Meeting Minutes
September 27-28, 2010
Charleston Full Board Meeting

Monday, September 27 Attendance

CAB
Tabitha Barrett-***Absent***
Dr. Emile Bernard
Manuel Bettencourt
Dr. Donald Bridges
Edward Burke
Arthur Domby
Kathe Golden
Judy Greene-McLeod-***Absent***
Lee Harley-Fitts-***Absent***
Dr. Rose Hayes
Stanley Howard
Dr. Kuppuswamy Jayaraman
Ranowul Jzar
Cleveland Latimore
Denise Long-**Absent**
Madeleine Marshall
Joseph Ortaldo
Dr. Marolyn Parson
Skyye Vereen
John Snedeker
Dr. Gerald Wadley-***Absent***
Sarah Watson
Alex Williams

Agency Liaisons/Regulators
David Williams, EPA
Robert Pope, EPA
Kyle Bryant, EPA
Al Frazier, GADNR
Shelly Wilson, SCDHEC
Kim Newell, SCDHEC
Heather Cathcart, SCDHEC
Van Keisler, SCDHEC

Contractors
Nancye Bethuren, SRR
Sonny Goldston SRNS
Jeannette Hyatt, SRNS
Bethany Raines, PEC
Erica Williams, V3T
Jenny Freeman, V3T
Bill Brizes, V3T
Ashley Whitaker, V3T

DOE/Other
Karen Guevara, DOE-SR
Doug Hintze, DOE-SR
Zack Smith, DOE-SR
Rebecca Craft, DOE-SR
Wade Whitaker, DOE-SR
Gerri Flemming, DOE-SR
Rich Olsen, DOE
David Hoel, DOE-SR
Jean Ridley, DOE-SR
Drew Grainger, DOE-SR
Garry Flowers, SRNS

Stakeholders
Tedda Howard
Karen Patterson
Eddie Watson

Mr. Doug Hintze, DOE-SR, served as Designated Deputy Federal Officer (DDFO) and Ms. Jenny Freeman, V3T, served as meeting Facilitator.

Ms. Freeman began the meeting by going over the ground rules, telling everyone to state their name before commenting and to speak into the microphones. She announced that there would be an Executive Committee meeting at 5 p.m. that day. She reminded everyone to sign in and listed all public comment periods for the meeting and reviewed the agenda.

Strategic Legacy Management Committee (S&LM) – Dr. Gerald Wadley, Chairperson

CAB member Marolyn Parson subbed for CAB member Wadley, who was out sick. CAB member Parson gave an update on the committee, stating that the last committee meeting was held on August 18 at the DOE Meeting Center. She expressed concerns about the location of the facility and asked for statistics on how many people from the public attend CAB meetings. She added that Paul Sauerborn's presentation concerning the Cold War Historic Preservation Program was impressive and requested more presentations from Historic Preservation Programs.

She announced that the S&LM committee has two open recommendations, including Recommendation 272, which concerns the increase of public tours at Savannah River Site (SRS). She continued that they did get a response back from Department of Energy (DOE), but that the committee is not 100 percent satisfied, and won't consider it closed at this time. She stated that there should be some discussions on it, explaining that one of the concerns is that when all the public tours are full, it is not until some later time the decision is made the tours can be increased.

Recommendation 262, on Future Missions, is also open and CAB member Parson addressed CAB member Madeleine Marshall, asking if she would like to speak about the Recommendation. CAB member Marshall said the Recommendation was about the Strategic Plan, which was more comprehensive the previous year. CAB member Marshall said that the new strategic plan excluded much of the information the Recommendation was addressing. She concluded that the committee doesn't really know how to close the Recommendation, so they want to discuss it further.

CAB member Parson stated that another issue that needs to be discussed is the Army training at SRS. She said that the committee, specifically CAB member Gerald Wadley, has concerns about the Army regulating itself on Site. She added they have asked Robert Pope, Environmental Protection Agency (EPA), to assist them. She concluded that this topic is ongoing. The S&LM committee is reviewing concerns, and will keep the CAB updated.

CAB member Rose Hayes expressed concern on the DOE Meeting Center. She stated that it is "inappropriate", hard to find and too small for large audiences. She recommended that the committee meetings be moved to larger venues.

PRESENTATION: *Update on Savannah River Recovery Act Program-Zack Smith, DOE-SR*

Mr. Zack Smith introduced himself as the Portfolio Director of American Recovery and Reinvestment Act (ARRA) at SRS. He noted that at this previous presentation to the CAB, more detailed information on project performance was requested. To address those concerns, he stated that he would provide more detail.

He said that the intent is to be transparent so everyone can follow what it going on with the project. He referred to R Reactor decommissioning, which concerned a bank of HEPA filters being pulled out. He then stated the presentation overview.

He stated that the scope of work for the Transuranic Waste (TRU) removal is 5,000 cubic meters to be removed. He said the project until June was classified as "red performance" and was at less than 80 percent. He explained that some adversities encountered in this area came from contaminated water that was found in the containers that were being removed in E Area. He added they found far greater Worker Protection Controls were needed and explained these improved controls increases cost. He said there were some facility modifications to address life safety codes. He added that the scope of work being performed has greatly increased and the fiscal baseline was modified to address these changes, but reminded everyone that the money was always there.

He then referred to a graph on the TRU Legacy Waste Program. He referenced the TRU volume that has been completed. He compared the ARRA scope to what was previously done. He noted that the graph also measures the Plutonium Equivalent Curies (PEC) and said the project is moving far more contamination with this effort then the previous effort.

Mr. Smith stated that to date they roughly 950 cubic meters have been shipped to the Waste Isolation Pilot Plan (WIPP) and a grand total of 2,000 cubic meters are processed and ready to ship. He then referred to another graph that shows the volume of waste to be exposed of monthly. He stated that the goal is 5,000 cubic meters shipped off Site by the end of the Recovery Act.

He referred to the Project Performance of P and R Reactors and went over the scope of the work for both. He listed the project challenges, including a late start and contract/subcontract issues. He stated that since these early challenges, contracts that come in for bid are more satisfactory and competitive; this has resulted in cost-saving.

He referred to photos of P Reactor and R Reactor and went into the achievements and Path Forward for both. The photo of P Reactor showed grouting and roof modifications, and Mr. Smith said it has gone well. He added that in R Reactor they have completed moderator draining to the -40 level and are mobilized in the -40 level to start grouting. He said they are about 60 percent completed with the grout placement in P Reactor.

Mr. Smith then went over the Project Performance, Cost Performance and Schedule Performance of M and D Areas. He explained that the Schedule Performance is going well and this means that the Cost Performance will approve. He added that he believes that both M and D Areas will come in ahead of schedule and under budget. He continued

that one adversity in the D-Area was in the levels of tritium contamination. He said they had to do much more with remediation and wells to make sure they captured it all.

He continued that in M-Area there will soon be an Area completion celebration. He said the completion is a huge achievement for the Site. In D Area, he said they have run into difficulty with the Thermal Detritiation units as they cost more than expected.

Mr. Smith reviewed Project Performance in P and R Ash Basins, going over the cost, which he said was "very good." He then overviewed the challenges in R and P Ash Basins, which included a late start and unplanned roadway. He said they had to start using a different type of truck and had to repair the road, which wasn't initially anticipated. He also stated that in P Ash Basin an additional five acres of ash was found outside footprint. He stated that despite challenges, both sections would be completed on time and in budget.

CAB member Marshall referred to a chart within Mr. Smith's presentation and stated that in the July portion of the graph there is a good deal of green, whereas in June there is a good deal of red and blue. She asked if something happened between June and July. Mr. Smith answered that several things took place and the baseline was adjusted to reflect the challenges he mentioned earlier, and that the field performance is gaining momentum. He concluded that these two things are what drove the progress between June and July.

CAB member Rose Hayes asked if the color-coding on the graph being discussed have a meaning. Mr. Smith answered that red means they are in bad shape, green means desirable, yellow means less than .9, or desirable, and blue means things are going exceptionally well.

Mr. Smith went over the achievements in the P and R Ash Basin and referred to photos of the work being completed. He then referred to a graph concerning Footprint Reduction and explained what it meant. He stated that the green areas are completed, the blue areas indicate being completed ahead of schedule and the yellow areas indicate behind schedule. He said that by the end of ARRA, the entire list will be completed. Next, he referred to a slide that showed all the progress concerning the SRS Footprint Reduction and stated that during ARRA 71 square miles have been completed.

CAB member Ed Burke asked Mr. Smith to go back to the graph showing progress with Footprint Reduction and asked why there were no "planned dates" on some of the activities within the "white section." Mr. Smith explained that the list is supposed to show all of the waste units that will be completed under the ARRA effort. DDFO Doug Hintze, DOE-SR, interjected and explained the dating process on the graph.

Mr. Smith summarized the major progress that has been achieved and explained there are "aggressive and manageable" plans for continued success.

CAB member Emile Bernard asked Mr. Smith, in reference to the P and R Reactor, if the shield doors have been grouted. Mr. Smith said the shield doors do not get grouted, they are removed and that the shield door for P Reactor is removed. He said that both will be disposed of because of the contamination on those doors. CAB member Bernard then asked, in reference to slide five in Mr. Smith's presentation, what the major contributor was to the "climb" on a graph presented there. Mr. Smith answered that in order to make the 5,000 goal by the end of the ARRA funding period the steep incline is necessary.

CAB Chairperson Manuel Bettencourt stated that he is concerned about the stuff that will be left at SRS, or things they don't have a "path." Mr. Smith said that as far as he knew, everything has a path. He said that all waste has a path. He added that there are 5,200 units that need to be moved out, but the ARRA plan only addresses 5,000 which means that 200 cubic meters are remaining and it is the most difficult to move. He said they do have a plan to move it, but do not have the money or time with ARRA.

CAB member Kuppuswamy Jayaraman asked if anyone measured how positive the impact is that with ARRA funding certain projects are being completed now rather than 10 years later without ARRA funding. Mr. Smith answered two months prior the goal number was 2,000 rather than 5,000 so this proves they are delivering more work for the same amount of money. He said that with the same amount of money they have taken on more work than was originally delivered. CAB member Jayaraman asked if ARRA funding had not been there and projects had

gone on a natural course, what would the impact have been. Mr. Smith answered that TRU waste removal would not have moved as quickly as it is moving. DDFO Hintze stated that the acceleration saved money.

CAB member Joe Ortaldo asked if the schedule to spend the 1.6 billion is set at 2012. He asked if Mr. Smith has an extra year to spend that money if it wasn't spent by 2012. Mr. Smith answered that in Footprint Reduction there is one activity that they received special approval to take a portion of into 2012, but predominately Footprint Reduction work will be completed in fiscal year 2011. In terms of TRU, they got approval to take the work into calendar year 2012. CAB member Ortaldo asked did the legislation allow more time to spend the money. Mr. Smith answered yes. CAB member Ortaldo asked if the work schedule slips, is there enough money available in that extra year to make sure that all of the work scope gets completed. Mr. Smith answered that the way things are established now, if you haven't executed, paid or completed the work, there will be no more money left. CAB member Ortaldo asked what happens to the dollars that are not spent. DDFO Hintze answered that the funding doesn't dry up with the scope spreads out. Mr. Smith said that any work that goes beyond 2012, he is not authorized to spend any funding on that. CAB member Ortaldo re-asked the question, using specific dollar amounts, and Mr. Smith answered that the funding would go back to the Treasury.

CAB member Don Bridges asked where the 200 meters^3 are physically located and how accessible is the 200 meters. Mr. Smith answered that the bulk of it is in E-Area and said that accessibility is not really the issue. He said it's more of an engineering issue.

CAB member Burke asked if the 20 percent bonus available to contractors would go back to the Treasury if the contractor did not receive it. Mr. Smith answered they could also put it on other work since the funding is owned by the Site.

Facilities Disposition and Site Remediation Committee (FD&SR) – Dr. Kuppuswamy Jayaraman, Chairperson

CAB member Jayaraman named all of his committee members and briefly explained what the committee's purpose is. He stated that the FD&SR committee has one recommendation to follow and had a committee meeting on August 18, 2010.

