

Meeting Minutes
Savannah River Site (SRS) Citizens Advisory Board (CAB) – Combined Committees Meeting
Beaufort, South Carolina (SC)
September 22, 2014

Monday, September 22, 2014 Attendance:

<p><u>CAB</u> Thomas Barnes Louie Chavis Robert Doerr Murlene Ennis Dr. Michael Havird – <i>Absent</i> Dr. Rose Hayes Dr. Eleanor Hopson – <i>Absent</i> Dr. Virginia Jones – <i>Absent</i> Cleveland Latimore Clint Nangle Dr. Marolyn Parson Larry Powell Dr. William Rhoten – <i>Absent</i> Earl Sheppard Harold Simon George Snyder Nina Spinelli James Streeter Ed Sturcken Christopher Timmers – <i>Absent</i> Louis Walters – <i>Absent</i></p>	<p><u>DOE</u> Angelia Adams, DOE-SR Jim Giusti, DOE-SR Allen Gunter, DOE-SR Brian Hennessey, DOE-SR Doug Hintze, DOE-SR Patrick McGuire, DOE-SR David Moody, DOE-SR Rich Olsen, DOE-SR Jean Ridley, DOE-SR Bill Taylor, DOE-SR Sandra Waisley, DOE-SR</p> <p><u>Contractors</u> Susan Blas, SRNS Kim Cauthen, SRNS John Gilmour, SRNS Kristin Huber, SRNS Jesslyn Anderson, Time Solutions James Tanner, Time Solutions Ashley Whitaker, Time Solutions</p>	<p><u>Agency Liaisons/Regulators</u> Tammy Robinson, Forest Service Kim Brinkley, SCDHEC Heather Cathcart, SCDHEC Trey Reed, SCDHEC</p> <p><u>Stakeholders</u> Gary Zimmerman Jean Sulc Steve Parson</p>
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Welcome & Agenda Review

CAB Facilitator, Ashley Whitaker, Time Solutions, welcomed everyone to the meeting. She read the Meeting Rules of Conduct and reviewed the day’s agenda, including the addition of Mr. Doug Hintze’s budget update. Ms. Whitaker announced there would be an SRS Information Pod meeting at Beaufort High School following the meeting. She reminded everyone how to access electronic copies of meeting materials through the CABNET feature and stated a public comment period was scheduled for the end of the meeting. She explained the purpose and process for using the question cards that were placed at each of the CAB members’ seats. She then welcomed CAB Chair Marolyn Parson to open the meeting.

CAB Chair Parson welcomed everyone to Beaufort, South Carolina stating four CAB members were from the “Low Country.” She introduced CAB member Earl Sheppard, a local resident, and asked him to say a few words about Beaufort. CAB member Shepard also welcomed everyone to Beaufort then he listed various local attractions. He said he hoped Beaufort would continue to be a location for future CAB meetings.

Facilities Disposition & Site Remediation (FD&SR) Committee Overview – Tom Barnes, Chair

CAB member Tom Barnes listed the FD&SR Committee members and reviewed the committee’s purpose. He provided a recommendation status update, stating recommendations 315 and 317 were open. CAB member Barnes announced the next FD&SR Committee meeting was scheduled for October 21, 2014, at the DOE Meeting Center. He said recent committee meeting attendance was low and he encouraged all committee members to attend, online or in person, since committee input and participation is valuable. He then welcomed Mr. Brian Hennessey, Department of Energy – Savanna River (DOE-SR) to begin his presentation.

PRESENTATION: Federal Facility Agreement Appendix E – Brian Hennessey, DOE-SR

Mr. Hennessey stated the purpose of his presentation was to satisfy a 2014 FD&SR Committee Work Plan requirement by providing information about the Federal Facilities Agreement (FFA) Appendix E. He said the FFA, established in the year 1993, was a legally binding agreement between the Department of Energy (DOE), Environmental Protection Agency (EPA), and South Carolina Department of Health and Environmental Control (SCDHEC). He said the FFA included administrative requirements, enforceable schedules for cleanup activities, and milestones for actions and documents. He explained the FFA listed Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response Compensation and Liability Act (CERCLA) “waste units,” other potential releases that DOE must address, and the process for addressing unknown additional releases. He stated the FFA identified DOE, EPA, and SCDHEC responsibilities as well as provided requirements for “Removal from Service Closure” of some SRS liquid waste tanks. Mr. Hennessey explained that Appendix E was located in the FFA and had three appendices, E.1, E.2, and E.3, which listed cleanup milestones for SRS waste sites. He said DOE annually updated and submitted Appendix E to EPA and SCDHEC for review on or before November 15; however, he explained due to the October 2013 government shutdown, Appendix E for fiscal year (FY) 2014 was submitted in December 2014. He provided the schedule for preparing, submitting, revising, and issuing Appendix E. Mr. Hennessey said documents DOE must include within Appendix E included: 1) RCRA Facility Investigation/ Remedial Investigation (RFI/RI) Work Plan, 2) RFI/RI Report with Baseline Risk Assessment (BRA), 3) Corrective Measures Study/Feasibility Study (CMS/FS), 4) Statement of Basis/Proposed Plan (SB/PP), 5) Record of Decision (ROD), and 6) Corrective Measures Implementation/ Remedial Action Implementation Plan (CMI/RAIP). He said the RFI/RI Work Plan was used to determine the extent of contamination while the RFI/RI Report with the BRA assessed the extent of contamination and associated health and environmental risks. Mr. Hennessey explained the CMS/FS provided cleanup alternatives based upon issues found at a waste unit. He stated the SB/PP identified a preferred remedial alternative for a waste unit, which incorporated public comments. He mentioned once public comments were identified, DOE, EPA, and SCDHEC issued the ROD, which included the official announcement of the chosen remedy and reasons why the particular remedy was selected. He said once the ROD was issued, DOE developed a CMI/RAIP, to implement the selected remedy for the waste unit. Mr. Hennessey provided a flow diagram to explain the necessary documents required to reach milestones within Appendix E.

CAB member Rose Hayes asked why members of the public were not allowed to review the potential ROD before the final ROD was issued. Mr. Hennessey explained that DOE read and evaluated all public comments for the proposed ROD and issued responses to each public comment in a record called a “Responsiveness Summary.” Mr. Hennessey said DOE, EPA, and SCDHEC only reconsidered the selected remedy within the ROD if public comments provided sufficient evidence; however, if no changes were required, DOE submitted a “Revision Zero ROD” to the regulators, which would go through the final review before being issued by DOE. Mr. Hennessey stated, “There was not provision in the CERCLA for the public to review the draft ROD. The public reviews the decision before it becomes a ROD.”

CAB member Nina Spinelli asked how much time it took to complete the FFA document flow chart. Mr. Hennessey explained the process took approximately three to four years to begin the field start through issuing the ROD.

Mr. Hennessey focused on the May 2014 approved Appendix E by providing an overview of FY 2014 Appendix E major changes, as well as key milestones that were approved for fiscal year (FY) 2015 and FY 2016. He explained that the three-year delay at the Consolidated Incineration Facility (CIF) and one-year delay at the Wetland Area at Dunbarton Bay (WADB), due to regulatory documents and RA, start were both approved in order for DOE to complete the D-Area Ash Basin, D-Area Ash Landfill and D-Area Coal Pile Runoff Basin projects between FY 2014 and FY 2020. He explained the missions in A, H, K, L, and N-Areas were extended because several waste units were identified that could be cleaned up earlier instead of waiting until those areas were inactive. Mr. Hennessey mentioned that milestones for the Ash Pile, Coal Pile Runoff Basin, and Outfall in A-Area were extended so more resources would be available for the D-Area ash projects. He said DOE recently requested a 15-month extension for the FY 2015 milestone to complete operational closure of four High-Level waste tanks; however, since the extension request was disallowed by SCDHEC and EPA, DOE planned to enter into dispute resolution in the near future. Mr. Hennessey stated in November 2014 DOE would submit the FY 2015 Appendix E proposed major changes stating FY 2016 milestones would move to Appendix E.1 and FY 2017 milestones would move to Appendix E.2. He said any potential impacts on the FFA cleanup schedule were unknown at that time since the SRS Environmental Management (EM) lifecycle baseline was still being developed. He said DOE continued to identify waste units

eligible for earlier cleanup in order to maintain progress and decreasing of long-term scope. He provided a chart titled, “SRS Area Completion Plan” to show the completion dates for industrial areas of SRS and groundwater units going along with each area. Mr. Hennessey said the regulatory approved FY 2014 FFA Appendix E was available online at <http://www.srs.gov/general/programs/soil/ffa/ffa/html>.

CAB member Hayes asked why scheduling and closure of the High-Level waste tanks was not top priority in Appendix E. Mr. Hennessey said closure of the High-Level waste tanks themselves was within the scope of the FFA; however, scheduling tank closure activities was not handled within the Appendix E process. Mr. Doug Hintze, DOE-SR, mentioned there were different types of schedules at SRS; however, the Integrated Lifecycle Cost Estimate was the document that showed how all the different programs and schedules fit together. Mr. Hintze said most of the area completion work Mr. Hennessey discussed was in the “Soil and Groundwater Remediation Program Baseline summary (PBS) 30.”

CAB member Streeter asked what factor drove the Integrated Lifecycle Cost Estimate. Mr. Hintze stated the critical path for the Integrated Lifecycle Cost Estimate was the Liquid Waste program.

CAB Chair Parson addressed the Area Completion Chart within Mr. Hennessey’s presentation by asking what potential site missions would support F-Area and H-Area tank farm operations from FY 2016 through FY 2032. Mr. Hennessey said those activities involved F-Area analytical laboratory, which supported the F and H-Area tank farms.

PRESENTATION: Annual Integrator Operable Unit Program Update – Brian Hennessey, DOE-SR

Mr. Hennessey stated the purpose of his presentation was to satisfy a 2014 FD&SR Committee Work Plan requirement by providing a description and update of the Integrator Operable Unit (IOU) Program. He provided a map of SRS and provided an overview of the IOU Program. He said Upper Three Runs, Fourmile Branch, Pen Branch, Steel Creek, and Lower Three Runs were the five major streams at SRS and were added to the FFA in 1997. He showed each streams’ location at SRS before he explained how each IOU included surface water, sediment, floodplain soils, plants, and animals. He stated the purpose of the IOU Program was to evaluate contaminants in SRS stream systems, determine whether early cleanup actions were necessary, and ensure a final IOU cleanup decision was made once all IOU cleanup actions were completed. He said as periodical reports and monitoring occurred, DOE-SR evaluated whether there were any conditions that warranted early cleanup actions. He said phase one of the IOU Program involved developing work plans for each of the six IOU’s. Mr. Hennessey explained that developing work plans was a “tremendous undertaking” since all information from both DOE and non-DOE sources was pulled together for each of the six IOU’s. Mr. Hennessey said phase two potentially lasted several years since it was necessary to continuously monitor and evaluate studies so a complete picture of contamination was created for each IOU. Mr. Hennessey explained that during phase two, “human health and ecological IOU receptors” were used to determine an IOU’s amount of risk. He stated that Upper Three Runs, Fourmile Branch, Pen Branch, Steel Creek, and the Savannah River were in phase two and would remain that way for several years; however, Lower Three Runs was ready to enter phase three. He explained phase three involved conducting conventional remedial investigations to evaluate data, define any problems that required DOE to take action, conduct feasibility studies to assess remedial alternatives, and if necessary issue a Record of Decision (ROD).

