Meeting Minutes  
Savannah River Site (SRS) Citizens Advisory Board (CAB) – Full Board Meeting  
Hilton Garden Inn - Augusta, GA  
November 13-14, 2017  

Attendance – Monday, November 13, 2017

CAB
Gil Allensworth  
Susan Corbett  
Eric Crossan  
Rose Dobson-Elliott  
Thomas French  
Dawn Gillas  
David Hoel  
Eleanor Hopson  
Douglas Howard  
Daniel Kaminski  
Jim Lyon  
Narinder Malik  
John McMichael  
Larry Powell  
Bill Rhoten  
Earl Sheppard  
Bob Smith  
Nina Spinelli  
Ed Sturcken  
Joyce Underwood  
David Vovakes  
Mary Weber  
Bobbie Williams

DOE/Contractors
Avery Hamnett, DOE-SR  
Jim Folk, DOE-SR  
Jean Ridley, DOE-SR  
Zach Todd, DOE-SR  
Thomas Johnson, DOE-SR  
Maxine Maxted, DOE-SR  
Terry Spears, DOE-SR  
James Tanner, S&K  
Chelsea Gitzen, S&K  
Federica Staton, S&K  
Kristen Huber, SRNS  
Kim Cauthen, SRNS  
Mark Schmitz, SRR

Agency Liaisons
Terry Hiott, SCDHEC  
Heather Cathcart, SCDHEC  
Susan Pulmer, SCDHEC  
Heather Cathcart, SCDHEC  
Gregory O’Quinn, SCDHEC  
Sandra Snyder, SCDHEC

Stakeholders
Jim Marra, CNTA  
Janett Rice, Bechtel  
Michael Grahm, Bechtel  
E Patten, BWXT  
Tom Clements, SRS Watch  
Bill Lawless, Paine  
Sharon Farrell, Westinghouse  
Ed Wannamacher, BWXT

Opening: Nina Spinelli, CAB Chair
Ms. Spinelli welcomed everyone to the meeting.

CAB Chair Update: Nina Spinelli, CAB Chair
Ms. Spinelli provided a PowerPoint presentation recounting any recent events that may be of interest to the CAB.

Meeting Rules & Agenda Review: James Tanner, CAB Facilitator
Mr. Tanner reviewed the meeting rules and the agenda for the day. Mr. Sheppard, Mr. Allensworth and Mr. Mikolanis also recounted the EM SSAB Chairs Meeting which had occurred since the previous full board meeting.

Agency Updates

Terry Spears, Deputy Site Manager, Department of Energy - Savannah River (DOE-SR)
Mr. Spears began his update by noting that Mr. Mikolanis recently became designated as the assistant manager for nuclear materials stabilization. He continued by summarizing various projects around SRS and milestone agreements with SC DHEC.

Q&A Session
Mr. Lyon asked what would be cut, reduced, delayed or deferred regarding possible future budget constraints. Also he asked if Mr. Spears had any comments regarding using Westinghouse as a contractor considering their history. Mr. Spears responded that such constraints would cause a slow down in various programs at SRS, but reminded him that had not yet come to pass. With regards to Westinghouse, Mr. Spears noted that many have dealt with similar significant difficulties related to large-scale nuclear projects which does not excuse Westinghouse’s performance on VC Summer.

Ms. Gillas asked if the underground tanks mentioned in Mr. Spears’ updated were operating tanks or closed tanks. Mr. Spears answered they were general underground fuel tanks across the site which had not been closed.
Mr. Malik then asked when the DWPF melter which had been assembled would be put into full production. Mr. Spears replied that restart of that plant is on track for December of 2017. Mr. Malik then asked what the regulatory milestones mentioned in Mr. Spears’ update are. Mr. Mikolanis answered that a clean up plan had been previously negotiated with SCDHEC and EPA, and when milestones are due within a 2-year window they move into Appendix E of the Federal Facilities Agreement. He went on further to note that the milestones mentioned in Mr. Spears’ update were Appendix E milestones which were completed for this year.