He then opened the floor for discussion on the recommendation for Preservation of Shield Doors to Support Nuclear Nonproliferation Programs and Other Scientific Programs at SRS and DOE-wide. He stated that this recommendation is the "brain child" of CAB member Don Bridges and the CAB's Technical Advisor, Bill Brizes. CAB member Jayaraman said that any suggestions made to improve the Recommendation were welcomed. He said it deals with the steel doors that are used in reactors such as P and R. He commented that it is an important resource because these doors are free of radiation material and contamination. He said that the issue is important and could bring about a great deal of savings.

CAB member Emile Bernard asked if there is an option for the committee to meet to speak over his concerns and present at a later date. He said he has heard a difference in opinion on some issues and he wants the committee to re-think the Recommendation and bring it back later. CAB member Jayaraman said that CAB member Bernard's concerns depend on what kind of questions need to be asked. He said that if it is just about the quality of the steel doors, that is a basic, "foundation" question and does not mean the Recommendation needs to be sent back to committee. He suggested that the Board take in the comments and make changes accordingly.

CAB member Art Domby reminded the CAB that the Combined Committee meeting has time set up as work time, and that the Board should treat it as such, and work the Recommendation. He commented that the Board could ask DOE, SRS reps, and contractors to address CAB member Bernard's issues with the Recommendation and asked CAB member Bernard if he had a fundamental issue to the Recommendation. CAB member Bernard said that he has several concerns about the Recommendation as it exists. He said there are no quantifications in the current Recommendation. He added that the overall draft seems to focus on the use as shielding for these detectors of minute qualities of some sort of material and he said it should be broader in application. CAB member Domby said that the Board could quickly edit CAB member Bernard's second concern.

CAB member Don Bridges said that shield doors may have surface contamination, but internally and chemically it is not contaminated. He commented that as for effective use of the steel, there would no premium paid to use it as bulk

steel and the steel would only be useful as material free of any low level contamination. He asked Mr. Bill Brizes, V3T, if there was anything he would like to address. Mr. Brizes commented on the size of the steel doors, which he said is 30 to 40 feet wide, 40 feet high, with a thickness of 10 to 12 inches. He said they weigh about 40 tons. He said that in one door there is enough steel to construct a detector room at SRS, which is roughly 8 feet by 10 feet and 8 inches thick. He noted that this information can be added to the recommendation if needed.

CAB member Alex Williams said that the Board members seem to be getting their procedures confused and that everyone is discussing the Recommendation to keep from discussing it. He said that the Chairman of the committee should decide what procedures to follow and that the ongoing conversation considering the Recommendation should be considered a formal discussion.

Facilitator Jenny Freeman said that the procedure is to work the Recommendation within the time allotted and suggested they do so. She added that the next day the Board could come back with the Recommendation to be voted on.

CAB member Joe Ortaldo said that he supports the Recommendation and agreed with CAB member Jayaraman when he commented that the Board is not telling DOE to do anything, but to evaluate for uses that CAB member Bridges pointed out. He said that all the Recommendation is asking is for DOE to look at these unique pieces of material for possible usage before throwing them away. He added that they could broaden it and include other uses. He commented that on the bottom of page one he would tone down the narrative and that on page two there is a place where the Recommendation is very definitive where it should be less so.

CAB Chair Bettencourt stated that the Board is asking DOE to determine the pedigree of the steel and assess the level of radiation within it.

CAB member Marolyn Parson commented on some editorial changes and suggested a few sentences be moved or omitted. She asked if the writers of the Recommendation had a discussion on the cost effectiveness of using the steel doors. CAB member Jayaraman answered that it was not discussed because of lack of data available to the CAB.

CAB Chair Bettencourt said that he would leave the cost analysis to the agencies involved. CAB member Parson said that she only meant that the agencies should include that analysis in their reports. CAB Chair Bettencourt responded that it is inherently part of the process. CAB member Parson said it is not inherent in the Recommendation.

CAB member Domby stated that the Board should so ahead and edit the Recommendation. He suggested they could add the terms, in part three of the Recommendation, “cost effective use” to address CAB member Parson’s concerns. He added that to address CAB member Bernard’s issues, the Recommendation should include “or other specialty scientific applications.”

CAB member Rose Hayes said that she understood what CAB member Bridges meant when he stated the most important part of the steel doors is the make-up. She stated that if she understands correctly, aside from cost, the doors are unique and won’t be found anywhere else. She said that this should be the primary issue, not the cost effectiveness.

CAB member Ed Burke said he agreed with CAB member Parson on adding a line about cost effectiveness. He said he is a little confused on how unique the doors really are. He said they should not push for recycling the doors just for the sake of recycling, but for the quality, cost effectiveness, and quality of the material.

CAB member Williams stated that background paragraphs two and three should be moved for effectiveness.

CAB member Madeleine Marshall said that the Recommendation surprises her because it seems to insinuate that the steel door values have been overlooked by DOE. DDFO Karen Guevara answered that the Environmental Management (EM) Program’s mission is to decommission the facilities and while it is true that there are unique materials comprising the facilities, it is not in EM’s mission to consider these unique assets.

CAB member Ortaldo suggested the Board could incorporate the phrase "to evaluate the cost effective use of the steel" to address the issue of cost effectiveness issue.

Rob Pope, Environmental Protection Agency (EPA), commented that while none of the agencies review the facilities for unique materials, all of the facilities are reviewed for historic preservation. He used C Reactor as an example, stating that there is interest in the facility in terms of historical preservation overall and there has been some hold-back. He said that he wouldn't say they don't look at those things, and that discussions, and considerations, do happen. He added that they haven't looked at the steel door issue, but stated there are other things to consider in terms of the steel doors. He commented that most people don't want metal from a DOE site and that it is a cost issue.

CAB member Howard said that the Board has an opportunity to at least look at the material to see if it's worthwhile to use for something else. He said if the CAB does not make a draft Recommendation at this point, it will be too late to dig it up later. He said it should be brought to DOE so it can decide if it has merit.

CAB member Williams said that the most hard-hitting paragraph in the Recommendation is the last and it should be the "lead" paragraph. He suggested they switch the two paragraphs for effectiveness.

CAB Chair Bettencourt suggested some additional editorial changes to the Recommendation.

Ms. Freeman announced to the CAB that the Board would vote on the Recommendation the next day, with no time for substantive changes. She asked for any last-minute comments or changes. She thanked everyone for their comments.

Nuclear Materials Committee- Judy Greene-McLeod, Chairperson

CAB member Bridges spoke in place of CAB member Judy Greene-McLeod, who was absent. CAB member Bridges updated the Board on the Nuclear Materials Committee's last committee meeting in August and summarized what was discussed at the meeting, which was the California Shuffler. He asked if anyone had any comments on the meeting or the Shuffler. CAB member Burke said that the technology surrounding the Shuffler was very interesting.

CAB member Bridges commented that he believes they are still waiting a decision surrounding a Performance Assessment at a disposition site in Texas. Pat McGuire, DOE-SR, answered but the audio was unclear. CAB member Bridges asked him what happened to the material that was loaded on the train, ready to go. Mr. McGuire said it is still on the train ready to go. CAB member Bridges asked where it was going to be shipped. Mr. McGuire answered that Texas is being considered, as well as other sites and they hope to make a decision by the beginning of the calendar year. CAB member Bridges asked Mr. McGuire if they have made a decision concerning heavy water. Mr. McGuire said that the decision has not been made yet, and they're looking at funding sources and other alternative processes.

CAB Chair Bettencourt asked if there was significant opportunity lost tying up railroad cars. Mr. McGuire said there is not. CAB member Bridges asked Mr. McGuire if there was a loss of funding source, can they use another source in the near future. Mr. McGuire answered that if the funding comes from ARRA, they have until the end of FY11 to spend the money. He said if it comes out of a Base Program, there will have to be some trade offs.

CAB member Stan Howard asked if there is a time limit on how long the materials can sit in the rail carts before something has to be done with it. Mr. McGuire answered they have performed some analyses and have moved the railcars for a contractor to look at and didn't have any flat spots on the wheels or bearings. He said that the breaking system was not locked up and he estimates the analysis will come back saying it can sit for several years, but they do not expect to take that long.

CAB member Kathe Golden asked if the railcars in Utah have been unloaded and returned to SRS. Mr. McGuire answered that all of the material delivered in the first trip to Utah has been unloaded and placed in temporary shipment. The railcars have been returned and reloaded on Site.

CAB member Hayes asked Mr. McGuire to characterize the contents of the barrels on the train. Mr. McGuire answered that it is depleted uranium oxide, which was a byproduct of production days. He added that there are 52 railcars and 90-100 drums can fit on a railcar. He said there are 10,000 drums left on Site and roughly 5,000 have been shipped to Utah.

CAB member Bridges said they have five Recommendations in the Nuclear Materials Committee. He added that four are "open" and one is "pending." He summarized all Recommendations. He stated that Recommendation 271 asked the plan be finalized for plutonium disposition. He suggested they change the Recommendation from pending to open. He asked Allen Gunter, DOE-SR, if there were any updates or news concerning the Recommendation. Mr. Gunter answered they have completed all the public meetings. He added that the Supplemental Environmental Impact Statement (SEIS) is being developed and they plan on issuing a draft in the Spring, with a plan to have the final completed by September with a Record of Decision (ROD).

CAB member Bridges stated that Recommendation 266 deals with enriched uranium disposition and asked if anyone would provide an update on where it stands. Mr. Gunter answered that they have completed the Reactor Mods and that they are ready to be shipped to the Canyon. As for the Canyon, he explained that they are in the middle of a Readiness Assessment to validate the facility as ready to start processing fuel. He said the amended ROD is still sitting with the Assistant Secretary waiting a decision so until DOE gets that, the Canyon cannot start processing.

CAB member Bridges asked Mr. Gunter that if the decision comes through, is he ready to issue a master schedule. Mr. Gunter said that they do have a schedule but it depends on when they are able to start. CAB member Bridges asked Mr. Gunter if he could present to the Nuclear Materials Committee when they do have a concrete schedule and Mr. Gunter said they would.

CAB member Bridges commented that Recommendation 263 deals with nuclear materials being in a safe, stable form. He said that this is under study and ongoing. He said the resolution to 263 will be extended.

CAB member Hayes said that when they originally put forward Recommendation 263, there were several parts to it. She said she remembers that one part asked if there were additional studies required and could the CAB be informed of what these were. She said she wonders if the CAB will know by January 2011 the agenda of the Blue Ribbon Commission, so that the CAB will know if all parts of the Recommendation have been answered. CAB member Bridges asked if DOE would give them the agenda in advance so the CAB will know all of its concerns have been answered. DOE said they would get the agenda for the CAB.

CAB member Bridges discussed Recommendation 259 and commented that the two major issues were how the nuclear materials were being coordinated at Headquarters and some safety analyses that were being completed at the Site. He said that he thinks this Recommendation is ready for closure.

CAB member Bridges asked if they closed out Recommendation 250 at the previous meeting; it was closed. He asked for any further comments on 250.

He then introduced Allen Gunter for his presentation.

PRESENTATION*: Status of Recommendation 259 Actions, Allen Gunter – Department of Energy-Savannah River*

Allen Gunter introduced himself and said he was going to provide an update of Recommendation 259. He said that the Recommendation had three parts to it.

He explained that the first part came out of the Government Office of Accountability (GAO) and concerned that DOE keep the H-Canyon facility and personnel fully engaged in stabilizing and dispositioning nuclear materials; it also asked for a proposed agency update.

The second part of the Recommendation concerns the replacement group for the Nuclear Materials Disposition Consolidation Coordination Committee (NMDCC) in order to ensure timely and accurate information.

The third section was that DOE will inform the CAB of progress in updating the safety documentation for H-Canyon operations.

Concerning the first part, **Action 1** states that SRS will complete the unirradiated enriched uranium campaign in FY11. They will be down blending the high enriched uranium to low enriched uranium and shipping to Tennessee Valley Authority (TVA) by the end of FY11. SRS has also completed the facility modifications, updated the procedure and training to support processing aluminum-clad used nuclear fuel. Mr. Gunter added that SRS is performing a Readiness Assessment to ensure the facility is ready to process used nuclear fuel. He also stated that DOE has updated Order 410.2, which is the management of nuclear materials. DOE has annual data calls for Sites to update their nuclear materials inventories and disposition plans.