He listed several organizations that were involved with the IOU Program. He provided a map of the Upper Three Runs IOU stating the phase one field start (FS) occurred in June of 2003, phase two FS occurred in January of 2007, and phase three FS was scheduled for November of 2034. He mentioned Upper Three Runs IOU had the highest reported biodiversity of aquatic macroinvertebrates of any stream in the western hemisphere. He provided a map of the Steel Creek IOU before he focused on an area inside the Steel Creek IOU known as the Wetland Area at Dunbarton Bay (WADB). He stated there was a large area where coal ash was deposited on the ground towards a Carolina Bay known as the Dunbarton Bay. Mr. Hennessey said coal ash that was deposited outside the P-Area Ash Basin covered approximately 38 acres. He explained a Statement of Basis/Proposed Plan (SB/PP) was submitted in May of 2013. He said DOE planned to issue a ROD in August of 2015 and begin remedial action in November of 2016. He provided pictures of a petroleum release site in D-Area that had been fully restored. Mr. Hennessey said results of the Savannah River Ecology Laboratory (SREL) assessment found that the D-Area stream channel was dominated by wetland plant species. He provided a map of the Lower Three Runs IOU. He explained that DOE felt it was the appropriate time to move towards a final cleanup decision for Lower Three Runs since P-Area and R-Area, which were located in Lower Three Runs, were being closed. He said results of the Lower Three Runs final

periodic report, which was conducted in September of 2012, found three areas along Lower Three Runs that exceeded an agreed upon action level between DOE, EPA, and SCDHEC. He showed pictures of the early actions taken in D-Area to remove the contaminated soil, install fence lines, and post warning signs. Mr. Hennessey said in order to begin the phase three assessment for Lower Three Runs, DOE, EPA, and SCDHEC must agree on the grouping of data, the type of human health risk assessment, and results of the ongoing ecological assessment. He listed the number of analytical records collected for Lower Three Runs before showing the schedules for each IOU.

CAB member Hayes asked why Par Pond was not drained to lower contamination. Mr. Hennessey said cleaning the areas around the tail of Lower Three Runs was the priority since trespassers could maybe experience “real exposure.” Mr. Hennessey said the contamination in Par Pond would probably not expose anyone to contamination.

Draft Recommendation Discussion

“Updates Provided to the Citizens Advisory Board at the Bi-Monthly Committee Meetings and Via Email”

CAB member Larry Powell read the draft recommendation before asking if there were any comments. Mr. Jim Giusti, DOE-SR, said there would be news stories DOE-SR would not provide information about to the CAB since some protocols hinder DOE from immediately involving the public.

CAB member Hayes stated the issue could be resolved by SRS agreeing to provide the CAB with information about upcoming issues that were within the CAB’s purview.

CAB Vice Chair Harold Simon asked Mr. Giusti if it was safe to assume that when the media contact DOE for information that information would be printed. Mr. Giusti replied, “I would say that was true about 90 percent of the time, but I might talk to a reporter and they may just keep information to wait and see where the story goes.” CAB Vice Chair Simon asked Mr. Giusti if it was possible for DOE to inform the CAB about that type of information shared with a reporter. Mr. Giusti replied, “No” and he explained he had to go through an approval process, which extended all the way up to DOE-HQ, every time he provided information to the media. Mr. Giusti said there would be situations when DOE would not inform the CAB of information given to a reporter since DOE felt it was inappropriate to share information about a story that may or may not be printed. Mr. Giusti said he was happy to provide all news releases to the CAB; however, when a reporter called and asked a question, specific DOE-HQ protocols stated the given information is only given to the reporter.

CAB Chair Marolyn Parson thanked Mr. Giusti for his clarification and she said the CAB had already seen an increase in communication due to the recommendation. CAB Chair Parson said she hoped the recommendation would be approved since its intent was to clarify communication. Mr. Giusti said he was happy to send the CAB as much information as he was allowed.

CAB member Powell asked Mr. Giusti if a member of the press called, was there anything he could tell the press that he could also tell the CAB. Mr. Giusti said “No,” and explained that providing the CAB with pieces of information that was given to the media would not help the CAB understand the situation. He explained information provided to the media would be better understood when the information was together in context with the entire news story. CAB member Tom Barnes said he wanted the draft recommendation to be voted on the following day.

Nuclear Materials (NM) Committee Overview – Rose Hayes, Chair

CAB member Hayes began her report by providing a recommendation status update stating recommendations 307, 319, and 320 were open. She discussed the purpose of recommendation 307 before she addressed recommendation 319. She said recommendation 319 suggested the CAB could use some of the materials in L-Basin to conduct preliminary testing to help determine parameters of the future design of a nuclear repository. She explained that recommendation 320 was the CAB’s continued suggestion that priority be given to looking at technological advances in chemical separation. She said further discussion of the three open recommendations would occur the following day. She announced the next NM Committee meeting was scheduled for October 7, 2014, at the DOE Meeting Center in Aiken, SC. She then welcomed Mr. Allen Gunter, DOE-SR, to begin his presentation.

PRESENTATION: K-Area Update – Allen Gunter, DOE-SR

Mr. Gunter said the purpose of his presentation was to satisfy a 2014 NM Committee Work Plan topic by providing an update on K-Area and plutonium storage. He showed the “SRS Waste and Material Flow Path” to illustrate the location of K-Area at SRS. He stated DOE decided in 1998 to consolidate non-pit plutonium from Rocky Flats Environmental Technology Site (RFETS), Hanford, Los Alamos National Laboratory (LANL), and Lawrence Livermore National Laboratory (LLNL) sites to SRS. He explained that also in 1998, DOE decided to convert the K Reactor to a plutonium storage facility in order to accelerate the Rocky Flats de-inventory program. Mr. Gunter mentioned that DOE approved the consolidation of only RFETS plutonium to SRS in 2001; however, DOE approved the consolidation of the remaining non-pit plutonium to SRS from Hanford, LANL, and LLNL sites in 2007. He said some of the plutonium at SRS was under International Atomic Energy Agency (IAEA) safeguards and explained prior to consolidation efforts, the plutonium at RFETS and Hanford was under IAEA. He explained once the plutonium came to SRS it remained under IAEA safeguards. He stated due to limited storage space, DOE placed additional material under the IAEA safeguards. Mr. Gunter mentioned IAEA personnel visited SRS periodically. He described how cameras and detectors transmit a live video feed to Vienna in order for the IAEA to monitor the storage. He provided pictures of K-Area storage in 2000 and 2009. He showed a picture of the 9975 shipping container, which he mentioned was a DOE-approved “Type B” shipping container. He also showed a cross sectional image of a 3013 container within a 9975 container. Mr. Gunter stated in 2010 that DOE began a project to expand the storage capacity of K-Area; however, he explained the expansion decision was made prior to any discussions were made concerning the future of the Mixed Oxide Fuel Fabrication Facility. He said phase one of the K-Area expansion was completed and became operational in June of 2012 while phase two was scheduled to be completed in November of 2014. He mentioned the K-Area expansion added an additional 2,500 storage positions in the K-Area storage facility. He discussed the DOE 3013 Surveillance Program that continuously monitored materials to ensure the assumptions remained intact. He said in year 2005, DOE-SR began conducting Non-Destructive Examinations (NDE). He stated when the NDE was completed there were no pressurization concerns. He said DOE-SR began conducting Destructive Examinations (DE) in the year 2007, which looked for corrosion, gas analysis, and material characteristics. Mr. Gunter also described the Shelf Life Program that was being conducted at LANL on small-scale and large-scale samples. Mr. Gunter provided images of a convenience can containing plutonium oxide from the K-Area Interim Surveillance Glovebox before he discussed surveillance results. He said SRS had the experienced staff and facility to handle safe storage of plutonium in K-Area and SRS continued to evaluate storage conditions to ensure safe storage.

CAB member Hayes asked how much material remained at LANL. Mr. Gunter said it was a small quantity; however, due to classification reasons he was unable to specify the exact number. CAB member Hayes asked if there was news about when the Waste Isolation Pilot Plant (WIPP) would be accepting shipments again. Dr. David Moody, SRS Manager, said the Department was planning for WIPP to reopen in 18 months.

Waste Management (WM) Committee Overview – Earl Sheppard, Chair

CAB member Earl Sheppard listed the WM Committee members and reviewed the committee’s purpose. He provided a recommendation status update, stating recommendations 311 and 312 were open. He announced the next WM Committee meeting was scheduled for October 7, 2014, at the DOE Meeting Center. CAB member Sheppard stated there was no presentation scheduled for that day; however, he said Mr. Steve Wilkerson, Savannah River Remediation (SRR) would provide an update the following day on Saltstone Disposal Unit Vault four.

Draft Recommendation Discussion

“Improving Public Communication and Understanding of the Liquid Waste Program and Revisions to the Liquid Waste System Plan”

CAB Chair Parson introduced and read the draft recommendation. She suggested changing the word “route” to “routine” on recommendation item number eleven. She also read recommendation 269 titled “Semi-Annual Review of the Inputs and Assumptions Used to Develop the Liquid Waste System Plan” which related to the draft recommendation. She explained at the August 12, 2014, WM Committee meeting, Mr. Jim Folk, DOE-SR, reminded the CAB of recommendation 269 and explained DOE had not done everything it agreed to do back in 2010. CAB

Chair Parson provided background information on recommendation 269. CAB member Sheppard stated he would like the draft recommendation to be voted on the following day.

Administrative & Outreach (A&O) Committee Overview – Nina Spinelli, Chair

CAB member Spinelli announced that all CAB members who were eligible for reappointment had reapplied for their next term. She said the CAB received 14 applications during the 2015 Membership Campaign; however, she said even though this year's campaign was over, the CAB Support Team accepted applications year-round. CAB member Spinelli briefly asked the CAB members to complete a survey she developed, which would help her draft a paper about the CAB's use of online technology for the Waste Management Symposium. She then began discussion of two draft position papers.

Discussion of Draft Position Papers

“The Savannah River Site Citizens Advisory Board's Position on the President's 2015 Budget Proposal”

CAB member Spinelli introduced the first draft position paper stating the goal of the position paper was to express the CAB's interest in the amount of funding DOE requested to meet milestones. She explained the verbiage of the draft position paper was similar to last year's position paper; however, costs, dates, and measurements were updated and incorporated. CAB member Spinelli read the draft position paper before asking if there were additional comments or suggestions.

Mr. Patrick McGuire, DOE-SR, suggested correcting the last sentence in the seventh paragraph to read “Funding for Used Nuclear Fuel (L-Area) in the FY 2015 President's Request is \$43 million, down \$2 million from 2014.” Mr. Hintze suggested deleting the entire first sentence of the eighth paragraph since it was incorrect. This draft position paper would be voted on the following day.

“The Savannah River Site Citizens Advisory Board's Position on Savannah River National Laboratory”

CAB member Bob Doerr introduced the second draft position paper stating he wanted to discuss various additions and changes made by the Executive Committee. He read the second draft position paper before asking if anyone had additional comments or suggestions.

Mr. McGuire suggested the CAB consider adding “Chemical Processing/Separation,” “Materials,” “Tritium/Hydrogen,” and “Environmental Science” to the bulleted list of expertise's for SRNL. Mr. McGuire asked for clarification on the intent of including the sentence, “Over 65% of the funding for the SRNL is from non-SRS customers.” CAB member Doerr said he felt it was important to include in the draft position paper that SRNL funding was almost self-sustaining. CAB members decided to add “A significant percentage of funding for SRNL is from non-SRS customers, which allows for a robustness of services otherwise unachievable” to the fifth paragraph of the draft position paper.

CAB Chair Parson asked “SRNL” to be spelled out in the title of the draft position paper. She also suggested adding the sentence “Uniquely, SRNL is Environmental Management's only corporate laboratory, and does work at all EM sites” to the first paragraph of the draft position paper. CAB Chair Parson asked to delete “wants to” from the first sentence on the second page. Dr. Moody discussed the cost savings and return on investment of SRNL. CAB member Doerr suggested adding “Modest technology development investments for more than five years have resulted in over \$5 billion in projected savings in Environmental Management's lifecycle cost and 20 percent return on investment” to be included in the sixth paragraph of the draft position paper.

CAB member Clint Nangle said he wanted to include the safety record of the SRNL. Dr. Moody said he believed Dr. Terry Michalske, SRNL, communicated that SRNL was the safest of DOE's national laboratories for the last 12 years. CAB member Nangle supported the decision to add “SRNL is the only one of those 17 which is an EM laboratory and has been rated number one in safety for the last 12 years” to the third paragraph of the draft position paper. This draft position paper would be voted on the following day.

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

CAB member Clint Nangle listed the S&LM Committee members and reviewed the committee's purpose. He announced the next S&LM Committee meeting was scheduled for October 21, 2014, at the DOE Meeting Center. He said there were no open or draft recommendations for the S&LM Committee to discuss. He then welcomed Mr. Hintze to begin his presentation.