Mr. Hoel asked if there had been any environmental violations or noncompliances in the past two months. Mr. Spears answered that there had been a couple which were anomalies with compliance samples taken from L falls K12 and LO7A which were found to have high counts of bacteria on October 9th which were reported to SCDHEC and DOE-SR is awaiting feedback as to whether or not that will result in an NOV. Mr. Hoel further asked if there had been any DOE order violations or noncompliances during that time, to which Mr. Spears responded there had not been to his knowledge. Mr. Hoel continued by asking what milestones were delayed until 2019. Mr. Spears replied that they were delayed pending re-negotiation in 2019 and those are waste tank waste removal milestones and closure milestones.

Mr. Rhoten asked what the rate of processing the containers of the on-dock rail detection system. Mr. Spears answered that the answer was above his knowledge level but he did know that wasn’t the first time it was deployed and an answer further would be relayed later.

Ms. Corbett asked if the plutonium mentioned in Mr. Spears’ update was part of the MOX program, to which Mr. Spears replied that the current downblending campaigns are non-MOX-able materials. Ms. Corbett then asked how many metric tons of plutonium that included, to which Mr. Gunter answered that a record of decision was issued in 2013 for 6 metric tons of plutonium which is non-MOX-able material and no decision has been made for a disposition path for the remaining plutonium. Ms. Corbett continued by asking how much is remaining. Mr. Gunter answered that there are 34 additional tons which includes material that is not at SRS and material that is at SRS. Ms. Corbett then asked if the downblending is scheduled to begin after the container is finished being discussed. Mr. Gunter responded that material had already been downblended in 2017 and every year 6 Destructive Examinations must be done on 3013 containers which are in storage in K Area in order to evaluate the 50-year storage life of those containers. He further noted that when those DE’s are complete additional 3013 containers will be opened so the material inside can be downblended as well which will eventually be sent to WIPP because it is TRU waste and not HLW.

Ms. Gillas asked what the plan is for the non-aluminum SNF, to which Mr. Spears replied that there needed to be some decisions made in the future regarding the stainless-steel fuels. Ms. Maxted also responded that a swap with Idaho is being considered where they would send aluminum-clad SNF to SRS and SRS would send any non-aluminum SNF to Idaho.

Mr. Lyon asked if a site had been identified for the advanced manufacturing collaborative, to which Mr. Spears noted that it had been announced almost two years prior which is USC Aiken.

Ms. Corbett asked regarding the decision to accelerate disposition of TRU waste from SRS to WIPP, if WIPP is in agreement, to which Mr. Spears responded yes, they are and SRS is asking for priority for accepting SRS shipments to accelerate the process.

Shelly Wilson, South Carolina Department of Health & Environmental Control (SC DHEC)
Ms. Wilson voiced her support for the efforts of SRS in their cleanup programs mentioned in Mr. Spears’ update.

Q&A Session
Mr. Hoel asked if SCDHEC had considered giving SRS a regulatory deadline for the TRU waste to leave the site. Ms. Wilson responded that SCDHEC would love to impose that, but it had not been gained or planned for the future.

Administrative & Outreach Committee Update: Eleanor Hopson, Chair
Ms. Hopson noted chair and vice chair for the CAB would be held the following day. She also relayed when the next A&O committee meeting would occur.

Facilities Disposition and Site Remediation Committee Update: Dawn Gillas, Chair
Ms. Gillas noted when the next FDSR committee meeting would be held, and what presentations the FDSR committee asked for which would be held the following day.

Nuclear Materials Committee Update: Larry Powell, Chair
Mr. Powell summarized what open or pending recommendations are current for the NM committee and what presentations the NM committee asked for which would be held the following day. He also noted when the next NM committee would be held.

Strategic and Legacy Management Committee Update: David Hoel, Vice Chair
Mr. Hoel summarized the recommendation statuses for any which are open or pending for the SLM committee, and the previous committee meeting’s activities. He then noted when and where the next SLM committee would be held, and what presentations the SLM committee asked for which would be held the following day.

**Waste Management Committee Update: Gil Allensworth, Chair**

Mr. Allensworth noted when and where the next WM committee would be held, and what presentations the WM committee asked for which would be held the following day.

**Balancing the Demands of EM Scope with the Pension Funding Committee Update:**

Tom French, Chair

Mr. French summarized the activities of the previous BDEMSPF committee meeting and noted when and where the next meeting would be.