Action 2 for Recommendation 259 dealt with the NMDCC, which was established in FY2005. He detailed the scope as developing, revising, and ensuring implementation of plans for the disposition and consolidation of special nuclear material within the DOE complex. They were also to look at conflicts created by doing these implementation plans. Mr. Gunter commented that the NMDCC was set up as an Executive Steering Committee and he listed who was involved with the creation of the committee and membership of the committee. He also listed the advisors, who were not voting members. He stated that the NMDCC's goal was to issue eight implementation plans for high priority nuclear material. He added that it was known that the NMDCC was to be a temporary committee, so in February 2008, the NMDCC proposed and the Deputy Secretary approved the establishment of a permanent Office of Nuclear Materials Integration (ONMI) within NNSA. He listed the missions of ONMI as overseeing the execution of DOE Order 410.2, integration and coordination of the Department's NMDCC activities, and establishing a Nuclear Materials Advisory Board (NMAB) with membership similar to NMDCC.

The NMDCC was officially disbanded on January 14, 2009 and seven of the eight implementation plans had been completed. The one implementation plan the NMDCC decided to defer was the "Removal of Surplus Pits from Pantex Zone 4." This was because of a Supplemental Programmatic Environmental Impact Statement that was going to be developed and Pantex figured out better ways to store its material so the urgency in regards to getting material out was diminished. Mr. Gunter stated that the ONMI has held periodic NMAB meetings, requested annual data call from all sites concerning updates to their nuclear materials inventories and disposition plans, requested annual Assessment Reports, requested a Management Plan, and are currently developing a National Strategic Plan for Management of DOE Nuclear Materials. He said it should be out in the Spring of 2011.

Mr. Gunter continued that **Action 3** dealt with the DSA for H-Canyon. A 3009 DSA was approved by DOE-SR on May 28, 2010 and DOE-SR presented this to the CAB on July 27, 2010.

He summarized by saying that all parts of Recommendation 259 have been addressed and DOE-SR requests closure.

CAB member Bridges asked Mr. Gunter if he found the new group, which was developed to deal with nuclear materials, effective. Mr. Gunter answered that they are doing the Request for Data Calls and other tasks; he noted that it does not have the "horsepower" that the NMDCC had, but that the committee is doing a great deal of work and is effective.

CAB member Jayaraman asked Mr. Gunter if his presentation concerning Recommendation 259 was given in an attempt to start a new precedent. He commented that typically the CAB receives a response in letter form. CAB Chair Bettencourt responded that the Recommendation was held open for an extensive amount of time because of the uncertainty of the NMDCC and because the Safety Analysis was going to be performed. He added that until recently, GAO was still working on the paperwork so the CAB is just now viewing the Recommendation.

Karen Patterson, public, stated that she is not clear on the relationship between the OMNI. She asked who is managing the material versus who owns the material. She asked where the line was between this new office and EM's responsibilities. Mr. Gunter answered that the program offices still own the material; EM has the responsibility for managing and ensuring the responsibility of the material, and for its disposition. He said that NNSA owns its material. The OMNI is there to do what the NMDCC was doing, which was to try to integrate the disposition.

CAB member Williams repeated CAB member Jayaraman's question, which asked if DOE is starting a new precedent with Mr. Gunter's presentation. Pat McGuire, DOE-SR, answered that the Recommendation has been around for a while, and the department felt that everything was in place to allow the CAB to close the Recommendation. He added that DOE is trying to present the information to just "bring it all together." He said it is not a precedent and DOE does not expect to do it again.

CAB member Joe Ortaldo suggested that at the next Nuclear Materials Committee meeting, the committee should decide whether or not to close Recommendation 259.

Waste Management Committee- Joe Ortaldo, Chairperson

CAB member Ortaldo outlined the objective of the Waste Management Committee and listed the committee members.

He stated that there was a Plutonium Disposition EIS meeting on October 17 that he attended; he said it was very interesting. He added that the Waste Management Committee met on August 24 and it had two presentations that related to the System Plan Rev 15. He said that is a roadmap for what's going to happen with liquid waste for the next 20 years. He commented that many of the committee's recommendations are centered on this plan. He added that they have also viewed presentations on the "Top 10 Programmatic Risks in the System Plan." He noted there was a presentation on what should be done to get the production rate at Defense Waste Processing Facility (DWPF) to 400 canisters a year. He said that this is a very important objective to meet in order to make the System Plan schedule.

CAB member Ortaldo commented that a member of the public, Dr. John Pickett, came to the June meeting and had a list of questions concerning the operation of DWPF. DOE has given a response to Dr. Pickett. CAB Chair Bettencourt commented that the written response to Dr. Pickett was only on the table for CAB members. He said that the CAB Support Team has sent Dr. Pickett the DOE response.

CAB member Ortaldo continued that on September 20, South Carolina Department of Health and Environmental Control (SCDHEC) held a public meeting on the general closure for the F Area Waste Tank Farm System. He encouraged the CAB members to get a copy of a document pertaining to this issue from Shelly Wilson, SCDHEC, and make comments. He said the document is comprehensive and informative.

He then announced that the next committee meeting would be on October 19, at the DOE Meeting Center in Aiken.

CAB member Ortaldo summarized his committee's recommendation status. He said they are making great progress and closing recommendations. He said they agreed to close Recommendation 268, which dealt with the Superfund training, and Recommendation 264, which dealt with Footprint Reduction.

He continued that they had two new recommendations, 270 and 269. Recommendation 269 was related to submitting semi-annual reviews of the system plan. He said that DOE gave a sufficient response to 269, so they moved it from "pending" to "open." Recommendation 270 is related to plutonium loading; he said they got a response from DOE, but are not comfortable with the response, so they will maintain the Recommendation as pending.

He went through a list of open Recommendations; 268 is closed, 264 is closed, 263 is open, 258 is open but moving along, 256 is open, 246 is open, 242 is open but almost ready to close, 224 is open but recommended for closure, and 162 and 135 are both are recommended for closure.

CAB member Williams asked if anyone present had information on the upcoming Superfund training cycle. Rob Pope, EPA, answered that he would speak about it the next day.

CAB member Domby updated the CAB that the Waste Management Committee just received from NRC a Periodic Clients Monitoring Report for Saltstone and it covers 2007-2010.

Administrative Committee- Sarah Watson, Chairperson

CAB member Sarah Watson reviewed the Administrative Committee's mission and objective.

She stated that the new member selection drive ended in August 2010, and the list of prospective members has been submitted. She said they will be getting more information soon concerning the status of current members who are up for reappointment. She added that four members will be leaving in January, and encouraged the CAB members to attract the type of members that would be appropriate for the Board.

She commented that although there have been comments about assigned seating, there is a reason for it and that it keeps the mentors and mentees seated together. She said if there are any problems or questions to contact the Support Staff.

She announced that the 2010 Retreat will be held in Aiken on October 28-30 and encouraged all CAB members to give her any information they wanted discussed at the Retreat. She added that DOE added an additional day in order to cover all topics and asked all members to attend, and if they can't, to advise the Support Staff.

CAB member Watson stated that at the last meeting, the CAB asked Becky Craft, DOE-SR, for the CAB to have a few minutes prior DOE tours for CAB members to present. She said that Ms. Craft has reviewed that request and the CAB will be able to use that resource. CAB member Watson said that the next step is to find volunteers interested in working the Speaker's Bureau. Anyone interested should contact CAB member Watson. There will be a training period, practice time and trial runs.

CAB member Watson introduced a new staff member on the CAB Support Team, Ashley Whitaker, V3T. She said that any CAB member who wants to contribute to the Board Beat newsletter should send all information to Ms. Whitaker.

She then discussed the live meetings and said that the SRS CAB is the only CAB that has live meetings available. She asked everyone to be mindful and utilize the live meetings whenever possible. She then asked if there were any questions.

CAB member Bernard asked if they had the start and end times for the Retreat. CAB member Watson said the agenda is not ready yet and that the information will be distributed soon.

CAB Chair Bettencourt asked if the CAB members need to be in Aiken the night prior to the Retreat. Ms. Freeman said that the agenda is still pending. CAB member Watson encouraged everyone to block the time and if there is a change, the Support Team will inform everyone and they can make the necessary adjustments.

~Public Comments

There were no public comments.

~Adjourned

Meeting Minutes
September 27-28, 2010
Charleston Full Board Meeting

Tuesday, September 28 Attendance

CAB
Tabitha Barrett-***Absent***
Dr. Emile Bernard
Manuel Bettencourt
Dr. Donald Bridges
Edward Burke
Arthur Domby
Kathe Golden
Judy Greene-McLeod-***Absent***
Lee Harley-Fitts-***Absent***
Dr. Rose Hayes
Stanley Howard
Dr. Kuppuswamy Jayaraman
Ranowul Jzar
Cleveland Latimore
Denise Long
Madeleine Marshall
Joseph Ortaldo
Dr. Marolyn Parson
Skyye Vereen
John Snedeker
Dr. Gerald Wadley-***Absent***
Sarah Watson
Alex Williams

Agency Liaisons/Regulators
David Williams, EPA
Robert Pope, EPA
Kyle Bryant, EPA
Al Frazier, GADNR
Shelly Wilson, SCDHEC
Kim Newell, SCDHEC
Heather Cathcart, SCDHEC
Van Keisler, SCDHEC

Contractors
Nancye Bethuren, SRR
Karthik Subramanian, SRR
Doug Bumgardner
Sonny Goldston SRNS
Jeannette Hyatt, SRNS
David Welliver, SRNS
Mike Navetta, SRNS
Paul Sauerborn, SRNS
Bethany Raines, PEC
Erica Williams, V3T
Jenny Freeman, V3T
Bill Brizes, V3T
Ashley Whitaker, V3T

DOE/Other
Jack Craig, DOE
Karen Guevara, DOE-SR
Doug Hintze, DOE-SR
Zack Smith, DOE-SR
Rebecca Craft, DOE-SR
Wade Whitaker, DOE-SR
Gerri Flemming, DOE-SR
Rich Olsen, DOE
Jean Ridley, DOE-SR
Drew Grainger, DOE-SR
Garry Flowers, SRNS

Stakeholders
Tom Clements
Frances Close
Tedda Howard
Karen Patterson
Rick McLeod
William DeCaro
Eddie Watson

Ms. Freeman, the CAB Facilitator, welcomed everyone back and introduced Doug Hintze, DDFO. She then went over the ground rules and briefly reviewed the agenda.

Approval of July meeting minutes:

CAB Chair Bettencourt moved to approve the minutes from the CAB July Full Board meeting. The minutes were approved.

Chairs Update-Manuel Bettencourt, CAB Chair and Donald Bridges, Vice Chair

CAB Chair Bettencourt, speaking of the CAB's flowchart, stated that there have been minor changes made to the flowchart since the last meeting. He encouraged all CAB members to keep an eye out for needed updates or edits. He stated that he was not able to attend the Chairs Site Specific Advisory Board (SSAB) meeting in Santa Fe due to illness and gave the floor to CAB Vice Chair Don Bridges, who attended, for a summary.

CAB Vice Chair Bridges stated that all DOE sites that have advisory boards fall under the SSAB. He stated there was a meeting in Santa Fe on September 15-16, which brought together the Chairs and the Vice Chairs from various

SSAB sites. He briefly went over who was in attendance and stated the SSAB meetings are held semi-annually at rotating site locations. He listed all eight sites that are represented by Boards.

He stated that the intent of the meeting was to get insights and management direction and focus, as well as to provide an update on Environmental Management (EM) cleanup programs, and to serve as a general information exchange. He then outlined the topics discussed, such as American Recovery and Reinvestment Act (ARRA), Waste Disposition, Transuranic (TRU) waste, footprint reduction, energy park initiatives, and budget updates.

He said there was a briefing from the Assistant Secretary of EM, Dr. Inés Triay. He said that she discussed "a journey to excellence" in an EM roadmap. He said the document was very "crisp" and "well-considered" and requested a copy when the document was distributed.

He stated for each of the sites, they gave the three top issues. He listed the three top issues that were discussed for SRS as dealing with the 49 tanks and 37 million gallons of liquid waste, consolidation disposition of Plutonium, and lack of a federal repository.

CAB member Bridges stated that the SSAB meeting was very informative and encouraged a good exchange between the Sites. He asked if there were any questions.

CAB member Ed Burke asked if any of the other sites are affected like SRS by the lack of a federal repository. CAB member Bridges answered that the only other site that really has an interest in the federal repository is Hanford.

CAB member Hayes asked CAB member Bridges if other CAB's have Board members selected in Washington. CAB Chair Bettencourt answered that none of the other sites allow the Board to elect members and that it is ultimately headquarters that signs off, and the local site that directly decides who will be on the Board.