PRESENTATION: Savannah River Site Budget Update – Doug Hintze, DOE-SR

Mr. Hintze said the purpose of his presentation was to discuss the Federal Budgeting Process and status of SRS FY 2015 funding. He stated he planned to discuss how the continuing resolution (CR) would impact funding for SRS programs. He provided a diagram of the Federal Budgeting Process. He mentioned the last time there was an appropriations before the start of the year was in 1997. He provided a chart of the Major SRS Cleanup Program Areas, which were called Performance Baseline Summaries (PBS). He discussed a chart titled, "FY 2015 Continuing Resolution," which showed the funding breakdown for each PBS. He said the President signed a CR, which was approved through December 11, 2014. He said the CR funding would be at the FY 2014 Enacted amount minus .0554 percent. Mr. Hintze explained DOE-SR was unsure when the final appropriations would be delivered. Mr. Hintze commented there was a lapse of appropriations this past year and DOE did not receive funding until the end of March 2014. He focused on the "FY 2015 Continuing Resolution" chart and explained how the highlighted amounts were called "lower of" amounts. He said DOE-SR did not know what funding to expect and he explained DOE-SR could receive either the FY 2014 Enacted amount, the FY 2015 President's Budget Request, the FY 2015 House Mark, or the FY 2015 Senate Mark. Mr. Hintze explained that the amount of uncertainty resulted in DOE-HQ giving DOE-SR the lowest figure in each of the program areas. He mentioned the highlighted number was not necessarily the amount of money DOE-SR would receive; however, he said DOE-SR would receive the highlighted amount for the percentage of the year that the CR existed. He said since the CR only went through December 11, 2014, which was approximately 15 percent of the year. He explained DOE-SR would then receive 15 percent of the highlighted number.

Mr. Hintze addressed the highlighted amount for PBS 12 Used Nuclear Fuel was 24 million dollars. He mentioned the program amount was reduced because Congress decided that National Nuclear Security Administration (NNSA) should pay for the activities being performed at SRS that supported the Non-Proliferation Program. He explained that instead of Congress decided to reduce the funding amount to DOE-SR instead of continuing to provide DOE-SR with the amount of money. He stated there was approximately 18 million dollars that NNSA would pay if the "lower of" highlighted amount were the actual appropriations; however, he explained that during the CR, the highlighted "lower of" amount almost guaranteed the UNF Program at SRS would have to be stopped. Mr. Hintze said the UNF situation was a great example of why the "lower of" amounts and CR uncertainties really hurt SRS. He discussed the "lower of" highlighted amount for PBS 14C Radioactive Liquid Tank Waste. He stated that last year the Saltstone Disposal Unit #6 was part of the FY 2014 Enacted amount of 566 million dollars; however, this year Saltstone Disposal Unit #6 was a separate line item project and the funding was broke out. Mr. Hintze explained that last year's amount for Saltstone Disposal Unit #6 was zero because it was not a separate line item project and this year, instead of DOE-SR having 566 million dollars, the "lower of" amount was 531 million dollars.

Mr. Hintze said since DOE-SR received its FY 2014 funding late last year, and was unable to perform all the scheduled work, DOE-SR had more carryover of funds than anticipated. He stated the carryover funds, was known as "no year money," and would not go away. He addressed the chart again, and said the carryover funding was not shown in the chart, and the funding amounts would be less impactful because of the available carryover funding. He explained that Congress passed the 2014 "Highway and Transportation Act," which extended the interest rates that affect pensions DOE-SR had to pay. Mr. Hintze mentioned how the "Highway and Transportation Act" enabled DOE-SR's contributions to the pension fund to be less than originally planned. He explained those cost savings would reflect the cost to perform work and the actual cost to perform work would be less in every single area at SRS. He mentioned DOE-SR was analyzing the amount of carryover funds, projected amount of scope, and the pension savings to determine how to approach OMB to realign the highlight "lower of" amounts. He stated he felt DOE-SR would be okay and be able to get by through the December 2014 timeframe; however, DOE-SR would not be able to spend at the rate originally anticipated. Mr. Hintze explained the CR would end December 11, 2014, but he said he thought an appropriations would not be available in December since this year was an election year. Mr. Hintze commented since elections occurred during the first week in November, there would be a lame duck

Congress from November to January. He said the benefit of not having an appropriations for the entire year was that when the new Congress was seated in January, the House and the Senate markups went away because the old Congress was disbanded. He then explained how the only amounts remaining would be the President's Budget Request or the FY 2014 Enacted amount, which meant DOE-SR would receive funding based on the "lower of" for those two amounts.

CAB member Doerr asked what the total would be if the highlighted "lower of" amounts were added together. Mr. Hintze said the amount would be 1174 million dollars.

CAB member Barnes asked if DOE-SR had the authority to move funds from one category to another without asking OMB. Mr. Hintze said, "No" and explained DOE-SR could not shift money between accounts since OMB placed "Category B Restrictions" on the money. Mr. Hintze clarified by saying the black numbers were specific Congressional control points, which DOE-SR did not have flexibility to change. He stated if it was necessary, DOE-SR had the authority to move up to five million dollars internally between the black control points; however, he stated Congress must be notified. He also explained if more the five million dollars needed to be moved, DOE-SR would have to go through a formal process to request permission to move funds.

CAB member Hayes asked if DOE-SR planned to use the term "Spent Nuclear Fuel" or "Used Nuclear Fuel." Mr. Hintze said from a budget perspective both terms were used interchangeably; however, he would discuss the correct usage with the CAB Points of Contact.

CAB member Spinelli asked why the House reduced funding for PBS 12 Used Nuclear Fuel. Mr. Hintze explained NNSA was responsible for the United States' Non-Proliferation Program, which partly dealt with bringing back materials from around the world. Mr. Hintze said the House decided NNSA should pay for the activities being performed at SRS that supported the Non-Proliferation Program. Mr. Hintze explained the House reduced the funding amount for PBS 12 Used Nuclear Fuel since NNSA would have to pay for work being performed by EM.

CAB Chair Parson asked if activities within PBS 14 Liquid Waste were included also included within PBS 30 Soil and Groundwater Remediation. Mr. Hintze explained that all Liquid Waste operational closure and deactivation activities occurred within PBS 14 Liquid Waste; however, final closure activities with regulators occurred within PBS 30 Soil and Groundwater Remediation.

Public Comments

Mr. Gary Zimmerman, public, thanked the CAB for allowing a public comment period and stated he attended various CAB meetings for approximately 15 years. He said he attended the May 2014 Full Board meeting and referenced a discussion that occurred about pebble-like material in Germany. Mr. Zimmerman stated he recently read an article that discussed how the German pebble material was not a big deal and there were only a few thousand pebbles; however, Mr. Zimmerman said he felt the issue was a big deal since each pebble was the size of a billiard ball, and there were approximately 900,000 pebbles. He mentioned the article also mentioned the possibility of Chalk River material coming to SRS. Mr. Zimmerman said the potential transporting of Chalk River materials scared him because the material was liquid high-level. Mr. Zimmerman explained that he felt the material from Chalk River was chemically different from the materials already located at SRS; however, he encouraged the CAB to draft a recommendation or position paper disapproving any new liquids from coming to SRS.

-Meeting adjourned

All presentations are available for review on the SRS CAB's website: cab.srs.gov

Meeting Minutes
Savannah River Site (SRS) Citizens Advisory Board (CAB) – Full Board Meeting
Beaufort, South Carolina (SC)
September 23, 2014

Tuesday, September 23, 2014 Attendance:

<p><u>CAB</u> Thomas Barnes Louie Chavis Robert Doerr Murlene Ennis Dr. Michael Havird – <i>Absent</i> Dr. Rose Hayes Dr. Eleanor Hopson Dr. Virginia Jones – <i>Absent</i> Cleveland Latimore Clint Nangle Dr. Marolyn Parson Larry Powell Dr. William Rhoten – <i>Absent</i> Earl Sheppard Harold Simon George Snyder Nina Spinelli James Streeter Ed Sturcken Christopher Timmers – <i>Absent</i> Louis Walters – <i>Absent</i></p>	<p><u>DOE</u> Angelia Adams, DOE-SR Jim Giusti, DOE-SR Doug Hintze, DOE-SR Pat McGuire, DOE-SR David Moody, DOE-SR Rich Olsen, DOE-SR Tony Polk, DOE-SR Jean Ridley, DOE-SR Bill Taylor, DOE-SR Sandra Waisley, DOE-SR Gail Whitney, DOE-SR</p> <p><u>Agency Liaisons/Regulators</u> Rob Pope, EPA Tammy Robinson, Forest Service Kim Brinkley, SCDHEC Beth Cameron, SCDHEC Heather Cathcart, SCDHEC Shelly Wilson, SCDHEC</p>	<p><u>Contractors</u> Tricia Kilgore, BJWSA Gary Mills, SREL Gene Rhodes, SREL Kim Cauthen, SRNS John Gilmour, SRNS Kristin Huber, SRNS Amy Meyer, SRNS Bernard Nora, SRNS Karen Vangelas, SRNS Larry Ling, SRR Steve Wilkerson, SRR Jesslyn Anderson, Time Solutions James Tanner, Time Solutions Ashley Whitaker, Time Solutions</p> <p><u>Stakeholders</u> Billy Keyserling Mindy Mets Suzanne Rhodes Jean Sulc Gary Zimmerman</p>
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CAB Facilitator, Ashley Whitaker, Time Solutions, reviewed the agenda and Meeting Rules of Conduct. She reminded everyone that discussion was limited to those seated around the table and stated public comment periods were scheduled throughout the day. Ms. Whitaker discussed the purpose and process for using the new question cards that were placed at each of the CAB members’ seats. She explained how to access electronic copies of meeting materials through the CABNET feature. She led everyone in the Pledge of Allegiance and National Anthem before she introduced CAB Chair Marolyn Parson to open the meeting and begin her update.

CAB Chair Parson welcomed everyone to the meeting and introduced the Major of Beaufort, Mr. Billy Keyserling, to say a few words.

Welcome from Beaufort Major, the Honorable Billy Keyserling

Mayor Keyserling welcomed everyone to Beaufort, SC. He said he was encouraged as he looked around the room during the National Anthem and Pledge of Allegiance because he was passionate about civic engagement. He said there were not enough organizations like DOE and the CAB who took the time, passion, and energy to reach out to communities affected by SRS. Mayor Keyserling said Beaufort was a very special place and encouraged everyone to explore the city. He mentioned he had been interested in SRS activities for many years. He shared his dream that one day South Carolina would be known for developing new technologies that cleaned up hazardous waste. Mayor Keyserling stated that if there was ever a facility that could make his dream come true it was SRS. He thanked the CAB for allowing him to speak. He mentioned he was easily accessible and encouraged the CAB to reach out to him if they needed anything while in Beaufort; however, he jokingly said he was unable to help with parking tickets.

CAB Chair Opening and Update - Marolyn Parson, CAB

CAB Chair Parson thanked Mayor Keyserling for coming. CAB Chair Parson explained that after the May Full Board meeting, she and CAB member Earl Sheppard found the phone number for the Mayor's Office on the internet. She laughed and commented Mayor Keyserling truly was accessible because when CAB member Sheppard dialed the number, Major Keyserling actually answered.

CAB Chair Parson called for discussion of the July Full Board meeting minutes. There were no suggestions or comments regarding the minutes. She opened the floor for a vote; the CAB, with no opposition and no abstentions, approved the meeting minutes with 15 votes.