Agency Updates:

Doug Hintze-DDFO DOE-SR

Mr. Hintze introduced himself and his co-DDFO with Karen Guevara. He announced that Savannah River Site (SRS) has a new Site Manager, Dr. Dave Moody, and thanked the previous Acting Site Manager, Jack Craig, for his work at SRS. He gave the floor to Mr. Craig.

Jack Craig, DOE, thanked the CAB for its service and announced that Dr. Dave Moody would arrive in a month. He briefly went over Dr. Moody's experience and background. He announced that SRS hosted the Annual Integrated Safety Conference in Augusta; he said 1,100 people showed up for the conference. Mr. Craig commented that Savannah River Nuclear Solutions (SRNS) and Savannah River Remediation (SRR) received DOE's highest safety award at the conference.

He continued that all SRS's contractors have approved a cost, scope and schedule from the department that was certified by DOE. He said he is happy those are in place. He thanked Doug Hintze for his work. Mr. Hintze announced that the Under Secretary for Energy, Christina Johnson, submitted her resignation. There has been an acting Under Secretary named.

He stated that during the previous week there was coverage of a Government Accountability Office (GAO) Report on the SRS tank closure program. He said there was talk of the increase cost as a result of the new contract in the liquid waste program. He continued that DOE replied "strongly" that the GAO report only looked at one aspect.

When it comes to the budget, he stated that DOE will be in a Continuing Resolution for an indeterminate amount of time. He added that when DOE is under a Continuing Resolution, it has restrictions; he has not viewed the restrictions yet, but will share with the CAB what they are and how they will affect the work at the Site when he knows of them.

Mr. Hintze stated that DOE just completed its Type B investigation concerning the worker who was injured while cleaning up TRU waste. SRNS runs that program and has developed a Corrective Action Plan to address the report for the incident.

He commented that the Waste Water General Closure Plan for the F-Area Waste Tank Systems has been submitted and is going through the review process at the moment.

He announced that the 2009 SRS Annual Site Environmental Report has been posted online and DOE will provide it to the CAB in the coming weeks. He stated that the report contains information about the Environmental Monitoring Program results, dose estimates to the general public, environmental restoration and waste management activities, and environmental research projects.

Mr. Hintze stated that SRS recently awarded its inaugural Environmental Stewardships award; there were four different categories, which Mr. Hintze highlighted.

He said that DOE met with SCDHEC and EPA concerning the Army training being proposed on Site. He said they discussed some of the concerns both agencies had. He explained that any training on Site by the Army is secondary to all DOE activities and missions.

He briefly overviewed Site operations such as DWPF, Saltstone, tank waste removal, Salt Waste Processing Facility (SWPF), and TRU waste.

In the area of nuclear materials, Mr. Hintze stated that SRS is 96 percent complete with consolidation of surplus nonpit plutonium from across the complex; SRS continues to dissolve a portion of that plutonium in the HB Line Facility.

Mr. Hintze added that the contractor building the Biomass facility is continuing on the project. This facility will result in a cleaner footprint for the Site. He said the layout has been completed, they've poured more than 7,000 cubic yards of concrete, and 280 tons of structural steel has been installed; the project is on schedule for completion in December 2011.

Garry Flowers- SRNS President and CEO

Mr. Flowers stated they SRNS is into its third year with its contract. He announced that a lab director has been named for the national lab and he will be at the next CAB meeting. Mr. Flowers continued by stating that South Carolina is very fortunate to have a national lab. He stated that the Savannah River Nuclear Solutions Lab is EM's lab and an applied sciences lab.

Mr. Flowers stated that there are a few more Memorandum of Understandings (MOU), such as the one with Hyperion, coming. He continued that some will come with companies that have small modular reactor technology; he stated that SRNS and SRS is technology neutral.

He stated that SRNS wants to put some substance behind the energy park initiative at SRS; he said that SRS is a great site for an energy park. He added that SRS is not a closure site.

He stated that shipments restarted in August; four to five shipments per week of TRU waste will be shipped until all 5,000 cubic meters is removed. He stated that H-Canyon has started helping with those efforts. He continued that roughly 820 cubic meters have been packaged. He said that this waste is very difficult and that what's left of TRU waste at the Site is the most difficult waste on Site. He added that they are on schedule and budget with the TRU waste removal.

He acknowledged safety awards that SRNS and SRR have received. He commented that SRS is the safest site in the complex. He explained that his construction workers have celebrated more than 25 million hours without a loss accident and the lab has celebrated 7 million hours without a loss accident. He said that safety is priority one.

Concerning the worker who was injured Summer 2010, Mr. Flowers said that they are still kelating his wounds and said the man is doing well and working.

Doug Hintze-DDFO DOE-SR

Mr. Hintze returned to answer CAB questions. One member asked what the root cause was for the incident in which the worker was injured. Mr. Hintze answered that the investigation stated that there was less than adequate approach used on high-hazard work.

Mr. Hintze commented that the Blue Ribbon Panel will be coming to SRS in the January timeframe but DOE doesn't know the agenda or any other information at this time. He said DOE would share with the CAB that information when it is available.

Robert Pope and David Williams-Environmental Protection Agency (EPA)

Mr. Pope asked David Williams, EPA, to come up and give his perspective on the agency update. Mr. Williams stated that the SRS CAB is the most well-organized and dedicated Board he has seen.

He announced that within the Office of Federal Facilities and Restoration and Reuse, which has authority over his program, the director and deputy director announced they are leaving. He added that this director and deputy director have been very active with meeting with DOE to discuss issues around the complex.

Mr. Williams added that EPA has a new administrator, Lisa Jackson. He announced that the Associate Administrator over the Office of Solid Waste and Emergency Response, who is over his program, has started an initiative with "community engagement "as his main priority. He continued by stating that he wanted to emphasize how effective and active the SRS CAB is.

He announced that the Superfund Training program team from phase one and two has been awarded the National Susan E. Olive Equal Employment Opportunity Award by the EPA headquarters. He then gave the floor to Mr. Pope.

Mr. Pope announced that EPA also recently gained a new regional administrator. He summarized her background and experience.

He then invited Kyle Bryant, EPA, to update the CAB on Phase one and two of the Superfund Training Program

Mr. Bryant stated that there were 39 cycle two graduates and that all graduates are performing well on the job. He summarized the work that the graduates are doing. He stated that six graduates have been provisionally placed in material handler positions; they have to take the production operator test in January 2011. EPA is instituting a tutoring program to be held at Barnwell Public Library every Friday to help the workers prepare for the test. He said it is mandatory for the cycle two graduates. He added that there are five graduates from the first cycle who are being encouraged to take the test as well.

Mr. Pope announced that round three of the Superfund Training Program is being discussed for 2011-2012. He stated that SRS contractors are being very honest with EPA. He said that SRNS is already going to have worker transitions during the next year and is not sure how far they can go with Superfund Training at this time. Mr. Pope said this information is very helpful to EPA. He continued that SRR is working on its staffing plan and they do think they will have more positions available; they will know better by mid to late 2011 what their needs will be and how they can work with Superfund Training. He added that Parsons will be an employer during phase three. EPA is currently talking to all employers and planning.

Mr. Pope stated that DOE has been proactive with talking to EPA about the Army training on Site. He said they have had preliminary discussions, but have now had more in-depth talks with DOE. He said that DOE is restricting use of the Site so that no missions are impacted, including cleanup missions. He commented that this takes care of a concern of EPA's. He added that DOE is being very proactive about marking what it knows is sensitive areas ecologically, which restricts D&D from impacting those areas. He stated that at the moment the Army and DOE is

working on a joint Standard Operating Plan (SOP) and EPA will take a look at that document to offer input. He described the document as a "guiding document." He also stated that DOE is updating the map used to define the areas that can be utilized by the Army; he explained the map will outline all the areas EPA was concerned about.

Mr. Pope stated that concerning ARRA, one of the best things SRS has done is take the activities that were already milestoned and they applied the Recovery Act funds to those actions. He said that SRS is doing significant work in a short amount of time; some activities will be completed at least a decade before schedule.

He commented that the F-Tank Farm General Closure Plan has been submitted by DOE to South Carolina Department of Health & Environmental Control (SCDHEC). SCDHEC has the plan out for public comment. He said there was a public hearing meeting in Aiken recently on the Closure Plan, but only three members of the public attended.

Mr. Pope said he is intrigued by the CAB's idea to re-use the shield doors as explained in its Recommendation. He stated that EPA and SCDHEC will not push the topic aside, but are pretty far into planning and public input has been asked for. He reminded the CAB that other reactors will be closed in the future and encouraged public input. He advised the CAB the best time to provide ideas, such as the shield door recommendation, is during time periods for EPA's public input.

He also advised the CAB that when areas are closed, it means that they have implemented all the activities they are going to implement, not that it is all completed.

Shelly Wilson-SCDHEC

Ms. Wilson stated that one of the issues on the CAB's priority list is the closure of High-Level Waste Tanks. She stated that the General Closure Plan for the F-tank farm is an important step. She said that approval of the document is needed for DOE to close the tanks. She explained that the approval is required for DOE to meet state laws and regulations. She continued that the approval is important because it is required to meet the federal section 3316 of the 2005 National Defense Authorization Act (NDAA). She stated that the document outlines the roadmap or general path to closure for F-tank farm; she said it is the overall process and the details will be in documents that follow it. It also outlines the roles of DOE, SCDHEC and EPA in that process. She advised CAB members to go to SCDHEC's website to view the document and requested comments by October 15.

In terms of ARRA funding, Ms. Wilson stated that the ARRA opportunity is incredible because it allows the chance for DOE to meet milestones in the near future that were really projected out. She said that many are thinking about what happens after ARRA. She said she doesn't want to see anyone sitting idle for 10 years after, so SCDHEC is looking at how to ramp down after the ARRA efforts while still doing work.

Al Frazier-Georgia Department of Natural Resources (GADNR)

Mr. Frazier announced that radiological workers participated in a Federal Emergency Management Agency mandated Pathway Exercise the previous week. He said it is required every six years and the exercise was designed to provide federal, state and local Emergency Responders an opportunity to cooperatively participate in and evaluate decisions. He explained that the exercise was a simulation of an emergency involving a release of radiation from Plant Hatch. He continued that the exercise required participants to evaluate, recommend, and propose implementation strategies and protective actions.

He stated that budget woes are still plaguing GADNR and that more cuts are proposed for the upcoming fiscal year. He stated that people are being moved around to avoid furloughs or layoffs. He then outlined branch changes and how it affected workers.

He outlined an incident in Twin City and Emmanuel County. He said there were reports coming in of explosive vapors or the smell of petroleum product in a number of home and businesses along Highway 80. He commented that both the state-on-scene coordinators and federal-on-scene coordinators with EPA responded and worked over the Labor Day weekend. The incident was tracked to leaking underground storage tanks at a nearby gas station. He said it took four to five days to find the source; EPA took responsibility over the remediation. As of the Thursday

following Labor Day, 6,000 gallons of contaminated water was extracted.

He stated that another incident responded to by the state-on-scene coordinators and federal-on-scene coordinators involved a situation at an upscale condo community where a serious concentration of explosive vapors was found underneath the condos in the sewer system. This was discovered by Georgia Natural Gas, who then determined that the concentration was not its gas. It was revealed that the condo complex was built on top of an un-permitted landfill where organic material was buried and decomposing. There were levels of methane in the water meters of each unit. The responsible party has been found.

~Public Comment

Dr. Rose Hayes stated that she has been doing research that stresses the need for the nuclear industry and federal agencies to build public confidence in the handling of nuclear waste materials and other issues. She stated that public perception is critical. She continued that the CAB has worked to improve public confidence and that DOE has sponsored successful tours at SRS, among other things. She is concerned about CAB member appointments that don't involve community involvement, but decisions made in Washington or local offices that represent Washington. She stated that this will diminish the CAB's efforts to increase public confidence and project a positive public image.

Karen Patterson, public, seconded Dr. Hayes' position and stated that how the CAB members are appointed is very important. She stated that both Jack Craig and David Williams mentioned that the SRS CAB is one of the most effective CABs in the country; she believes that one of the reasons why the SRS CAB is so effective is because of how its members are selected. She addressed DOE by stating that several years ago DOE was concerned about the public's perception of having a Managing and Operating (M&O) contractor as administrator of the CAB as a conflict of interest, and because DOE was concerned about this, the administration was changed. She suggested to DOE that if DOE takes over the responsibility of selecting members, the public perception will be that the SRS CAB is no longer an independent CAB which is what makes it so effective. She encouraged DOE to consider its decision to appoint CAB members.

Recommendation Status Report- Bill Brizes, Technical Advisor, V3T

Mr. Brizes presented the Recommendation Summary Report relative to the last CAB Full Board meeting. He stated that the CAB has two pending recommendations, 13 that are open, and 257 have been closed. There have been a total of 272 recommendations that the CAB has worked on.

He stated that since July, there are two pending recommendations, the CAB has taken two pending recommendations and opened them, and two recommendations have been closed.

CAB member Bridges asked about Recommendation 250. Mr. Brizes stated he will get back to CAB member Bridges. Mr. Brizes stated that he put together a new Recommendation Report and it was sent out to the Chairs and Vice Chairs.

He added that there are three tables in the new report. He then outlined each table. He stated that table one lists the recommendations as a function of time, starting with 2010 and going back to 1994. He said it racks up the totals of pending, open and closed. Table two discusses the active recommendations by year, starting with 2010. The third table discusses the recommendation as a function of each committee.

Mr. Brizes stated the plan is to change the Recommendation report once a month or as there are changes, and send it out to all Chairs and Vice Chairs. Kathe Golden, CAB, thanked Mr. Brizes for the report because she said it was helpful.

Strategic Legacy Management Committee-Dr. Gerald Wadley, Chairperson

CAB member Marolyn Parson substituted for CAB member Gerald Wadley due to his illness. She stated that her committee did not have any follow-up from the previous meeting and then introduced the next presenter, Rich Olsen.

PRESENTATION: *SRS Performance Measures Update- Rich Olsen, Department of Energy-Savannah River*

Mr. Olsen introduced himself and outlined the purpose of his presentation. He stated the Performance Measures have been updated through August actuals. He explained that the Performance Measures presented on pertain to the focus of clean-up of the Site.

He stated there are five areas of improvement that the CAB suggested. The first improvement was to demonstrate alignment with the Site Strategic Plan and EM Mission achievement. The second improvement was for each measure, provide a percent complete status as well as the end state year that DOE will accomplish that particular measure. The third improvement was color-coded FY2010 actuals to provide easier identification of those measures that are ahead, on target, or behind schedule. The fourth improvement was to show both ARRA and end state targets for TRU waste, MLL, LL, Remediation and Facility D&D measures. The last improvement was to create graphical analysis and lifecycle projections for Key Performance Measures.

He then referred to a chart in his presentation that listed EM Site cleanup areas and the percent completed at the end state. He explained there are five areas of cleanup, including nuclear materials, liquid waste, solid waste, solid & ground water and facilities. He then briefly went through each section and listed the critical areas of measures. He also listed the percent completed for each section at its end state. He explained that the end states are when the project is completely done, not ARRA goals.

He then explained how they create the measures that were listed on the chart. He referred to a graph that showed the structure of how DOE measured the measures. He said they tried to create a disciplined approach to the measures so to track history, the current year and the future all in the same document. This eliminates the question of where the numbers came from. He explained the graph, saying the first area defines the measure, the unit of the measure and the cumulative results of where they are up through physical year 2009. He continued that the center area of the graph addresses the current year and where DOE is in terms of a physical year versus the target. The last part of the graph is the end state analysis. There is also a color coding chart that highlights whether they are on, ahead, or behind schedule.

Mr. Olsen referred to the next graph within his presentation, which accounts for how the three levels of nuclear materials are addressed. It displayed the measures, which included Plutonium, Low Enriched Uranium, and Spent Nuclear Fuel, the unit of measure and the cumulative actuals through FY2009. The graph showed that 42 containers of Plutonium have been shipped, 297 trailers of Low Enriched Uranium have been shipped and 0 bundles of Spent Nuclear Fuel have been shipped. The graph also featured a FY2010 analysis, with the actuals versus the annual target listed, as well as the end state analysis.

The next graph showed the performance measures for liquid waste. Mr. Olsen briefly explained the graph and said there is a measure for radioactivity due to the CAB's concerns. He listed the activities that are behind schedule, but stated that DOE is recovering from that and everything will be on schedule.

He then went over a graph with performance measures for solid waste, which includes measures for TRU, MLLW and LLW. He stated that in terms of TRU waste, DOE's actuals is 456 cubic meters shipped and the target is 520 cubic meters. He added that DOE should make its target by the end of the year. For low level and mixed low level waste, DOE is at 7,194 cubic meters shipped with a goal of 7,655; Mr. Olsen said DOE will meet its goal here as well.

Mr. Olsen's next graph listed area completion. He stated the release sites end states is 515; DOE has done 317. He said they only targeted one for the year, but have achieved five due to the ARRA funding. In terms of D&D buildings, DOE scheduled four, has completed three, and should meet its goal by the end of the year.

Mr. Olsen stated that his next two slides, which featured two graphs, were the same metrics but the difference is that DOE is comparing them to the ARRA end state. He then summarized the end state analysis; both graphs highlighted the ARRA metrics.

Mr. Olsen listed work in progress as for each major Performance Measure, providing a graphical depiction of the lifecycle is in progress. He also stated that the measure for liquid waste, canister production, is an example of how such projections will be demonstrated. He then referred to a graph analysis of liquid waste canister production.

Mr. Olsen summarized his presentation by stating that DOE will continue to develop Lifecycle Graphs for the key operational areas of EM operations, with a target date of the end of the first quarter in FY2011. He stated that they are working on getting the targets finalized for FY2011 and the October 1 report will reflect these targets. Furthermore, starting in FY2011, TRU measures will be separated into two separate categories and suggestions from the CAB are welcomed.

CAB Chair Bettencourt asked if the graph on page nine of the presentation is an indication that DOE will meet its annual target for the items listed in green. Mr. Olsen said that it was. CAB Chair Bettencourt requested that Doug Hintze and Pat McGuire ensure that the Nuclear Materials Committee within the CAB be briefed on the information found on page seven, which deals with the start-up of HB-Line South.

CAB member Jayaraman thanked Rich Olsen for the presentation. He then stated that in the last graphical analysis listed in the presentation, in regard to the canister production, that he was surprised that the target "flattened out" after 2016. Mr. Olsen recommended CAB member Jayaraman talk to someone with liquid waste.

CAB member Stan Howard commented that the presentation provided a big improvement and he appreciates the new charts/graphs.

Doug Bumgardner, Savannah River Remediation (SRR) assistant planning manager, commented that with canister production, the chart is showing that 2021 they will have processed all of the sludge canisters and gotten to salt-only canisters. He explained that the amount of material that is being vitrified is less, takes longer to accumulate and results in a lower number of canisters.

CAB member Denise Long asked to review page nine of the presentation. She asked that since Mr. Olsen told CAB Chair Bettencourt that they would meet the target of items highlighted in green, if that meant DOE was really behind schedule concerning the ones labeled as yellow when both areas listed the same numbers. Mr. Olsen stated that the target was based on fiscal year 2010. He explained that the ones that are in green are slotted to be finished by fiscal year 2010; the yellow activities acknowledge that they won't be completed by fiscal year 2010, but by calendar year 2010.

Shelly Wilson, SCDHEC, commented that the presentation provided a great indicator of progress. She said that the yellow boxes concerned her because they are related to a three-agency decision. She stated that she was surprised that these activities were coded as yellow and that SCDHEC and EPA have not been behind schedule in their decisions concerning these areas. She stated that SCDHEC has met its deadlines and has a great respect for the closure projects. She commented that she thinks these are internal commitments DOE is commenting on and not regulatory commitments, but asked that Mr. Olsen clarify so that it does not appear that SCDHEC and EPA are behind schedule. Mr. Olsen commented that he would take Ms. Wilson's comments into consideration and stated that she does not believe that the information he provided is indicative of any missed deadlines on SCDHEC's part.

Terry Spears, DOE, responded to Ms. Wilson and said that she is correct. He recommended to Mr. Olsen that in the future the lesson learned is to do a better job on the delta analysis so that it's clearer. He stated that with respect to the completion of waste removal, the first yellow box on the graph resulted from an internal plan to have waste removed from four tanks and have that approval from SCDHEC; he said that was an internal expectation, not a regulatory expectation.

PRESENTATION: *Energy Park Initiative-Mike Navetta, Savannah River Nuclear Solutions (SRNS)*

Mike Navetta introduced himself as the manager of the energy park initiative for SRNS. He stated that an energy park is something that redeploys under-utilized DOE assets to produce clean energy source. He continued that it restores American leadership of energy and climate technology, provides sustaining missions for DOE Sites, and is a

joint effort of DOE, local and regional communities, the private sector, unions, as well as other interested parties; he said an energy park is meant to be "community driven."

Mr. Navetta continued that the role of SRNS is to inventory SRS assets and competencies, identify national energy security needs, assist DOE with the development of an SRS energy park, and generate concepts for consideration by DOE and stakeholders.

He stated that work that has been completed by SRNS so far includes two Strength-Weakness-Opportunity-Threat (SWOT) workshops, two DOE public workshops, strategic view interviews, a formulated vision, implemented projects and launched a Modular Reactor Demonstrating Complex.

He continued that the focus should be on energy security, climate disruption, and economic security; he said these issues are intertwined. He said the energy park is bigger than the Site and is a public-private partnership. He commented that they will need some legislation and "seed" funding. He stated that SRS has many relevant capabilities and assets. The "backbone" of the energy park must be nuclear.

In terms of targeted national needs, Mr. Navetta listed energy security, independence from foreign oil, improvements in generation storage efficiency, developing and deploying fusion energy, climate change, and nuclear nonproliferation.

He stated that because SRS has tritium as an asset, and an unique ability to manage large amounts of that at SRS, the Site is the logical place to deploy fusion for the first time in this country. He said that the long-term energy park vision is to turn SRS into the national fusion energy park. He then summarized the activities that need to be done before that can happen.

He then referred to a graph in his presentation that listed SRS's competencies and how the Site should align them using nuclear and carbon fuel cycle work.

Mr. Navetta stated that everything he is presenting today is the vision of SRNS and that nothing has been endorsed by DOE. In terms of building the energy park, he referred to a graph that listed assets SRS has being used to enhance the mission. These assets include tritium, MOX, and others. He then listed perceived future assets as well.

He outlined the basic program as it has begun to evolve conceptionally. He stated that the near term, 2010-2025, will focus on the Bioenergy Integration Center, the Modular Reactor Demonstration Complex and the Modular Reactor Power Park. The mid-term, 2026-2050, will focus on US Energy Freedom Center. The long-term, which is beyond 2050, will focus on the National Fusion Energy Park. He then referred to the SRS energy park master plan, which laid the vision out on a timeframe. The graph showcased when certain assets would come into play concerning the vision; the time frame was listed as 2010-2050.

Mr. Navetta summarized the BioEnergy Integration Center concept by listing its features and benefits. He explained that the idea is to take CO_2 emissions from stationary sources on the Site, and feed it to algae oil to grow algae oil. He then referred to a graphic of the Algae Biofuels Production concept.

The new slide showed a graphic of the Modular Reactor Demonstration Complex and listed its features and benefits. Mr. Navetta stated that modular reactors are used because they are a stepping stone to fusion and allow work to be done with higher and higher temperatures with more exotic materials. Modular reactors are in high-demand.

Mr. Navetta responding to a question about a "water split" answered that there are a few ways to have a water split; there is a high temperature process that thermally splits water and an electrolysis process.

Mr. Navetta listed benefits of an energy park to America as carbon-neutral "plug-in" fuels, hydrogen from surplus weapons and used nuclear fuel, a pathway to independence from foreign oil, revitalization of the American manufacturing sector, a renaissance of science and mathematics education and sustainable clean energy jobs. He listed benefits to the region as: keeps SRS on the path to fusion, makes SRNL the clean energy integration laboratory, it creates a potential for 25,000 high-paying jobs, an increase of clean water supplies, expands potential

for light element and medical isotope missions at SRS, reutilizes EM assets following Recovery Act footprint, and delivers new missions and state of the art facilities.

He stated that the implementation plan is to build a broad national coalition and partnership to develop a compelling business case and induce an "Apollo-like" presidential challenge. He continued that they plan to secure "seed" funding and plan and launch with resolve.