CAB Chair Marolyn Parson continued her update stating CAB membership was at 21 members since one CAB member resigned since the July Full Board meeting. She stated the CAB's 2015 Membership Campaign was underway and there were seven positions to be filled. She explained that she and CAB Vice Chair Harold Simon participated in the national Environmental Management Site Specific Advisory Board (EMSSAB) and the SRS CAB was one of the eight Environmental Management (EM) boards chartered under the Federal Advisory Committee Act (FACA). CAB Chair Parson listed the other advisory boards before she described how she and CAB Vice Chair Simon attended the recent EMSSAB Chairs Meeting in Idaho Falls, Idaho. She said the Idaho National Laboratory (INL) Advisory Board hosted the Chairs Meeting. She reviewed agenda topics, which included presentations and discussions about Waste Disposition, the 2015 DOE budget, and DOE's use of acquisition and project management. CAB Chair Parson commented that specific details about the Chairs Meeting would be discussed at upcoming October committee meetings; however, she said CAB Vice Chair Simon would provide a detailed overview of INL at the November Full Board meeting. CAB Chair Parson said while on the INL tour, some individuals delayed entry into a particular facility because they failed to complete a necessary dosimeter form; however, CAB Chair Parson said she was thankful entry was delayed since a radiological alarm actually sounded in that particular building while individuals were correcting their forms on the bus. She stated everyone was told the alarm often sounded due to the facility regularly experiencing naturally occurring radon. CAB Chair Parson provided various images of items housed at the EBR-1 Atomic Museum, which was a National Historic Landmark where the world's first usable amount of electricity was generated from a novel nuclear reactor in year 1951. CAB Chair Parson showed pictures of the Snake River in Idaho.

She then listed SRS facilities the CAB toured on September 10, 2014. She said the tour was the best one the CAB ever received and she thanked everyone, especially Mr. Jim Folk, DOE-SR, and Stuart MacVean, President of Savannah River Remediation (SRR), for arranging the tour. CAB Chair Parson announced the United States Nuclear Waste Technical Review Board scheduled a meeting on October 29, 2014, at the Marriott Hotel in Augusta, Georgia, to review DOE activities related to managing spent nuclear fuel (SNF) and High-Level Waste. She listed topics that would be discussed and stated CAB members Nina Spinelli and Rose Hayes would attend the meeting. CAB Chair Parson mentioned the CAB had two draft position papers to discuss before she asked Ms. Whitaker to review the correct procedures for renewal for adopting position papers.

Ms. Whitaker explained any CAB member could draft a position paper; however, the Executive Committee must approve the first draft. Ms. Whitaker said if the Executive Committee approved the first draft, the position paper would then be discussed on the first day of the Full Board meeting, and possibly adopted after a majority vote on the second day of the Full Board meeting. Ms. Whitaker noted any CAB member could write a minority statement opposing the draft position paper. She explained adopted position statements were posted on the CAB website and sent to DOE-SR and DOE-HQ for review; however, DOE did not formally respond to adopted position papers.

Voting on Draft Position Papers

"The Savannah River Site Citizens Advisory Board's Position on the President's 2015 Budget Proposal"

CAB member Spinelli reviewed the position paper before opening the floor for discussion. CAB Chair Parson called for a motion since there were no additional comments. CAB Vice Chair Simon made a motion and the CAB voted to adopt the position paper with 15 votes of approval, one opposition, and no abstentions.

“The Savannah River Site Citizens Advisory Board’s Position on Savannah River National Laboratory”

CAB member Bob Doerr reviewed the draft position paper and asked if there were any comments. CAB Chair Parson called for a motion since there were no additional comments. CAB member Hayes made a motion and the CAB voted to adopt the position paper with 16 votes of approval, no oppositions, and no abstentions.

A copy of both position papers have been attached to this document.

PRESENTATION: Recommendation & Work Plan Status Update – Jesslyn Anderson, Time Solutions

Ms. Jesslyn Anderson, Time Solutions, provided an update of the recommendation status report and Work Plan progress. She stated the CAB adopted six recommendations since January. She said recommendations 307, 312, 315, and 317, 319, and 320 were open. She provided an update of the CAB Work Plan and highlighted each committee’s progress so far for the year.

Agency Updates

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

Dr. David Moody thanked Mayor Keyserling for speaking and briefly commented that he shared Mayor Keyserling’s vision for implementing advanced cleanup technologies that were developed at SRNL to clean up SRS. Dr. Moody said DOE-SR valued the CAB’s opinions, recommendations, and continued support of SRS. He said the Secretary of Energy, Dr. Ernest Moniz, toured SRS in July. Dr. Moody explained after the tour, Secretary Moniz made strong statements in favor of supporting and securing the future of SRNL. He discussed the Nuclear Materials Program stating all the Sodium Reactor Experimental (SRE) fuel was removed from L-Basin and dissolved in H-Canyon. He said a campaign to work off the remaining highly enriched uranium (HEU), for potential use at the Tennessee Valley Authority (TVA), would begin in the fall. He said SRS would be providing another 40 tons to TVA to generate power. He stated recently DOE-SR began purifying plutonium. He said the first batches of purified plutonium seemed to meet MOX requirements; however, he said even if MOX was delayed, the first step in the process was oxidation. He commented he was glad DOE-SR was closer to dispositioning the plutonium from SRS.

He said 16 modifications were completed at H-Canyon to continue the useful life of H-Canyon. He addressed the June 24, 2014, public meeting about the German HEU project and mentioned the public comment period closed on July 21, 2014. Dr. Moody said DOE planned to move forward and issue the National Environmental Policy Act (NEPA) document later in the year. He said the research and development at SRNL, which was funded by the German government, was going extremely well. Dr. Moody discussed the Liquid Waste Program by addressing tank closure progress. He said DOE was recovering as much of the tank closure schedule as possible for tanks 12 and 16. He explained that DOE-SR felt it might be possible to recover the schedule for tank 16, but not for tank 12. Dr. Moody explained that tank 12 was substantially delayed to due to the budget situation over the last few years, reprogramming’s that did not occur until late in the year, the lapse of appropriation, and technical challenges in tank cleaning. He said DOE was currently involved in discussions with South Carolina Department of Environmental Health and Control (SCDHEC) and the Environmental Protection Agency (EPA). Dr. Moody commented that DOE looked forward to working with the regulators to accelerate tank closure projects. Dr. Moody stated, “Whether we reach agreement or not, we are still moving forward to close those tanks as rapidly as we possibly can.” He said construction of the Salt Waste Processing Facility (SWPF) was approximately 75 percent complete and startup was anticipated for 2018. Dr. Moody addressed Enterprise SRS, which was “alive and well.” He said several activities were moving forward.

CAB member Hayes asked if the material that would be processed and sent to TVA was part of the 1,000 assemblies from L-Basin. Dr. Moody said “Yes.”

CAB Chair Parson asked if the German government and public interest groups were against the shipment of HEU. Dr. Moody said he was unable to speak for the German government, but he said there were public interest groups within the German populous, that did not support shipment of the HEU. Dr. Moody said DOE planned to

communicate openly with the public about the project; however, in order for the project to move forward, the project must be fully funded and DOE had to believe in the technology and disposition paths.

Mr. Rob Pope, Environmental Protection Agency (EPA)

Mr. Rob Pope began his update by discussing DOE's extension request for two liquid waste tank milestones. He said EPA and SCDHEC did not agree with the extension request and DOE recently released a letter raising the issue to an "Informal Dispute." He outlined the process for an "Informal Dispute," which involved EPA, SCDHEC, and DOE discussing the extension request and figuring out how to move forward. He said EPA looked forward to the discussion, and working with DOE and SCDHEC to resolve the issue. Mr. Pope mentioned EPA was pleased DOE was moving forward with the D-Area cleanup projects. He stated EPA recently issued a letter "closing out" the Groundwater Source Actions that were occurring in P-Area over the last few years. He explained tanks 17 through 20 were already part of the Federal Facility Agreement (FFA), but EPA issued another letter about the process to begin the required monitoring outlined in the original record of decision (ROD). Mr. Pope mentioned there was a long-term Groundwater Source Action in A-Area for a vapor extraction system that pulled chlorinated solvents out of the vadose zone above the groundwater. He said DOE asked EPA to evaluate whether the vapor extraction system in A-Area could move from an "active system" to a "passive system" since DOE felt enough progress had been made that an active system was no longer a necessity. Mr. Pope said EPA was currently evaluating DOE's request.

CAB member Hayes asked if EPA was preparing to respond to DOE's letter for dispute resolution. Mr. Pope explained that EPA probably would not respond in writing. He explained the FFA process stating once an "Informal Dispute" was raised, the three agencies would meet to discuss the issue. Mr. Pope said when DOE submitted the extension request a lengthy packet for DOE's justification was included. Mr. Pope explained that when EPA went through DOE's justification packet, there were things EPA felt were overstated and did not fully agree with. Mr. Pope stated EPA did not concur with DOE's extension request because EPA felt DOE's request for a 15-month extension, even with the justification packet, was excessive. CAB member Hayes asked if the basis for EPA's non-concurrence was due to legal or safety issues. Mr. Pope said "Neither," and explained EPA's decision to non-concur was based on a technical evaluation of the extension request, and EPA's knowledge of where DOE was in the process of closing tanks 12 and 16.

CAB Vice Chair Simon asked when the dispute resolution discussions would occur. Mr. Pope said the letter from DOE said DOE would contact EPA and SCDHEC to set up a meeting. CAB Vice Chair Simon asked what the next phase involved if DOE, EPA, and SCDHEC did not reach a resolution. Mr. Pope explained that the "Informal Dispute" phase involved the FFA Managers, which would be himself, Brian Hennessey, DOE-SR, and Susan Fulmer, SCDHEC, along with their first line supervisors to meet. Mr. Pope said there was no timeline in the FFA for how long the "Informal Dispute" could last; however, he said any of the three parties could elevate the process to a "Formal Dispute" if they felt the "Informal Dispute" phase was not working. Mr. Pope mentioned that the FFA said all three agencies must use all effort to resolve issues in the "Informal Dispute" phase before advancing to the "Formal Dispute" phase.

CAB Chair Parson asked Mr. Pope if he thought discussion would ever occur about moving waste units to shift more effort on the Liquid Waste Program. Mr. Pope said EPA was not inclined to move any of its milestones for any waste unit. He explained EPA wanted to see DOE continue to request adequate funding to complete cleanup across the SRS, and not only for the Liquid Waste Program.

Ms. Shelly Wilson, South Carolina Department of Health and Environmental Control (SCDHEC)

Ms. Wilson began her update stating SRS and SCDHEC celebrated a big accomplishment in the transuranic (TRU) waste arena at SRS earlier in September. She explained there was approximately 12,000 cubic meters of TRU waste from legacy operations sitting at SRS. Ms. Wilson said during the 1990's, SRS began preparing the TRU waste for disposal. She explained only a small amount of TRU waste remained at SRS; however, due to the Waste Isolation Pilot Plant (WIPP) shutdown, the TRU waste was not going anywhere. Ms. Wilson stated SCDHEC was proud of SRS's big accomplishment. She mentioned the SWPF was the big facility intended to treat the High-Level Waste. She said the revised schedule focused on the SWPF being operational from 2018 to 2021; however, she explained that SCDHEC had not received an extension request from SRS and the SCDHEC milestone was technically still year 2015. She mentioned she felt SCDHEC would receive an extension request at some point and she described

how the extension request should be resolved since a current SCDHEC milestone, which had stipulated penalties associated with it, was involved. Ms. Wilson discussed the dispute process for tanks 12 and 16 stating SCDHEC had the same reasons for not approving DOE's extension request for tanks 12 and 16. She explained that SCDHEC was entering the dispute, and noted that SCDHEC felt the milestones were critically important because they drove treatment and closure of the ageing tank systems. She said the way to best support the High-Level Waste milestones and risk reduction was to have more treatment. She mentioned SCDHEC was trying to keep everyone focused on waste treatment areas that would maximize treatment at existing facilities, use the Next Generation Solvent (NGS) at the SWPF, and use the small column ion exchange technology.

CAB member Hayes asked if any SC politicians pushed for a formal and quicker approach to resolve funding issues relating to High-Level Waste. CAB member Hayes asked if the SC Governor was providing any support on this issue. Ms. Wilson said, "Yes," and explained that SC elected representatives strongly supported the need for High-Level Waste treatment and tank closure. Ms. Wilson said it was hard to "plus up" a budget that DOE had not asked for. Ms. Wilson explained that for FY 2014 and FY 2015, SCDHEC was under the impression that DOE had not asked for the sufficient funding to operate the existing treatment facilities to the maximum capacity. CAB member Hayes asked if a result would be reached faster if the dispute resolution process were advanced to the "Formal Dispute" phase. Ms. Wilson said SCDHEC was determining best strategies approach the dispute resolution.