SRNS wants to continue its role as incubator of concepts and facilitator of implementation. He said SRNS wants to acquire buy-in from DOE/National Nuclear Security Administration (NNSA) and the community to a common energy park vision within six months. He continued that SRNS plans to transition leadership and ownership of the energy park initiative to the community within 12 months and put "the shovel in the ground" for the first implementing project within 18 months.

He summarized his presentation by stating that the energy park needs to be done right, using DOE/NNSA assets, at SRS and while engaging the community and region. He also referred to some back-up slides that showed graphics of the Hyperion Power Module, the General Electric PRISM, the General Atomics EM2, and the TerraPower Traveling Wave.

Karen Guevara, DOE-SR and co-DDFO, reminded the CAB that the request for the presentation came from the CAB after an earlier presentation she gave on the topic. She continued that it remains a fact that SRS is still an EM "landlord" site. She said that the energy park may not be part of its future mission, but listed areas that are part of the future mission, including strategic planning. She stated that Mr. Navetta has presented a contractor's vision on what may be.

CAB member Burke commented that all of the projects involve the private industry. He asked how much of the energy park would be funded by the federal government and how much would be funded by the participants in private industries. Ms. Guevara answered that they don't know that yet, but the Site is expecting there will be some private funding.

CAB member Hayes commented that on the discussion of features of the modular reactor designs there is no talk of any kind of nuclear waste that such a reactor would generate. She asked that this be discussed with the CAB and while doing so, to consider concerns on how this would affect nuclear proliferation. Mr. Navetta answered that the four companies that SRNS has continuing dialogue with have fast-spectrum burning reactors. These reactors are designed to burn used fuels, surplus plutonium materials, or high enriched uranium materials. He continued that these reactors burn this fuel in a manner that consumes the materials. This results in a matrix that is largely fusion products. He concluded that they will inevitably create some waste materials, but the materials they are producing are far less dangerous from a radiotoxicity standpoint than the materials that are coming out of conventional light water reactors. He added that when thinking long-term about issues such as geological repositories, it makes the design of those simple and assured.

CAB member Madeleine Marshall asked who owns the trademark to the U.S. Energy Freedom Center. Mr. Navetta answered that SRNS trademarked that term and it was paid for my corporate funds; the trademark was done four to five months ago.

CAB member Golden asked Mr. Navetta what is meant by the descriptor "small" in the term "small modular reactor." Mr. Navetta explained that all of the small modular reactors are designed to be factory-built and are all designed to be transported on either a flatbed trailer or a railcar, so they are much smaller than a conventional modular. As an example, he stated that the Hyperion Power Module's actual reactor vessel is roughly the size of a refrigerator.

CAB member Parson asked for clarification where Mr. Navetta stated that the energy park initiative would require authorizing legislation. He stated that there is an organization called the Energy Communities Alliance that has been pushing legislation that includes some authorizing legislation that specifically instructs the Energy Department to do energy parks. He stated that the current authorization for energy parks is contained in a series of legislation, not a single bill that expressly authorizes and instructs the department.

CAB member Domby instructed the CAB to go to DOE's website and type in nuclear materials to collect more information; he said DOE has an extensive amount of information available. He asked if the fiscal year request for the presidential budget for small modular reactor research and development is tied to the technology SRNS is dealing with and if not, what Site is getting that money. Mr. Navetta answered that when it comes to funding nuclear energy, the money largely goes to the Idaho National Laboratory and much that has been set aside for small modular reactor research is being used to develop two light water reactors. He continued by stating that Washington is currently fixated on small light water reactors and this is mostly because of the Nuclear Regulatory Commission (NRC).

CAB member Joe Ortaldo asked what other nuclear powers such as France or Russia are doing in this field. Mr. Navetta said that the rest of the world is more progressive than America. He briefly outlined some plans being made and executed by other countries.

CAB member Ranowul Jzar commented that she heard competitiveness within the project and that SRNS would do well not to compete with other sites so much, but collaborate.

CAB member Bernard asked Mr. Navetta if some of the energy park systems would employ waste as fuel, is there a point where SRNS needs to ask DOE to save waste or store it in useable forms. Mr. Navetta stated that he has had this discussion frequently. Ms. Guevara stated that since they are still at the conceptual stage, there is no chance that DOE would've dispositioned all of the waste before the energy park needs it.

Waste Management Committee- Joe Ortaldo, Chairperson

CAB member Ortaldo stated that his committee met on August 24 for a committee meeting and there was a SCDHEC public meeting that he attended recently. He reminded CAB members to pick up a copy of the closure plan from Shelly Wilson to make public comments; he said the document is very informative. He reviewed the Recommendation Report Bill Brizes gave earlier in the day.

He continued that the day's two waste management presentations are very important and are related to key issues in the System Plan. He commented that the System Plan points out that many complicated operations have to work together very closely and more quickly than before. He then summarized what the upcoming presentations were about and why they're important.

PRESENTATION: *Defense Waste Processing Facility (DWPF) Melter Bubblers- Karthik Subramanian, Savannah River Remediation(SRR)*

Mr. Subramanian stated that DWPF is SRR's vitrification facility and it's intended to vitrify all of its sludge waste and at the end of its life cycle, salt waste. He stated there is a significant impact to the sludge processing rate that will be gained in implementing the bubblers into the melter itself. He explained that the bubblers have been through decades of development. He then acknowledged everyone that was involved in developing the bubblers.

He provided an outline of his presentation, which included a liquid waste overview, a DWPF overview, the bubbler implementation, and answering specific questions.

He stated he would be talking about DWPF, which is the vitrification facility. He said they have liquid waste, salt waste, and sludge waste in the two tank farms. The sludge is then prepared, goes to DWPF where the glass is vitrified, and then goes to the Glass Waste Storage Building (GWSB). He stated that all of the liquid waste facilities are highly integrated and by putting in bubblers in the vitrification facility, they have to be able to have the tank farms heated at that rate and take the canisters to the GWSB at that rate. He added that the bubblers are a piece of the puzzle.

Mr. Subramanian stated that DWPF has averaged 215 canisters annually over the last 10 years. He said they have learned a great deal about the sludge batches and the chemical make-up of the sludge as the batches go into DWPF; SRR plans to use that information in order to run the bubblers.

He stated that the DWPF process is made up of two things. He referred to three objects on his graph, calling them cells, which are called “chemical process cells” and the melter. He then referred to the graph to explain how the DWPF process works. He also reviewed waste acceptance activities and glass quality requirements.

He defined the melter as a “joule-heated melter”; it has two electrodes that put electricity into the glass melt that makes it hot, it then melts and goes up the pour spout and into a canister. He then referred to a graph and pointed out other parts of the melter such as the melter shell, dome heaters and the riser. He stated that the ability of the DWPF to make glasses has multiple limiting steps in how fast it can go. He commented that the current limiting step is how fast the melter can melt the glass. He explained that as they get into different sludge batches and different components chemically, they melt at different rates. He said that the first step in making the sludge processing rate go faster is having the melter go faster. He said that the first option is putting in more electricity in a section he referred to on his graph, and another option is to increase flow within the melter.

He then explained what the current Glass Pump is and how it operates. He stated that it is an airlift bubbler that puts in a little bit of glass and air; it increases flow within the glass pool itself. He explained that the Glass Bubbler provides a six percent increase in canister productivity and has been in place since 2003.

Mr. Subramanian referred to a chart that reviewed melter bubbler implementation. He explained the difference between heat and cold on the graph. He stated that in an “agitated melter” there is a lower area of cold, which means that the melt rate would go faster. He referred to the graph to show the heat flow and said that it is a representation of what bubblers might do. He stated that the bubblers are intended to increase convective heat flow within the melt pool, thereby maintaining the temperature without the associated temperature gradients.

He stated that in order to put the melter into DWPF is to maximize the number that they can without impacting how long the melter will last. He continued that they also want to maximize symmetry and that they have to ask, “Where is the location in relation to the feed point?” There also needs to be a consideration for the ease of remote access and minimizing the impact on remote jumpers. He referred to a graph of the melter configuration and pointed out the different parts and how it works together.

He stated that a bubbler is a “fancy name” for a tube that pushes in air. He referred to a graphic that reviewed the assemblies of four bubblers. He stated that one of the bubblers has to have a level detector as well as the bubbler, and that this is the most complicated one. He then explained how each assembled bubbler works and what the parts are used for. He referred to a graphic of the top of a melter. He pointed it out and stated that it is not a trivial task to install a bubbler.

Mr. Subramanian stated that SRR’s installation and operation of the bubbler systems will always follow a safe, systematic, and controlled approach. He said that the testing program is being completed to determine any safety and operational impacts to the system; they do have a safety design strategy. He announced that the testing program is now complete. He added that the bubbler installation is on track to September 2010 and it is going through a detailed controlled start-up. The same glass quality requirements were met and SRR enhanced the production capacity to accelerate the sludge disposition rate.

To develop the bubblers, Mr. Subramanian stated that they have a library of programs and previous melters under similar conditions. He listed previous testing sessions that served as a comparison for the melter bubblers. Knowledge of test programs, and previous melters operated under similar conditions, were used to develop the strategy for implementation at DWPF. He referred to a chart that listed this information.

He listed the key parameters in DWPF bubblers, stating that the cold cap is critical to the operation of the DWPF and that maintenance is critical. He said it is the cap on top that contains all of the volatiles and heat within the melt pool. He explained that they will operate the bubblers in a way that will maintain the cold cap. Benefits of maintaining the cold cap include a minimized carryover of volatile species, the off-gas system life will not be significantly impacted and there will be minimal changes in radionuclide carryover.

He summarized his presentation by stating that a bubbler implementation strategy is a comprehensive plan that addresses specific technical issues and integration within the plant. A controlled strategy will be used to install and

operate bubblers at the DWPF facility; there will be a start-up phase and continuous improvement that will take place as bubblers are operated and more knowledge is gained.

CAB Chair Bettencourt asked if previous issues with the cold cap have been resolved and if so, how. Mr. Subramanian stated that when the water pools and evaporates there is a pressure surge, but he isn't aware of other issues. CAB member Ortaldo said that hasn't happened very often.

CAB member Bridges asked if they have looked into the chemistry of the liquid to somehow make the material less viscous so it would be more likely to mix because it would not be as sluggish as opposed to the bubbler approach. Mr. Subramanian answered that there is an idea of looking at rheological modifiers, but it's really the idea of being able to control the rheology of the sludge so to be able to feed it. He continued that in terms of melt rate, what controls the melt rate within the glass is really the sludge components. He stated that there is not much one can do with the melt pool because of the glass quality requirements that have to be met.

CAB member Bernard asked if there were three melters on slide 13. Mr. Subramanian answered no and that DWPF is the only melter available at SRS. He stated that M-Area melter was a melter that was run 15 to 20 years ago at SRS in a different area and the LAW Pilot melter is being run for WTP at the Hanford Site. CAB member Bernard asked what the diameter was of SRR's melter; Mr. Subramanian answered that the melt pool service area is roughly 2.5 sqaure meters, so the diameter is around eight feet.

CAB member Jayaraman asked why there is a need to increase the productivity of canisters. Mr. Subramanian answered that the need is to accelerate the closure of and the permanent immobilization of the sludge waste in the tanks. As far as need, he said he is not aware of regulatory drivers, but there is a need to cut the risks as soon as possible.

~Public comments-None.

PRESENTATION: *Top Ten Risk-Doug Bumgardner, Savannah River Remediation(SRR)*

Doug Bumgardner explained that when he speaks about the top ten risks, he is referring to the liquid waste program, its cost and schedule, but not hazards. He explained that there is an Integrated Safety Management Program that measures the hazards.

He then stated that to answer CAB member Jayaraman's question on why it is necessary to increase productivity of canisters, it is to close tanks faster. He said that in order to get the sludge out of the tanks, they have to produce more cans among other things. All of the top ten risks pertained to the closure of tanks.

He outlined the area of concerns as equipment reliability, major system failure, tank space availability, tank leak sites reducing useable space, technology readiness, Salt Waste Processing Facility (SWPF) start-up being delayed or processing rate being limited, meeting tank cleanliness requirements for closure, availability of closure documentation, and integration or coupling of execution activities. He stated that the purpose or intent of his presentation was to review the top two risks, equipment reliability and major system failures.

He stated that while looking at the risk handling strategy for equipment failure, there are a few issues that are key such as the System Health Monitoring Program, which is a program where engineers go out to look at data from the systems and identify whether or not it is performing as expected, and the Preventive Maintenance Program, the Corrective Maintenance Program and Spare Parts.

He explained that the System Health Process has a formal program for how it's done; there are two different reports on how it's done, a report done on a monthly basis and a more formal annual report. He said that they keep track of the systems with a "stop-light" chart; a green system is where there are no negative trends and it is performing as it should, a yellow system has some degradation and make require additional work, and a red system is a system where the needs are not being met. He stated that all of the above depends on the trend analysis.

He continued that engineers also look at maintenance impacts and system walk-down observations, and based on all that review, there will be a set of actions. He then referred to a graph that explains what considerations do into the System Health Reports.

The next slide was a graph of the SRR System Health Performance. Mr. Bumgardner said it is a stop-light tool they use to evaluate system trends. He stated that it looks like the amount of red is increasing, but when this particular graph was created there were 25 systems put into the system. He stated that the previous quarter was versus 100 systems. He said that if you look at that data today with the same number of systems, the red, which represents one system, looks the same.

He then referred to a graph reviewing the Corrective Maintenance Indicator; he said that they noticed that the Corrective Maintenance was increasing and this identified a need to hire additional maintenance mechanics. That was a corrective action taken because of the trends. He then referred to trend concerning process upsets at SWPF; he stated that as each incident was identified and characterized, actions were identified and carried through.

He listed an example of equipment failure as a failure in DWPF that's not a melter, and listed the risk as a lack of adequate equipment shares could result in degraded facility performance and decreased canister production rates. He listed handling strategies on this risk as replenish assembled until spares, revalidate spare equipment list, verify spares are maintained on hand, procure additionally spares as needed, projectize procurement of spares, and investigate system life extension. The unmitigated lifecycle risk is one year and the most likely residual lifecycle impact is six months.

CAB member Ortaldo asked if that one year and six months timelines meant that the particular system would be out of service during that time. Mr. Bumgardner answered that it represents a year increase to the project. CAB member Ortaldo asked that with the key systems, is it correct to say that those times represent extensions of the lifecycle time to complete the plan. Mr. Bumgardner said that is correct. CAB member Ortaldo asked if it costs 400 to 500 million annually; Mr. Bumgardner said yes.

CAB member Bridges asked what the sense of urgency is when they see red. Mr. Bumgardner answered that the red system may require immediate action or it could be a long-term action. The urgency would be dependent on the specific incident. Mr. Bumgardner then reviewed another equipment failure risk that could occur, this one more severe, listed the risk and reviewed the handling of the risk. He then reviewed the lifecycle risk, mitigated and most likely.

He summarizes his presentation by stating that SRR has a detailed risk program that's very methodical and structured, as well as a program where they look at the risk on a monthly basis. He stated that as the risks change, the risk program is updated, new actions are identified, and then annually there is a complete scrub of all the risks and this is associated with changes to the System Plan. He stated that when looking at the lifecycle, all of the acceleration activities that are ongoing help the risk profile. Equipment reliability and major equipment failures are top areas of concerns, specific risks are analyzed by subject matter experts, and risk handling strategies are included in the Integrated Priority List so money spent can be targeted.

CAB member Bridges asked Mr. Bumgardner if he thought he had adequate spare parts for the program. Mr. Bumgardner said that there are places where there could always be more parts.

CAB member Golden asked if she understands correctly Mr. Bumgardner said the program is never without risk. He answered that yes, they are never without risk.

CAB member Ortaldo asked how the system is utilized when budget time comes around and they have to decide what spare parts to buy. Mr. Bumgardner answered that ultimately everything rolls up into an Integrated Priority List, so as they near the budget, they look at that list.

CAB member Ortaldo reminded his committee that the next Waste Management Committee will be on October 19 at the DOE Meeting Center in Aiken and that they will have two Recommendations to review.

Facilities Disposition & Site Remediation-Dr. K. Jayaraman, Chairperson

CAB member Jayaraman briefly addressed his committee's objective and introduced all members of the committee. He said they had a committee meeting on August 18 and he summarized all of the presentations.

PRESENTATION: *EPA's Role in the Site Remediation and Cleanup Program at SRS-Robert Pope, EPA*

Robert Pope began his presentation by providing an overview and listed EPA's mission. He stated that EPA is an independent agency that was founded in 1970. He said that EPA sets national standards and many states pick up the laws. The rule is that none of the state laws can be less stringent than EPA, but they can be more so.
He stated that EPA has 10 regions and SRS is in Region four. Region four runs from Kentucky to Mississippi and from Florida to North Carolina. He listed the major DOE Sites in Region four, as well as other Sites of interest. Region four is the largest region as far as continental landmass.

He continued by stating that Superfund is a nickname for the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) which became a law in 1980 and was amended in 1986. CERCLA is a reactive law meant to address previously contaminated Sites and was established in nationally known disasters. Prior to CERCLA, if there was an emergency disaster EPA didn't have any authority as a federal entity to respond and the states didn't have any authority either. CERCLA provides authority to respond to threatened releases or releases of hazardous substances. The reason Superfund is referred to as such is because it was originated with a tax on chemical companies that created a fund that can be drawn upon to make these responses. EPA wanted a fund because it wanted a polluters pay policy. He stated that there were many small chemical companies that left waste and other environmental hazards; these companies would leave with no paper trail and there would be a mess to clean up. Superfund was a way to pay for these cleanups without directly affecting tax payers. He added that the tax attached to Superfund sunsetted during the second Clinton administration. Therefore, the fund is slowly going down.

He stated that the National Contingency Plan (NCP) is the set of implementing regulations or "rules" and procedures for how EPA responds to hazardous waste. It also establishes the risk level that triggers cleanup action. This risk number depends on what state you live in.

CERCLA was established in 1980, but it took some time for the federal government to realize that it had its own Sites to clean up and not just private Sites to clean. The Executive Order 12580 delegated to DOE and DoD the responsibility to implement certain provisions of CERCLA to clean up its own Sites. Mr. Pope explained that the Executive Order made DOE and DoD lead agencies. He continued that this is true for other federal Sites as well. He added that federal facilities must follow policies and procedures as spelled out in the NCP.

CAB member Bridges asked if CERCLA responded to the Gulf oil spill. Mr. Pope said that part of it does; since it was on the water, the coastguards would respond.

Mr. Pope listed what Sites are on the National Priorities List (NPL) in Region four. He referred to a graph of how many there are and where each is located. He stated there have been 48 Sites cleaned up and removed off the list in Region four. He stated that there are eight planned to be listed in FY10 and 14 planned to be listed in FY11. He said there has been a slow-down on listings in the past years.

He listed the DOE facilities in Region four that EPA works with as SRS in South Carolina, Paducah Gaseous Diffusion Plant in Kentucky, Oak Ridge Reservation in Tennessee, and Pinellas Plant in Florida. He also listed the Department of Defense (DoD) facilities EPA works with in Region four.

Mr. Pope commented that SRS was added to the Superfund National Priorities List in December 1989. He said that as it was added to the NPL SRS was required to have a Federal Facilities Agreement (FFA) which is an agreement with the state and EPA.

He then listed federal statutes for cleanup of federal facilities as CERCLA, RCRA, Oil Pollution Control Act, Safe Drinking Control Act, Clean Water Act and the Clean Air Act.

He continued that the FFA agreement for SRS was not signed until 1993; it is a three-part agreement with DOE, EPA and SCDHEC. The FFA governs the investigation and remediation program, the roles and responsibilities of each party, schedules and deadlines, enforceable milestones and penalties, the procedures for working together and if there is a dispute, the FFA offers a dispute resolution process.

Mr. Pope stated that EPA is responsible for the oversight of remedial actions at SRS, ensures adherence to the NCP, CERCLA, FFA, and provides guidance. EPA provides technical and procedural assistance, as well as information, guidance and training.

He stated that there are certain activities or events that require EPA and SCDHEC concurrence such as the Record of Decision (ROD), implementing remedies, operating remedies and determinations of the success of remedies. He stated that EPA's involvement is "early and often." When a Site is discovered, DOE contacts EPA to start the process of leading up to and selecting remedies, designing and installing remedies, and monitoring and evaluating the effectiveness of remedies.

He then listed the EPA team for Region 4, as well as the EPA SRS Team Support Staff. He overviewed the decision process for the EPA Project Managers; at SRS they utilize the "Core Team" process which means that there is core team of an EPA Project Manager, a state Project Manager and a DOE Project Manager, as well as additional support. The three people from the core team make the decisions. At the EPA management level, management looks at proposed remedies, make sure EPA is being consistent across the country, ensures the plan has state concurrence and then gives approval to proceed with the proposed plan. The EPA RPM represents the SRS core team's decisions. Next, a proposed plan is issued to the public, anywhere from 30 to 45 days are given for public comments, and then a ROD is written by DOE taking into consideration any public comments. The core team participates in writing the ROD. Mr. Pope explained that DOE signs the ROD first as lead agency, then EPA and SCDHEC signs the ROD.

He stated that EPA continues involvement and works to ensure the remedy is designed and constructed as it said it would be. He said that they try to reach the objectives in the ROD and ensure that it is protective of human health and the environment. He then noted that every five years, EPA completes a review.

He said that the decision documents "belong" to DOE, EPA, and SCDHEC. He stated that EPA must sign a ROD for it to be final per the requirements of the NCP. Mr. Pope said that collaboration is very important and that the team work approach is employed to ensure all FFA requirements are being met while also streamlining and accelerating the process. He stated that collaboration includes scoping meetings and design teams that look into special topics.

He reviewed the current activities and projects for FY10. Mr. Pope stated that there are 22 non-compliant High Level Waste Tanks to be closed by 2022; two tanks were closed in 1997 and tanks 18 and 19 are scheduled to close on 12/31/12. Two more tanks must achieve bulk waste removal by 9/30/10. He stated that individual tank closures are part of South Carolina's regulations using Closure Modules. He said that the Tank Farms are the CERCLA Operable Units, so even though the individual tanks are closed, EPA's involvement is with the Operable Unit itself. He noted that Tank Closure Milestones are in the FFA and are subject to dispute if missed. He commented that DOE prepare a Performance Assessment for each tank farm; he listed the status of each. SCDHEC is the lead regulatory agency for tanks up to the Proposed Plan and EPA reviews and issues comments to South Carolina on tank documents.

He stated that a Proposed Plan and Interim ROD are planned for each tank farm. If a change needs to be made to a ROD there has to be an Explanation of Significant Difference or a ROD amendment.

CAB member Jayaraman asked, concerning the Executive Order and three-part agreements, if either blunts the force of the EPA's power as the lead regulatory agency. Mr. Pope answered that there was reluctance amongst some federal agencies to comply with CERCLA and so the Executive Order came in place under George H. Bush that said that the agencies did have to comply with CERCLA. He said that it stated that they weren't going to use the Superfund money to clean up federal facilities but money that is requested from Congress. He noted that this did not take away from any of the regulatory authority of agencies such as EPA or SCDHEC. He concluded that he doesn't feel like this takes away from EPA's authority.

CAB member Bernard asked for Mr. Pope to elaborate on the "subject to dispute" issue concerning any missed Tank Closure Milestone. Mr. Pope stated that the milestones that have been negotiated into the FFA agreement for tank closure are subject to dispute. So, if DOE comes to EPA and says it won't be able to close a tank, or needs an extension, and EPA doesn't agree, they can go into a dispute with DOE. The dispute can be resolved at the Project Manager level or higher. Shelly Wilson, SCDHEC, commented that in terms of the letter EPA has to send that week concerning a tank closure, SCDHEC will be sending its own letter that week as well. She noted that SCDHEC is not behind in its schedule and has not missed any deadlines with the High Level Waste. She then addressed CAB member Jayaraman, since he previously referred to EPA as a primary regulator, that SCDHEC is not a secondary regulator.

CAB member Hayes commented that she read a report indicating that because of some confusion in the DOE RFP concerning cleaning up the tanks in F-Farm there is now an estimate that the contractor will change the number of tanks to meet that schedule. She asked if that would become an issue and will the milestone schedule be corrected or adjusted. Mr. Pope said that he believed she was reading the GAO Report and he stated there were a few issues. He commented that as far as EPA and SCDHEC are concerned, the tank schedule is fully enforceable and fully open to dispute, so they are not entertaining any ideas of changing that schedule. He stated that DOE is still responding to the GAO Report but EPA has not been approached and EPA would not be open to moving the schedule.