Public Comments

There were no public comments.

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

CAB member Clint Nangle listed the S&LM Committee members before reviewing the purpose of the S&LM Committee. He provided a recommendation status update, stating the S&LM Committee did not have any draft or open recommendations. He announced the next S&LM Committee meeting was scheduled for October 21, 2014, at the DOE Meeting Center. He then introduced Mr. Rich Olsen, DOE-SR, to begin his presentation.

PRESENTATION: Work Scope Descriptions and Glossary of Terms – Rich Olsen, DOE-SR

Mr. Olsen stated the purpose of his presentation was to share an updated "Glossary of Terms" document and work scope descriptions. He explained that the document was intended to provide a description of the work involved to accomplish the respective portion of the cleanup mission and explain terms and metrics DOE often used. He explained the glossary was divided into six functional areas which included "PBS 14 Liquid Waste," "PBS 13 Solid Waste," "PBS's 11C and 12 for Nuclear Materials," "PBS 30 Soil and Groundwater Remediation/Facilities," "PBS's 20 and 100 for Site Support Functions," and "SRS disposition paths for environmental cleanup." Mr. Olsen noted that the sixth section was added to the Glossary in order to clarify past confusion related to the term "disposition." He commented that updating the Glossary was a joint effort and he listed different individuals who contributed to finalizing the document. He demonstrated how to use the Glossary by asking everyone to open his or her copy. He explained that at the beginning of the six sections there was a paragraph to describe the work performed. He said a descriptive list of commonly used terms relating to the corresponding section was listed after the brief paragraph. Mr. Olsen stated the newly added sixth section in the Glossary described the disposition path for each cleanup element at SRS. He said each cleanup element at SRS had its own disposition path. Mr. Olsen explained that at SRS a cleanup element was considered to be dispositioned when it was in its final physical state and final location. He explained that for the sixth section both the physical state and final location were identified for the various cleanup elements at SRS. Mr. Olsen provided an example by referencing the disposition path for High-Level Radioactive Liquid Waste on page 24 of the Glossary. He said the three cleanup elements were "Tank Waste after Removal of High Radionuclides," "Highly Radioactive Components in Tank Sludge and Salt Waste," and "Tanks." He said the final physical state for "Tank Waste after Removal of High Radionuclides" was Saltstone, which had a final disposition path location at the Saltstone Disposal Units at SRS. Mr. Olsen explained that some cleanup elements only had a final physical state and final location; however, he explained that other cleanup elements had an interim location before the final location. He discussed the second High-Level Radioactive Liquid Waste cleanup element of "Highly Radioactive Components in Tank Sludge and Salt Waste," which had an interim disposition location. He said the final physical state of the cleanup element was mixed with molten glass and solidified in Canisters. He said

the interim disposition location was at the Glass Waste Storage Buildings and above ground pad storage on-site at SRS; however, the final disposition path location was at a Federal Repository off-site. Mr. Olsen discussed each cleanup element for “Solid Waste,” “Nuclear Materials,” and “Soil, Groundwater, and Facilities.” He said the SRS Work Scope Descriptions and Glossary of Terms document was intended to be an informational tool for SRS stakeholders and members of the public.

CAB member Hayes asked for clarification about using the terms SNF or UNF. Mr. Olsen said when the Glossary was being developed definitions for both SNF and UNF were included. He stated he spoke with Ms. Maxcine Maxted, DOE-SR, and she said DOE-SR would adopt any necessary changes when DOE-HQ provided direction about the proper usage; however, he said DOE-SR planned to continue using both terminologies until DOE-SR received official direction from DOE-HQ. CAB member Hayes said the CAB was told on the September 10, 2014, tour that the correct usage was SNF. Mr. Olsen said he would speak with the NM subject matter experts and try to provide the CAB with an answer as soon as possible.

CAB member Spinelli asked what an affluent treatment facility was. Mr. Giusti said that was a facility at SRS where waste water was treated.

CAB member Hayes said the Glossary of Terms was a wonderful document and she said she hoped there was a plan to update the document for the CAB and members of the public regularly.

CAB Chair Parson asked if the Three Rivers Landfill was located on-site at SRS. Mr. Olsen said some people consider the landfill off-site, but it was really part of SRS. CAB Chair Parson also pointed out that the table of contents did not correctly match up the corresponding pages.

CAB Vice Chair Simon asked if a flowchart could be developed to show the entire process from receipt to disposition for each of the cleanup element disposition paths outlined on page 24 of the Glossary of Terms. Mr. Olsen said he would discuss the request with DOE subject matter experts and follow up with the CAB.

Waste Management (WM) Committee Overview – Earl Sheppard, Chair

CAB member Earl Sheppard thanked all the CAB members who attended the surprise tour of Beaufort Jasper Water and Sewer Authority the day before. He provided a recommendation status update stating recommendation 312 was open. He said the next WM Committee meeting was scheduled for October 7, 2014, at the DOE Meeting Center. He introduced Mr. Steve Wilkerson, Savannah River Remediation (SRR), to begin his presentation.

PRESENTATION: Z-Area Saltstone Disposal Facility/ Vault 4 Update – Steve Wilkerson, SRR

Mr. Wilkerson said the purpose of his presentation was to fulfill a 2014 WM Work Plan requirement by providing a status update on vault four at the Z-Area Saltstone Disposal Facility (SDF). He provided pictures to show where the SDF was located at SRS. He explained the real issue at vault four was that small cracks enabled rainwater to migrate into the vault and collect in the narrow annular space between the grout waste form and vault wall. He mentioned if the water level was able to get high and not managed or collected, the contaminated liquid could seep through the construction joints and cracks in the wall and be released into the environment. He discussed the controls that were in place prior to initiating the stabilization project. He said the small cracks were being sealed, a gutter system was used to collect the rainwater, the water level inside the vault was managed below the hut level, and several containments were built in order to prevent and minimize any releases into the environment. Mr. Wilkerson said use of vault four stopped in 2012 and all disposal operations involved the new cylindrical SDUs. He explained that several alternatives were evaluated to eliminate rainwater infiltration to vault four while mitigating worker and environmental risks. He said the selected alternative was to pour a minimum “clean cap” of non-contaminated grout on top of the vault four cells to lower the radioactive exposure rates for worker. Mr. Wilkerson said an “elastomeric” roof covering would be installed on cells D, E, F, J, K, and L. He explained that cells A, B, C, G, H, and I were already coated and sealed. He provided a project status update stating SRR and DOE were committed to the vault four stabilization plan, which was fully funded and significantly ahead of schedule. He explained the project was scheduled to “clean cap” and apply the “elastomeric” roof coating to three cells in FY 2014. He said clean capping was completed on cells, J, K, L, D, and E and the roof coating was complete on J, K, L, and D. He said the roof coating for cell E was in progress. Mr. Wilkerson stated capping and coating of the remaining cells was scheduled to

be completed by February 2015. He discussed contamination at the Z-Area Retention Basin stating that rainwater carried contamination from vaults one and four to the Storm Water Outfall Z-01. He provided pictures to explain the Z-Area Storm Water Flow process and pointed out specific locations such as Retention Basin No. 4, Vault 4, Storm Water Outfall Z-01, and McQueen's Branch. He said the storm water issue occurred from vaults one and four Saltstone Disposal Units (SDUs) carrying contamination from vaults one and four to the storm water drain line, which flowed to Retention Basin No. 4. Mr. Wilkerson explained that Retention Basin No. 4 only discharged if the level of water reached the predetermined spillway height, and in February 2013, due to record amounts of rainfall, Retention Basin No. 4 discharged for the first time. He stated that spillway from Retention Basin No. 4 flowed to Storm Water Outfall Z-01, which was the location where low-level contamination was deposited in the earthen conveyance ditch beyond Storm Water Outfall Z-01. He explained Storm Water Outfall Z-01 flowed to McQueen's Branch; however, Mr. Wilkerson said no regulatory or DOE Order driven compliance limits were exceeded, but sedimentation breaks were installed in order to minimize the spread of contamination. He explained what actions were implemented to proactively manage the situation. He provided pictures of the June 12, 2014, basin expansion project, which, was recently completed. Mr. Borders said soil was removed at Storm Water Outfall Z-01 in accordance with 2 DOE Order 458.1 and the SDF Solid Waste Permit. He said continued radioactive effluent monitoring of Storm Water Outfall Z-01 and McQueen's Branch had not detected any increases of contamination.

CAB member Spinelli asked what type of contamination was being discharged. Mr. Wilkerson explained the contamination was cesium-137.

CAB member Hayes asked what operations were used to prevent cesium from becoming airborne. Mr. Wilkerson explained that if there was contamination that could not be decontaminated, the material would be "painted in place" to prevent the cesium from becoming airborne.

Draft Recommendation Voting

"Improving Public Communication and Understanding of the Liquid Waste Program and Revisions to the Liquid Waste System Plan"

CAB Chair Parson reviewed each item number of the draft recommendation. She stated she wanted to connect recommendation 269 to the draft recommendation on the CAB website. Ms. Whitaker said she would figure out the best solution after the meeting. CAB Chair Parson called for a motion and asked if there was any discussion.

CAB member Sheppard asked if there was any documentation of what materials DOE had provided to the CAB regarding the draft recommendation and recommendation 269. CAB Chair Parson said various presentations were provided to the WM Committee. She explained when she was a member of the WM Committee she remembered the WM Chair received a hardcopy of the Liquid Waste System Plan revision; however, she said she did not think there was a written record of what DOE provided in the past. CAB Chair Parson said the Liquid Waste System Plan Revision 19 was posted on the SRS website, but she could not find past revisions. There was no additional discussion and the CAB approved the recommendation with 15 votes of approval, no oppositions, and no abstentions. A copy of this recommendation has been attached to this document.

Public Comments

Ms. Suzanne Rhodes, League of Women Voters of South Carolina (LWVSC), discussed Yucca Mountain issues. Ms. Rhodes shared various "myths" beginning with how Senator Harry Reid of Nevada and other Nevada leaders opposed Yucca Mountain. She said the second myth was that Yucca Mountain had miles of tunnels; however, she explained now that Yucca Mountain was a 5-mile exploratory tunnel with a 2-mile branch. Ms. Rhodes said another myth was that Yucca Mountain had miles of railroad tracks for shipment of SNF. She explained the United States maps of rail routes showed proposed routes, not existing tracks, to Yucca Mountain and it would cost approximately nine billion dollars to complete railroads to Yucca Mountain. She said SRS was already doing more than its share of managing the nation's waste problem. She stated Congress needed to fund SRS waste cleanup and implement a comprehensive long-term national plan, and Europe and others needed to manage their own wastes. A copy of Ms. Rhodes' letter has been attached to this document.

Facilities Disposition & Site Remediation (FD&SR) Committee Overview – Tom Barnes, Chair

CAB member Tom Barnes listed the FD&SR Committee members. He provided a recommendation status update, stating recommendations 315 and 317 were open. He announced that the next FD&SR Committee meeting was scheduled for October 21, 2014, at the DOE Meeting Center. He encouraged all FD&SR Committee members to attend the meeting, either in person or online. He welcomed Dr. Gene Rhodes, Savannah River Ecology Laboratory (SREL), to begin his presentation.

PRESENTATION: Summary of SREL Technical Review in Response to CAB Recommendation 317 **– Dr. Gene Rhodes, SREL**

Dr. Rhodes stated the purpose of his presentation was to discuss the technical review performed on behalf of DOE, relative to CAB recommendation 317. He listed members of the review team before discussing the purpose of the technical review. He said SREL was tasked to provide DOE-SR with recommendations on whether there was fact-based evidence to support the request for conducting additional radiological environmental monitoring in Georgia (GA). He explained that based on the results of the recommendation, SREL provided DOE-SR with recommendations for potential alternatives that could be undertaken to address concerns of the CAB and citizens of GA. He discussed the approach for conducting the technical review and stated a team of subject matter experts conducted the assessment and monitoring program review. Dr. Rhodes explained that elements of the monitoring program were identified and a structured framework was developed to evaluate program elements. Dr. Rhodes mentioned the review team reviewed elements of the monitoring program and conducted internal assessments before producing the final report, which included a summary of conclusions and recommendations. He said the program elements that were evaluated were environmental pathways, regulatory standards used to establish exposure limits, dose-risk calculations from the SRS Environmental Monitoring Program, and DOE's current method of providing monitoring results to the public. Dr. Rhodes explained the review team evaluated potential sources of contaminants at SRS, determined spatial and temporal sampling conducted by DOE-SR at SRS and surrounding areas, and compared the SRS Environmental Surveillance Program with SCDHEC's program. He explained the review team drafted conclusions and recommendations regarding the effectiveness of the monitoring program for protecting the public. Dr. Rhodes said, "The review team did not find evidence that the establishment of another independent environmental surveillance program for radionuclides in GA was warranted." Dr. Rhodes stated for GA, existing monitoring programs for movement of radionuclides into local communities by air, rainwater, and surface water, were well monitored and adequate at that time. He stated it was an unlikely scenario for radionuclides to move into GA by groundwater unless the hydrology of the region was significantly altered due to changes in the Central Savannah River Area (CSRA) water management. He also noted it was an unlikely scenario for radionuclides to move into GA through plant and animal accumulation unless there were significant changes in contaminant transfer via other pathways such as air, rainwater, surface water, or ground water. Dr. Rhodes said based on evaluations, SREL did not see any substantial benefit for creating a new monitoring program.

He explained there were conclusions and recommendations for each individual pathway. He said SREL recommended establishing consistent protocols in statistical analyses in order to enhance comparisons between DOE-SR and SCDHEC data sets, and provide better utility of SCDHEC data for validation purposes. Dr. Rhodes discussed the air and rainwater pathway stating SREL recommended that when possible, DOE consider collocating additional sampling locations for the DOE-SR and SCDHEC monitoring networks. He said for the surface and drinking water pathways, SREL felt additional sampling was necessary only if significant increases in atmospheric deposition or groundwater occurred and radionuclides were detected. He addressed the ground water pathway stating SREL recommended only additional sampling was warranted if significant increases in atmospheric deposition and radionuclides were detected; however, he said additional sampling might be necessary if significant hydrologic conditions occurred near the Savannah River Floodplain. He said SREL suggested DOE-SR consider utilizing a subset of wells for annual sampling for comparison with SCDHEC radionuclide data. Dr. Rhodes said sampling locations in the Savannah River were adequate; however, SREL recommended adding additional sites in the floodplain wetlands or river cutoffs on the GA side and a modified sampling strategy for sediments be utilized in the Savannah River Floodplain. He said SREL only recommended changes in the soil pathway if deposition or radionuclides were detected. He addressed the plant and animal pathway by explaining that SREL suggested adding wild edible vegetation sampling to the DOE-SR program. He explained that both the DOE-SR and SCDHEC monitoring programs should sample grassy and woody vegetation and a few additional locations in GA would

complete the monitoring network. Dr. Rhodes said SREL determined DOE-SR's regulatory standards for determining risk were widely accepted and practical. He stated the methodologies for DOE-SR and SCDHEC dose calculations were consistent despite procedural differences. Dr. Rhodes listed the communication recommendations and stated that a majority of the information provided to the public from SRS was very technical. He said DOE-SR should consider developing a communication strategy that incorporated limited monitoring data collected from local communities as a basis for providing outreach about interpreting data and radiological monitoring. Dr. Rhodes stated local community leaders should assist in developing the educational programs for use in local communities or within the DOE complex.

CAB Chair Parson asked if Dr. Rhodes' report would be posted to the SRS website. Mr. Jim Giusti said he would work with Dr. Rhodes to post the report on the SREL website. CAB Chair Parson also asked Dr. Moody when and how DOE-SR planned to implement some of the SREL recommendations. Dr. Moody said he was pleased that Dr. Rhodes conducted the independent look at the combination of DOE and SCDHEC monitoring programs. Dr. Moody said he was very interested and excited about pursuing additional outreach efforts at SRS.

CAB member Hayes asked if there were significant differences in both in the amount and way samples were collected between GA and SC. Dr. Rhodes said, "Not particularly."

CAB member Spinelli addressed a recent newspaper article that classified the Savannah River as one of the most polluted rivers in the country. She asked how monitoring determined what radionuclides came from SRS. He explained the monitoring network, which was sufficient, was designed to pick up radionuclides. Dr. Rhodes said determining what came from SRS depended on the type of radionuclide. He explained some radionuclides such as tritium might overlap when figuring out where the material came from; however, he explained there were very few other radionuclides that overlapped.

Mr. Pope asked if SREL spoke with DOE about the ongoing Environmental Justice (EJ) meetings when making the recommendation for a new communication strategy. Dr. Rhodes said the EJ meetings were noted within the final report. Dr. Rhodes said the recommendation was focusing on engaging the public in a different way than was currently being done. He said he there were probably members of the public who feared they were at risk, but they did not know they did not have anything to fear.

PRESENTATION: Downstream User Protection & Communication – Gail Whitney, DOE-SR, Beth Cameron, SCDHEC, & Tricia Kilgore, BJWSA

Ms. Gail Whitney said the purpose of her presentation was to fulfill a FD&SR 2014 Committee Work Plan topic by providing the CAB and public with an understanding of the notification processes in the event of an environmental release from SRS. She said due to the 1991 tritium release from SRS, the Beaufort-Jasper Water and Sewer Authority (BJWSA), and the City of Savannah, must provide their customers' confidence that any water quality impacts from SRS operations were managed properly, contaminant information was available in a timely manner, and the water from the Savannah River could be used safely. She stated the two types of notifications were "non-emergency notifications" and "routine reports." Ms. Whitney stated both types of notifications were provided to BJWSA, City of Savannah Industrial and Domestic (COSI&D), City of North Augusta, SC, SCDHEC, Georgia Department of Natural Resources (GADNR), and Southern Company. She said the "routine information reports," that were provided to SRS stakeholders, were a weekly river mile 118.8 tritium concentration report, the annual Radiological Analysis Report for Offsite Drinking Water Systems Utilizing Savannah River Water, and the annual SRS Environmental Report. She explained that due to the 1991 release, DOE-SR incorporated a process that notifications of planned activities, that would result in radionuclide concentration increases in the Savannah River, would be provided to the stakeholders prior to SRS beginning any discharges. Ms. Whitney explained that notifications of unplanned releases that did not trigger emergency response action levels were sent as soon as possible. She said trigger limits were established to inform the stakeholders at any point in time when the tritium concentrations exceeded 5,000 picocuries per liter; however, Ms. Whitney explained to further ensure SRS captured the trigger notification, DOE-SR instituted an administrative trigger limit of 3,000 picocuries per liter to ensure SRS never exceeded the 5,000 picocuries per liter trigger limit. She discussed "Emergency Notifications," which were considered events that fell within the emergency categorization/classification system established by DOE Orders. She explained that for events involving HAZMAT releases, offsite notifications must be sent within 15 minutes; however, all other events required a notification being sent within 30 minutes. Ms. Whitney said since 1991, releases

from SRS have not resulted in any major impact to local or downstream stakeholders. She said river samples were collected at River Mile 118.8 and analyzed weekly for tritium. She explained in 2013, no Environmental Protection Agency drinking water maximum contaminant levels were exceeded at BJWSA or COSI&D. She noted in 2013, SRS only contributed 36 percent of the tritium in the Savannah River and she commented that SRS discharges into the Savannah River had never exceeded the five thousand picocurie tritium notification trigger.

CAB member Hayes asked what the amount of tritium concentration was in the Savannah River. Ms. Whitney said the tritium concentration the week before the meeting was 1,500 picocuries per liter, which was far below the drinking water standard of 20,000 picocuries per liter. Ms. Whitney said the concentration amount changed weekly.

CAB member Spinelli asked what type of alerts were sent individually to members of the public in event of an emergency release into the Savannah River. Ms. Whitney said the Emergency Operations Center had protocols for how the public was notified of an emergency. Ms. Whitney explained that a notification about the tritium in the river was actually a weekly email sent to stakeholders; however, she explained a release that triggered a federal limit, in-house limit, or involved a release of a HAZMAT material, would initiate emergency management protocols.

CAB member Doerr asked if tritium dissipated the further it went down the Savannah River. Mr. Pope said the proper term was “dilute” and explained that as the tritium came in contact with more inputs that did not have tritium it became diluted.

PRESENTATION: Downstream user Protection & Communication – Beth Cameron, SCDHEC

Ms. Cameron said she planned to discuss the radiological monitoring of the surface water conducted by SCDHEC. She showed a brief video from the SCDHEC website about Environmental Surveillance and Oversight Program (ESOP) surface water monitoring. She provided a map of SRS to show various sampling locations where early detection monitoring occurred. She discussed the SCDHEC enhanced monitoring network, which were used to collect and analyze tritium to provide early notification to downstream drinking water users of potential tritium releases. She said samples were collected on Monday, Wednesday, and Friday. Ms. Cameron explained if a sample collected at the Highway 301 location resulted in a concentration above specified action limits then emergency notification protocol was implemented. She stated a “courtesy” notification was distributed if a sample was between 5,000 and 10,000 picocuries per liter; however, she said an “official” notification was sent if a sample went over 10,000 picocuries per liter. Ms. Cameron said an experiment was performed at the BJWSA Purrysburg plant to determine the travel times for tritium releases in the Savannah River. She stated the calculation was approximately 58 hours to reach BJWSA intake at the Purrysburg plant from the Highway 301 location. She mentioned at the BJWSA intake approximately 50 percent of the concentrations from the Highway 301 location were diluted at the Purrysburg intake. She provided an image of a tritium courtesy notification.

PRESENTATION: Downstream user Protection & Communication – Tricia Kilgore, BJWSA

Ms. Kilgore discussed the BJWSA Raw Water System, which had an intake on the Savannah River that was downstream from the Highway 301 bridge. She said Purrysburg and Chelsea were the two water treatment plants and there was an 18-mile canal from the Savannah River to the Chelsea water treatment plant. Ms. Kilgore said each water treatment plant had two reservoirs for off stream storage, which totaled approximately 300 million gallons of water. She provided pictures of the Savannah River at the intake location, 18-mile canal, Chelsea reservoir, and Purrysburg reservoir. Ms. Kilgore stated once she received an email or phone call notifying her of a release BJWSA makes a decision about the treatment process. She said if a release contained a substance BJWSA could not treat, such as tritium, the two river pumps would be turned off and water from the canal and reservoirs would be used until the release passed. She said there was approximately at least a weeks’ worth of water within the reservoirs and canal. Ms. Kilgore said in the event of a release customers would first be notified by a press release by newspaper, television, or radio about the safety of the treated water. She mentioned regular press conferences occurred and media outlets such as social media websites and emails were used. Ms. Kilgore said if a release was larger than a one-time spill, BJWSA had the authority to enforce water restrictions. She said BJWSA would most likely follow its Crisis Communication Plan.

CAB member Doerr asked where the intake canal was located in correlation with Savannah, GA. Ms. Kilgore said the intake location was mile 38, which was 10 miles upstream of the city of Savannah. CAB member Doerr also asked if rainwater had any factor in supporting the capacity of the reservoirs. Ms. Kilgore said rainwater did not have a significant effect on the reservoirs due to evaporation. CAB member Doerr asked if a severe hurricane occurred would salt water intrusion ever be an issue for the intake canal. Ms. Kilgore said salt water would not reach the intake since it was far enough upstream to not be effected by tidal influences.

CAB member Earl Sheppard thanked his supervisor, Ms. Kilgore, for providing the presentation.

Draft Recommendation Voting

“Updates Provided to the Citizens Advisory Board at the Bi-Monthly Committee Meetings and Via Email”

CAB member Larry Powell reviewed the draft recommendation and asked if there were additional comments. There were no additional comments and the CAB adopted the recommendation with 16 votes of approval, no oppositions, and no abstentions.

A copy of this recommendation has been attached to this document.