Jean Ridley, DOE-SR, said that at this time, DOE has no plans of changing the schedule and that is why SRR is in the process of developing additional technologies to meet those schedules. DOE does not plan to change those milestones in the FFA.

CAB member Golden commended the regulators and DOE for cooperating and working with each other.

Draft Recommendation: *Preservation of Shield Doors to Support Nuclear Non-Proliferation Programs and Other Scientific Programs at SRS and DOE-wide*

CAB member Jayaraman thanked Ms. Wilson for her comments about SCDHEC's role at SRS and stated that his committee will be requesting a presentation from SCDHEC in the near future.

He then stated that the CAB had an interesting conversation on the topic of shield doors at the previous day's meeting. He stated that the shield doors provide an unique opportunity to reserve a potentially important natural resource; the doors are clean of contamination. He stated that the Draft Recommendation "Preservation of Shield Doors to Support Nuclear Non-proliferation Programs and Other Scientific Programs at SRS and DOE-wide" is asking for DOE to assess the pedigree, resourcefulness, uniqueness, importance and probable use, while evaluating the cost effective use. If the steel has a desired pedigree, the Recommendation asks that the doors be stored for subsequent use.

He went over the reviews given by the CAB the previous day. CAB member Jayaraman requested that the Recommendation be approved. Ms. Freeman asked for a motion for the Recommendation to be approved. CAB member Jayaraman made the motion. CAB member Bernard and CAB member John Snedeker seconded the motion. The Recommendation was opened for discussion.

CAB member Bernard stated that the following sentence be stricken from the last paragraph of the background: "Program plan is not to remove the shield doors but grout them in place." He wants to replace that sentence with the following sentence: "Program plan is not to preserve the shield doors."

Ms. Freeman replied that the Recommendation Manager has to agree with CAB member Bernard's suggestion in order to change the wording.

CAB member Jayaraman asked if there were any other comments or suggestions. Bill Brizes, technical advisor, stated that CAB member Bernard's suggestion was a good one that would bring the Recommendation up to speed.

CAB Chair Bettencourt asked for a motion for the sentence to be changed. CAB member Jzar made a motion. There was a second. Everyone voted in favor of changing the sentence.
CAB member Parson pointed out a typographical error in the last sentence on the first page. It was corrected.

CAB member Jayaraman called for a vote on the Recommendation. 18 voted in favor, 0 were opposed and CAB member Denise Long abstained because she did not have enough information on the Recommendation. The Recommendation was approved.

CAB member Jayaraman announced that his committee's next committee meeting will be on October 5, 2010 at the DOE Meeting Center in Aiken.

Nuclear Materials Committee- Judy Greene-McLeod, Chairperson

CAB member Bridges stated the day prior that he changed Recommendation 271 from "pending" to "open." He asked if there were any disagreements over that changed status. If the Recommendation is kept at pending there can be some discussion on if DOE's response is adequate and if it is changed to open, the CAB can start the dialogue. He said there is no obvious reason why it should not be open. The record shows that Recommendation will stay open.

CAB member Howard subbed for CAB member Greene-McLeod, who was absent. He summarized the presentations from the day prior and introduced David Welliver.

PRESENTATION: *H-Canyon Documented Safety Analysis (DSA)-David Welliver, Savannah River Nuclear Solutions (SRNS)*

Mr. Welliver stated he would be providing an update on H-Canyon's DSA upgrade status. He stated in 2008, DOE directed SRNS to upgrade the H-Canyon safety analysis to meet the format and content requirements of DOE standard 3009.

He then went through the timeline of the DSA; SRNS has submitted the upgraded DSA to DOE in March 2009. DOE provided comments to SRNS in September 2009. He said that SRNS and DOE worked together to incorporate the comments, and DOE approved the DSA on May 28, 2010. He added that the implementation of DSA is scheduled for September 30, 2010.

He said that the DSA was a total ground-up rewrite of the existing document. A new hazard analysis was developed, hundreds of hazardous events were identified, and controls were selected. He added that a brand new accident analysis was developed and a new criticality analysis.

He continued that H-Canyon runs under Technical Safety Requirement (TSR) controls. He stated that these are controls that DOE approves in order for the facility to run within the risk envelope DOE approves. He said that part of the upgrade effort was to take a look at existing control schemes and select TSR controls using preferred hierarchy. He stated that examples of preferred hierarchy are engineered versus administrative, passive versus active and preventive versus mitigative. He stated that they selected control sets that prevented an event rather than mitigated an event. He stated that all of the accidents identified were either prevented or mitigated such that the facility could safely be operated without any undue risk to the public, workers or environment.

He stated that some examples of control improvements include safety-class redundant systems, a vessel air purge system, a seismic air purge system and H-Canyon exhaust ventilation modifications.

Mr. Welliver commented that DOE assembled a review team of 25 scientists and engineers from DOE to review the DSA and TSR. He added that no DOE comments called into question the validity of the underlying hazard and accident analysis or control selection. He stated that the comments focused on the level of detail in chapter two and four, as well as TSR bases, and the linkage between hazard analyses, the DSA and TSRs. He noted that to resolve these comments a joint DOE/SRNS team was established.

He listed the activities analyzed by DSA as processing of used fuel, processing or unirradiated uranium materials, processing of plutonium materials, processing of uranium, plutonium, and neptunium solutions, processing of laboratory sample returns from SRS analytical laboratories, and repackaging of TRU waste containers.

He stated that since May, when DOE approved the document, they have been working diligently to implement the document. He said that an implementation plan was developed and an implementation manager was identified as a senior SRNS manager. He listed key implementation activities as modifications to plant systems and equipment in order to support DSA and new TSR controls, training of operators, engineering, and support personnel, and procedure revisions. He stated that more than 70 to 80 procedures had to be rewritten or developed.

Mr. Welliver stated that they are now going through an Assessment of Readiness, where 18 functional areas are being assessed. Three independent assessments have been completed or started on H-Canyon; these assessments include management self-assessment, facility self-assessment, and readiness assessment. He stated that the assessment lines of inquiry include technical information, facility systems, and level of knowledge. The goal is to declare readiness by September 30, 2010.

CAB Chair Bettencourt asked when SRNS put the DSA together, did it use any outside independent sources and did DOE use any outside sources in its review. Mr. Welliver answered that SRNS did bring in outside contractors from other Sites. Patrick McGuire, DOE-SR, answered that DOE did not bring any sources in from off-site, but did use experts from Waste Disposition and other areas outside the nuclear materials purview.

CAB member Bridges asked that when they completed the new analysis did they find the consequences greater than the earlier analysis or the frequency of the occurrences greater. Mr. Welliver answered that when the earlier analysis was completed for H-Canyon, there was a different method of conducting analyses so it is hard to compare. He answered that because of the methodology some events were higher in consequence and frequency.

CAB member Jayaraman asked if the H-Canyon Safety Analysis takes into account an emergency event that could cause harm to the entire Site. Mr. McGuire stated that DOE is working on something called “earthquake day,” to gauge multiple facility implications to a major disaster. He listed all the emergency procedures and teams that are in place for such a case. He said that really only a seismic or tornado event could affect more than one facility at a time. He stated that the “lesson learned” from the oil spill in the Gulf is tightening and perfecting the organized emergency procedures on Site.

CAB member Golden asked if there is a set lifespan for the DSA. Mr. Welliver stated that every year they are required by law to review the DSA and TSR, and change or update whatever needs it. He said that they shouldn’t have to do another update for three to four more years.

CAB member Marshall asked if there were so many changes because of increased concern in seismic events and other related emergency scenarios. Mr. Welliver answered that the update was part of a fresh look at things He stated that the changes were issued mostly because of a change in mindset over the years since the document was originally drafted.

Mr. McGuire stated that in 2007 H-Canyon did not have a defined mission and was not planning on dispositioning any highly enriched uranium or used nuclear fuel. Therefore, they had to plans to upgrade the safety requirements. Now that the facility has been approved to process material, the safety documentation had to be updated to be in-line with DOE standard 3009.

CAB member Bridges asked how old the analysis was when DOE and SRNS updated it. Mr. Welliver answered late 80s to early 90s. Mr. McGuire answered that was the base analysis but that they continued to update/review the analysis annually. The review was roughly 10-years-old before it went through the new methodologies.

CAB member Howard stated that based on Mr. Welliver’s presentation Recommendation 259 should be closed.

Administrative Committee-Sarah Watson, Chairperson

CAB member Watson named her committee members, and stated that the new member campaign has ended and that she hopes all CAB members have taken the opportunity to ask others to apply. She listed all members that will be leaving the CAB.

She stated that the Support Team assigned seating so that the mentors and mentees can sit together. She stated that the CAB will continue with the mentoring program and CAB member Howard will continue to manage that process.

She noted that the CAB Retreat will be held on October 28-30 at Rose Hill Estates in Aiken; she encouraged every CAB member to attend. She commented that there is an extra day added to this year's Retreat. The agenda has not been finalized and suggestions are encouraged.

CAB member Bernard asked who he should inform if he has an idea for the Retreat agenda. CAB member Watson answered that he could inform her or any Support Staff member.

She stated that the CAB has received a great deal of information from the Speaker's Bureau and that she has asked Becky Craft, DOE-SR, to make arrangements so the CAB will have a few minutes at the beginning of each DOE tour where a CAB member can present to the tour group.

CAB member Watson stated that the SRS CAB is the only Board that uses online meetings and in an effort to continue as a pace-setter CAB, the Board needs to make sure that it takes every advantage to use the Live Meeting option. She stated that there will be a demonstration by Erica Williams, V3T, at the Retreat.

She stated that all CAB members should make sure their contact information is accurate and she asked all members to take notice of email notifications from the Support Team. She said it is a major source of contact and that members of the Board should specifically be diligent about checking their email before Full Board meetings. She stated that when members check into a hotel for a Board meeting, the Staff has made arrangements for the members, and it is up to Board members at check-in to notify the hotel staff of those arrangements or needs.

CAB member Hayes asked what the times are for each day of the Retreat meeting. CAB member Watson answered that the itinerary has not been solidified yet and that members will be notified. Ms. Flemming, the CAB's Federal Coordinator, stated that more than likely the meeting will be starting by 8:30 a.m. each day; the meeting will end by noon on the third day.

CAB member Parson asked how many applications for membership to the CAB were received. CAB member Watson answered 13.

CAB member Bernard ask CAB member Watson is if she put the schedule for the committee meetings together. She said she does not.

CAB member Jayaraman asked if DOE and SRS will be choosing the new members for the CAB. CAB member Watson said that is correct and said that this is in compliance with DOE regulations. CAB Chair Bettencourt stated that it is still the CAB members' responsibility to nominate as many members as they can.

~ Public Comments

Tom Clements, Friends of the Earth, said he is trying to monitor what DOE is up to in regard to the energy park initiative. He asked what is the status is of the task force; he said this has been responded to before but with the change in headquarters, he would like to be updated. He added that there are federal regulations regarding transfer of surplus property, 10-CFR 770, and he would like to know if DOE can affirm if this regulation will be met. He said it is not clear to him if the energy park will be on surplus land or other property at SRS.

He said that almost everything that could be thought of was proposed in the energy park initiative, and who knows what's going to stick, but in the reporting of the Hyperion Reactor and the signing of the MOU a few weeks ago, he saw some reporting that there may be an attempt to construct this Reactor without NRC approval. He commented

that none of the small modular reactors have been through the licensing process at NRC and this process won't start for another year or two. He stated that a reactor is not going to be built at NRC that's not licensed by NRC. He commented that earlier when DOE may have constructed a Reactor, only the MOX plant is being regulated by NRC and the DOE Sites. He said he does not feel a Reactor should be built at NRC without NRC approval. He recommended that this point be addressed in future presentations.

CAB member Snedeker commented that he has been listening to presentations for more than a year and said it seems like there is a "going-out-of business" sale. He said it is refreshing to hear a presentation about the energy park concept as opposed to what Mr. Clements commented on. He said that focusing on developments that will be beneficial over many years, rather than focusing on cleaning up the legacy from the past, is an inspiring and refreshing move forward and the CAB would be well-advised to invite presentations along these lines more often.

~Adjourn