Administrative & Outreach (A&O) Committee Overview – Nina Spinelli, Chair

CAB member Spinelli reviewed her report from the previous day. She thanked everyone for submitting reappointment applications on time and completing the survey she developed, which would help her draft a paper about the CAB’s use of online technology for the Waste Management Symposium. She said an outreach event was planned for October with the Beaufort Rotary Club and she encouraged CAB members to reach out to other community groups and think of new outreach efforts to attract potential members.

Nuclear Materials (NM) Committee Overview – Rose Hayes, Chair

CAB member Hayes reviewed her report from the day before providing a recommendation status update. She stated recommendations 307, 319, and 320 were open. She said the NM Committee was developing a recommendation and she announced the next NM Committee meeting was scheduled for October 24, 2014, at the DOE Meeting Center.

Public Comments

Ms. Mindy Mets, Savannah River Site Community Reuse Organization (SRSCRO), said she served as the Nuclear Workforce Initiative Program Manager. She said it was a pleasure to be part of the SRS Information Pod the night before. Ms. Mets said she spoke with various high school students leaving Beaufort High School about opportunities in the nuclear realm. She said in October 20–24, 2014, was National Nuclear Science Week. She said the SRS CRO hosted a committee that coordinated local celebration activities. She encouraged everyone to look at the website nwinitiative.org to find out planned activities.

~Meeting adjourned

All presentations are available for review on the SRS CAB’s website: cab.srs.gov

Recommendation 321

Improving Public Communication and Understanding of the Liquid Waste Program and Revisions to the “Liquid Waste System Plan”

Background

For many years the Savannah River Site Citizens Advisory Board’s Work Plan has included an annual update on the revisions to the “Liquid Waste System Plan.” This “Liquid Waste System Plan” is a very important document as it details the activities that must be sequenced to treat and disposition the High Level Waste currently in the underground storage tanks and to close the tanks. While the “Liquid Waste System Plan” is revised annually, it describes the planning basis for processing the liquid waste in the underground storage tanks through the end of the program mission. The development of the “Liquid Waste System Plan” is a joint effort between the Department of Energy, Savannah River, and the company that has the contract for the liquid waste program, which currently is Savannah River Remediation.

To fulfill the Work Plan, the Department of Energy or a contractor for the liquid waste program has given a presentation on the revisions to the “Liquid Waste System Plan” to the Waste Management Committee or to the full Board at one of the bi-monthly meetings. The most recent presentation was given on July 24, 2014, to the full Board by a representative from Savannah River Remediation. The liquid waste program is very complicated and involves many steps with many processes and utilizes many facilities. In addition, the liquid waste program is subject to several laws and regulations as well as an enforceable agreement. As a result, it is difficult for members of the Board and the public to comprehend the significance of the revisions in the “Liquid Waste System Plan” given during a single presentation and to have time to formulate thoughtful questions or comments at the conclusion of the presentation.

This is unfortunate given the importance of the liquid waste program to the safety of workers at the Savannah River Site and the citizens of South Carolina. The High Level Waste in the underground storage tanks has repeatedly been described by the Department of Energy and the South Carolina Department of Health and Environmental Control as the greatest environmental risk in South Carolina. The latest revision, number 19, to the “Liquid Waste System Plan” shows that enforceable milestones will be missed, which will result in delays in the treatment of the High Level Waste and closure of the underground storage tanks. Not only will the risk to the public from the High Level Waste continue for many years to come, the tax payers may have to foot the bill for millions of dollars of fines if enforceable deadlines are not met.

Comments

Over the years the presentations about the annual revision to the “Liquid Waste System Plan” given by the Department of Energy or its contractors have not consistently shown the same figures, tables, schematics or bullet lists to communicate the Liquid Waste Program and the “Liquid Waste System Plan” or its revisions. In addition, the presentations have included numerous acronyms. When such a complicated presentation is given without previous discussions or copies in advance, the public is not well served.

All experts that give presentations to the Savannah River Site Citizens Advisory Board should keep in mind that, by design, the Citizens Advisory Board is not a technical Board; as a result, there are many members who do not have scientific or technical backgrounds. That does not mean, however, that complicated processes/issues have to be avoided; instead, the presenters need to be able to explain complicated processes in layman's terms. For example, one does not have to be a chemist or be given chemical formulas to understand what the outcome and importance of the "Actinide Removal Process/Modular Caustic Side Solvent Extraction Unit" (often abbreviated as ARP/MCU) is to the treatment of high level liquid waste.

A better process needs to be initiated to inform the Board and the public at large about the Liquid Waste Program and the Liquid Waste System Plan (and its revisions), the progress that is projected for the future, and the consequences of missed milestones.

This recommendation is intended to build upon "Recommendation #269-Semi-Annual Review of the Inputs and Assumptions Used to Develop the Liquid Waste System Plan" (http://cab.srs.gov/library/recommendations/recommendation_269.pdf) that was adopted by the Board on May 25, 2010, and accepted by the Department of Energy on July 19, 2010.

Recommendations:

The Savannah River Site Citizens Advisory Board recommends that the Department of Energy:

1. Work with the Waste Management Committee to develop a template for the annual presentation that describes the revisions to the Liquid Waste System Plan; specifically, at a minimum, the template should specify what diagrams, figures, tables, or schematics should be used every year and must be free of acronyms.
2. Adhere to the template described above when the annual revision to the Liquid Waste System Plan is presented to the Board thereafter.
3. Hold an information session every year with the Waste Management Committee prior to the finalization of the revision to the "Liquid Waste System Plan" to highlight the changes and to answer questions that arise; this session must be done prior to any scheduled presentation to the Board on the revisions to the "Liquid Waste System Plan."
4. Provide an estimate of how much of an increase in the budget for the Liquid Waste Program would be needed to meet milestones when budget shortages are responsible for delays in meeting enforceable milestones.
5. Provide a printed copy of the Executive Summary of the annual revision to the "Liquid Waste System Plan" to the Waste Management Committee at least one week prior to any scheduled presentation on such revisions.
6. Provide a printed copy of the annual revision to the "Liquid Waste System Plan" to the Chair of the Waste Management Committee as soon as it is finalized.

7. Include links to copies of the current and past “Liquid Waste System Plan” revisions on the www.srs.gov homepage under the “Publications and Documents” dropdown tab.
8. Work with the Waste Management Committee to come up with a schedule to develop the template described above.
9. Work with the Waste Management Committee to develop a mutually agreeable timeline for the information session described above, distribution of the Executive Summary to the final revision of the “Liquid Waste System Plan” and the annual update on the revision to the “Liquid Waste System Plan.”
10. Include a presentation that describes the Liquid Waste Program and the role of the Liquid Waste Program Plan at the Citizens Advisory Board’s Annual Education/Process Meeting.
11. Include the liquid waste system facilities as a routine part of the Site tours provided for members of the Citizens Advisory Board.

Recommendation 322

Updates Provided to the Citizens Advisory Board at the Bi-Monthly Committee Meetings and
Via Email

Background

In recent months several situations have arisen at the Savannah River Site that the Board first became aware of by reading Aiken, Augusta, and other local newspaper stories; viewing news programs on the Augusta television stations; or via email from Site stakeholders who read trade journals. For example, the Board was unaware of a series of safety concerns that had been raised by the Defense Nuclear Facilities Safety Board until an article was published in the *Augusta Chronicle*. The Board was also unaware that a new technology was being installed that would reduce the possibility of the build-up of hydrogen in the Liquid Waste System, thereby reducing the risk of an explosion, until an article was published in the *Times and Democrat*. The Board did not become aware that the Director of the South Carolina Department of Health and Environmental Control had written a letter to Secretary Moniz of the Department of Energy, threatening to enforce millions of dollars in penalties for failure to meet important High Level Waste cleanup milestones, until an article was published in the *Aiken Standard*.

Most recently, the Board was unaware of the possible shipment of used nuclear fuel containing highly enriched uranium from the Federal Republic of Germany, until it was mentioned during the Public Comment period at the May 2014 Board meeting. It wasn't until an email was sent to the Board on June 4, 2014, containing a *Federal Register* announcement, that the Board was given any details of the pending project. In addition, even though the Board had two bimonthly committee meetings the day before the Department was scheduled to hold a public meeting on this possible receipt of used nuclear fuel from Germany, the Board was not given an update on the situation.

Comments

From the examples above, it can be seen that some of the "situations" have involved safety concerns, clean-up delays, or receipt of nuclear material, but others were important accomplishments at the Site. In order for the Citizens Advisory Board to be able to provide meaningful input and meaningful written recommendations to the Department of Energy, its members need to be informed of situations at the Site in a timely manner. The failure of the Department to do such is threatening to erode public trust and hampering the effectiveness of the Board. The Department's lawful commitment to transparency requires a more forthright approach.

The usual method for communication between the Department and the Board is through formal presentations at the bimonthly Board meetings, bimonthly committee meetings, or during the "agency update" portion of the bimonthly Board meeting. Unfortunately, these methods have failed to provide Site information that is important to the public in a timely manner.

Key information about the Site could be delivered in a timely manner by simply building on existing communication methods between the Department and the Board, resulting in an increased opportunity for open dialogue and developing a stronger relationship.

Recommendations:

Given the pressing nature of this issue, the Savannah River Site Citizens Advisory Board recommends that the Department of Energy:

1. Provide updates at the regular Citizens Advisory Board's bimonthly committee meetings.
 - a. These updates should be provided by the designated Department of Energy liaison to each issue-based committee.
 - i. These updates should be patterned after the "Agency Update" format used at the Citizens Advisory Board's Full Board Meetings.
 - ii. These updates should be brief and informal, with the option of a PowerPoint presentation or handout, and be followed by a question and answer session.
2. Provide updates via email to the Citizens Advisory Board.
 - a. These updates should be sent when a situation arises at the Site and waiting could mean that information could appear in the press before the Board is informed in a meeting environment.
3. Provide news releases relevant to the Site via email to the Citizens Advisory Board.
 - a. These news releases should be sent at the same time that they are posted on www.srs.gov or at the same time they are sent to news media.

The Savannah River Site Citizens Advisory Board's Position on the President's 2015 Budget Proposal

The Savannah River Site began operations in 1952 producing various materials to support the nation's Defense Department in its development of a nuclear weapons program. The site also developed a variety of nuclear materials for other uses including medical isotopes and the space exploration program. The various projects provided essential support for our national defense, research and other programs and the community benefited through growth and quality of life. The local community has always strongly supported the Site and the Site has been a valued member of the community.

The primary mission of the Savannah River Site has changed from production to cleanup. Cleanup includes waste materials remaining from years of nuclear production and other sources such as foreign research reactor materials.

The materials to be cleaned up include 37 million gallons of liquid and solid (sludge) wastes stored in aging carbon steel tanks. Some of these date back more than 50 years. Similar tanks have been discovered leaking in Hanford located in Washington. The waste in the SRS tanks continues to be described as the most hazardous environmental risk in the State of South Carolina. Leaks from these tanks could potentially contaminate the ground water and get into the Savannah River which is the source of the drinking water for communities down river of SRS including Savannah.

In development of FY 2015 budget, and the ongoing continuing resolution, the Site Treatment Plan Liquid Waste System Plan Rev 17 calls for emptying and operationally closing the remaining tanks by 2028. The process for cleaning a tank consists of removing the bulk of the nuclear waste from the tanks treating and stabilizing this waste, and with the consent of regulators grouting the tanks and any small residual levels of waste in the tanks with grout.

The cleanup of the tanks is the subject of Enforceable Agreements with the State of South Carolina and the U.S. Environmental Protection Agency. The Public expects the Department of Energy to meet the commitments that have been made.

In July 2014, the Nuclear Regulatory Commission released a Consultative Technical Evaluation Report for H-Area Tank Farm pursuant to the Ronald W. Reagan National Defense Authorization Act of 2005. The evaluation found that DOE should continue to evaluate efficiency of various tank cleaning technologies, continue to explore methods to improve estimates of residual waste volumes, and conduct additional analysis to demonstrate long-term stability. The report also found that DOE should conduct waste release experiments, as well as conducting a more comprehensive analysis of containment release from tank annuli.

As of August 2014, L-Basin, a 3.4 million gallon "swimming pool" stores an inventory of 3072 bundles of both domestic and foreign spent nuclear fuel. The pool's maximum capacity is 3650 bundles. Ongoing consideration is underway for expanding storage, including the potential addition of dry-cask storage. The Savannah River National Laboratory conducted a 2011 study on fuel and basin life extension, and found that the basin's fuel inventory could be safely stored for at least an additional 50

years, contingent upon continuation of management activities. At this time, a final disposition path and long-term repository has yet to be established. The 2015 President's Budget Request for Nuclear Material is \$260 million, down \$12 million from 2014. Funding for Used Nuclear Fuel (L-Area) in the FY 2015 President's Request is \$43 million, down \$2 million from 2014.

FY14 funding for Liquid Waste is \$566M including SDU6. FY15 President's Budget for Liquid Waste is \$588M including SDU6 (\$551M + 37M). The Liquid Waste Budget based on the President's Budget Request is increased \$22M from the FY14 Enacted Budget. However, due to increase in pension, the funding left for Liquid Waste scope of work is effectively the same level as FY14. Through the Liquid Waste Disposition Program, the Savannah River Site plans to disposition 1 Mgal of liquid salt waste through Actinide Removal Process/Modular Caustic Side Solvent Extraction Unit, produce 120-130 canisters of vitrified high-level waste at Defense Waste Processing Facility, continue Salt Waste Processing Facility construction, and continue construction of saltstone disposal unit 6.

The DOE has until 2028 to meet clean-up milestones, and with the projected budget, the mission will be delayed a decade, until 2039. While no tanks are actively leaking, some tanks have leak sites, which require additional maintenance to mitigate safety risks of reaching the water table. Savannah River Site is a unique facility that is currently running at between 1/2 and 1/3 of its full capacity. The only way to meet milestones is to operate the site at increased capacity, which would require requesting additional funding.

The impacts of the budget cuts include:

1. Forgoing the increase in the treatment capacity of Actinide Removal Process/Modular Caustic Side Solvent Extraction Unit by the planned 300%
2. Reducing the production of vitrified canisters by 67% from almost 300 / yr. to 100 per year
3. Delaying the construction of Saltstone facilities to stabilize the extracted water
4. Delaying development of storage for glass canisters and additional infrastructure to further increase salt waste treatment capability

There is no reason to believe that if these cuts are made now, that the needed funding will be restored in the future. It is also clear that the total project costs will be much higher if the program is delayed than if is completed on schedule.

Even if funding is restored in future years, the setbacks to the Liquid Waste program due to FY 14 reductions will make it difficult if not impossible to be able to meet the commitments that have been made in the Enforceable Agreements. Most critically, the citizens of South Carolina and Georgia will be placed at increasing risk due to the failure of the tanks that have already exceeded their useful life. The costs of remediation if a tank failure occurs will far exceed the short term savings. The remediation costs will be in addition the higher program costs due to a delayed schedule.

At this time, there is a belief that the 2015 budget will simply be a continuing resolution from the 2014 budget. Under the constraints of that budget, clean-up completion by the target milestone is a near impossibility, and that violates the federal government's commitment to clean-up the environment. The potential fines for failing to reach the milestones could be \$105,000 per day, totaling up to \$154 million.

The Savannah River Citizen's Advisory Board strongly believes that full funding should be restored to the Liquid Waste Cleanup program. The budget restoration makes sense in the financial long term and from a safety perspective for the workers at SRS and the people of the region.

Position Statement approved at September 2014 Full Board meeting. This paper will be up for renewal September 2015

The Savannah River Site Citizens Advisory Board's Position on Savannah River National Laboratory

Purpose of the Position Paper:

Identify the reasons for the SRS CAB to support the continued funding of the Savannah River National Laboratory (SRNL) by the Department of Energy (DOE). Uniquely, SRNL is Environmental Management's only corporate laboratory, and does work at all EM sites.

Energy Secretary Ernest Moniz made an announcement on May 20, 2014 that a Commission to Review the Effectiveness of the National Laboratories has been formed.

This commission has been congressionally mandated pursuant to the 2014 Consolidated Appropriations Act.

The commission will evaluate the effectiveness of the DOE's 17 national laboratories. SRNL is the only one of those seventeen which is an EM laboratory, and has been rated number one in safety for the last 12 years. The DOE has already acknowledged the national laboratories are a leading force in driving U.S. scientific and technological innovation and advancing the DOE's science, energy, environmental, and national security missions.

Since 2012 the SRS CAB has been introduced to numerous accomplishments and technological innovations by the Savannah River National laboratory (SRNL) through site visits and presentations by Dr. Terry Michalske, SRNL Laboratory Director.

For example the SRNL has:

- Been very helpful to the Tokyo Electric Power Corp (TEPCO) to overcome the aftermath of the Fukushima nuclear reactor problem.
- Provided new innovation for the SRS EM to process and store nuclear waste such research will ultimately save money in the SRS EM annual budget analogous to research being conducted in a variety of U.S. and international labs.
- Provided consulting services to numerous industries, educational facilities and U.S. government agencies like Ford Motor Company, the Department of Homeland Security, the FBI, the Defense Department, United Technologies, the NNSA, Clemson University and USC-Aiken.

The SRNL is a major employer of highly skilled and educated scientists in the Aiken community and the State of South Carolina. A significant percentage of funding for SRNL is from non-SRS customers, which allows for a robustness of services otherwise unachievable. Modest technology development investments for more than five years have resulted in over \$5 billion in projected savings in Environmental Management's lifecycle costs and 20 percent return on investment.

The SRNL has expertise in the fields of:

- Engineering Development
- Biotechnology
- Atmospheric Technologies
- Hydrogen use
- Nuclear Research

- International Remediation Solutions
- Technological Transmutation

The SRS CAB strongly supports the continued financial appropriations of the SRNL by the DOE. The Commission to Review the Effectiveness of the National Laboratories is charged with the responsibility to:

- Address whether the DOE's National Laboratories are properly aligned with the Department's strategic priorities.
- The Labs are not providing redundant services.
- Have unique capabilities to provide current and future energy and national security challenges.
- The Labs are appropriately sized to meet DOE's energy and national security missions.
- Supporting other Federal agencies.
- To consolidate and realign the National Labs to reduce overhead costs.
- Assess the opportunity to use other research, development, and technology centers and universities to meet the DOE's energy and national security goals.
- Assess whether the National Labs projects are compliant with statutory requirements.

Based on the presentations provided to the SRS CAB, we feel that the SRNL meets and arguably exceeds the standards of excellence and cost/benefit that the Commission is charged to identify amongst 17 National Labs. In our view the SRNL should receive increased funding and responsibility by the DOE.

As stated earlier the SRNL is a major employer in Aiken, SC. In the viewpoint of the SRS CAB the benefits of continuing the SRNL far outweigh the obvious cost. The benefit to South Carolina is evident by the strong support the SRNL received this spring from U.S. Senators Lindsay Graham and Tim Scott when the SRNL celebrated its 10th year anniversary as a national laboratory. SRNL has been an applied science laboratory for more than 60 years.

It is noted that the DOE Commission has already met in July 2014. The SRS CAB would like this Position Paper shared with the commission as soon as possible to acknowledge our strong support for the SRNL.

I am Suzanne Rhodes, representing the League of Women Voters of S.C., and today I want to address Myths associated with Yucca Mountain. Thank you for the opportunity to share our concerns.

1st myth – “The Problem with YM is Harry Reid.” Senator Harry Reid of Nevada, Majority Leader, is a handy target, but the problem is much grander than Harry Reid. Other Nevada leaders oppose YM – including a series of Governors, Attorney Generals, and the tourism industry, which is a major source of revenue. Nevada has raised unresolved legal obstacles as well.

2nd – “There are miles & miles of tunnels at Yucca Mountain.” The original design was for 40 miles of tunnels, and later it was decided to double the capacity. Yucca Mountain is now one 5-mile exploratory tunnel with a 2-mile branch once used for equipment storage. It is now closed and would have to be reopened, checked out, and significantly enlarged.

Another – “There are miles and miles of railroad tracks for shipment of spent fuel to Yucca Mountain.” If you have seen US maps of rail routes, they are proposed routes, not necessarily existing tracks. The railroad & equipment you might have seen in lovely photos at the mine opening are light rail once used to transport workers and test equipment – and visitors – into the mine – About \$8 or 9 billion dollars would be required to complete rails to YM.

To top it off, this site is so terrific that ‘after 100 years’ (whatever that means) drip shields need to be installed – made out of titanium – and costing another \$8 or 9 billion – to protect the waste and water from each other.

Please recall that the popular highway fund lacked about \$8 or 9 billion this summer. We’re not talking about chump change, even in the US budget sense.

– “Wastes from reprocessing spent fuel require less space in a geologic repository than spent fuel.” This fiction ignores the ‘hottest’ fission products are in reprocessing wastes. Because they are so hot, they require more separation space in the repository than the original spent fuel – so reprocessing does not significantly reduce the need for a repository.

– “Spent commercial fuel contains ‘good stuff.’” The independent National Academies and GAO have repeatedly reported to Congress over the years that reprocessing commercial spent fuel costs more than the recovered products are worth, and also that reprocessing raises proliferation problems because of the separated plutonium. That was long before we began to understand the complications raised by high-burnup fuel in reactor operations.

Reprocessing is always outstandingly messy because of fission products, especially messy for high-burnup fuel. Reprocessing spent fuel is NOTHING like the separation of weapons materials now going on at SRS.

– “Storing and reprocessing commercial spent fuel at SRS would provide GOOD jobs.” If spent fuel is brought to SRS or another ‘temporary’ storage site, it will provide lots and lots of jobs for truckers, some for concrete pad construction, and fencing. Transportation effects on a local site are mind

boggling and worthy of a separate presentation. The trucks are huge and roads would be impacted. Hopefully most would come on trains. Hopefully none will come to SRS.

There is another quip – “YM has been studied to death.” THAT one is true. Studies have found Yucca Mountain to be a difficult site – politically, technically, and environmentally. Lots of folks think that YM is as good as any other site, and it may be. However it will require quite a package of technical, political, and economic stipulations.

So, in summary, the League finds that Yucca Mountain is not a simple solution to the nation’s nuclear waste problem, and certainly not a solution to South Carolina’s wastes at SRS or at our reactors. There are federal documents footnoted in the League report (LWVSC.org) for people wanting details. I can email copies of the cited documents to anyone interested. The sources are mostly the National Academies and the GAO, and they have been official for decades.

So, we have invested in a site that will require lots more money at a time when Congress can’t make decisions, and a hostile state, and Congress has long since diverted the Nuclear Waste Fund.

So all this is why the League has taken the position that both weapons waste at SRS and commercial waste at SC nuclear power plants should stay safely contained and stored where the wastes have been generated - near historical jobs and local knowledge. We can only hope that one day this country will get serious about a permanent repository program. We all need to pay attention so that SRS doesn’t become the ‘interim’ site. If that happens, then as many as 37 Congressional districts now with nuclear waste could lose interest in a geologic repository. We can’t let that happen. We need them all to develop a decent national policy.

BTW - It’s easy & comfortable to criticize the Department of Energy – DOE – but CONGRESS is the real culprit. Pull up the League report & do a word search for ‘congress.’

SRS is the ONLY simple solution - especially since SRS boosters erroneously ‘believe’ that commercial spent fuel reprocessing jobs would be forthcoming, and also believe in the likelihood that Yucca Mountain will receive the SRS wastes. This pair of beliefs seems to be shared by our delegation. And many of our state leaders.

IN SUMMARY:

- SC’s SRS is already doing more than its share of managing the nation’s waste problem,
- Congress needs to fund SRS waste cleanup and implement a comprehensive long-range national plan, and
- Europe and others need to take responsibility for their own wastes.

9/23/14 Beaufort SC SRS CAB meeting

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The League of Women Voters of South Carolina is a nonpartisan political organization that encourages informed and active participation in government, works to increase understanding of major public policy issues, and influences public policy through education and advocacy. The League of Women Voters is where hands-on work to safeguard democracy leads to civic improvement.