**Discussion of Draft Recommendation:**

“Glass Waste Storage Buildings”

Ms. Spinelli summarized the draft recommendation and its history.

Ms. Underwood asked what the first recommendation looks like from the DOE-SR perspective – what it would entail. Ms. Spinelli summarized the history behind a final repository. Ms. Underwood noted that she is unsure of what DOE-SR can do in response to that recommendation to implement it.

Ms. Corbett asked for a canister model number to be added, which was accepted.

**Discussion of Draft Recommendation:**

“SRNL Funding”

Ms. Spinelli summarized the draft recommendation and its history.

Ms. Gillas asked if each program in EM has a set of funding given to SRNL for testing which gives the lab a base funding. Mr. Mikolanis answered that the majority of its funding is from overhead accounts. Ms. Gillas then asked if the funding for SRNL varied or stayed the same in recent years, which Mr. Mikolanis noted he would find an answer for and provide it to the CAB in response. Ms. Gillas then asked if SRNL has expressed to have a desire for base funding instead of the current system. Ms. Spinelli summarized the presentation given at the previous full board meeting.

Mr. Hoel suggested minor edits to the background section of this draft recommendation, which were accepted.

Mr. Kaminski suggested another minor edit which was accepted.

Mr. Vovakes asked if each PBS requires a separate authorization from Congress. Mr. Spears answered with a yes.

**Discussion of Draft Recommendation:**

“DWPF Additional Failed Equipment Storage”

Mr. Malik summarized the draft recommendation and its history. He then made a small wording change.

Ms. Corbett asked if the failed melters in storage are encapsulated in something. Mr. Malik noted they are in a large steel tank. Ms. Corbett asked if they are highly radioactive. Mr. Folk answered saying they’re stored in a steel box in a vault on the south side of DWPF. Ms. Corbett then asked for a sense of the size of a melter. Mr. Folk estimated it’s about 20 feet long, 10-12 feet wide and 15 feet high. Mr. Malik noted it weighs about 70 tons. Mr. Folk also noted that the previous melter which was removed, Melter 2, was about 80-85 tons because it still had glass in it, and the boxes are about 70 tons. Ms. Corbett then asked if they’re moved by trains, which Mr. Folk responded yes they are. Ms. Corbett continued her questioning by asking if the melters are going to go to a permanent repository, which Mr. Folk noted would still need to be decided, but most likely yes. Ms. Corbett went on to ask if the melters would need to be re-packaged in order to be shipped. Mr. Folk answered they would most likely have to be re-packaged in order to be shipped.

Mr. Hoel suggested adding some sort of time frame within the recommendation, which was accepted.

Mr. Powell asked when the first vault was constructed, which Mr. Spears noted the first vault and melter were created at about the same time as DWPF. Mr. Powell noted that the sooner construction began for a new vault the better since no vault currently existed for the melter which is now in use.
Mr. French asked if this would be a capital project, and if so, it would need to be a line-item budget. He further noted it takes 24-36 months to get a line-item budget approved.

Ms. Underwood asked what the worst case scenario is if the current melter fails while no storage vault exists. Mr. Spears noted that would depend on the nature of the failure, and if feasible a repair would be made to enable continued use of said melter. He went on to note that if the melter could not be repaired and needed to be placed, processing would be halted until adequate storage for the failed melter would be built.

Mr. Kaminski suggested some minor grammatical changes which were accepted, and to change the timeline from two years to as soon as possible which was also accepted.

Public Comment

Bil Lawless suggested making changes to public comment periods at CAB meetings, and then graded all of the current draft recommendations created by the CAB with letter grades. He also went into detail as to why he gave that grade and what he would suggest changing.

Mr. Tanner noted that the bulk of the work done on recommendations is completed at committee meetings, and if anyone from the public wanted to have their input considered that would be the best time for it.

Jim Marra noted GWSB 1 is in very safe condition and there is no heat load problem which was concluded and ensured by analysis. He went on to note that removing waste from HLW tanks and putting it in a vitrified form is the best path forward.

END OF DAY 1, November 13, 2017
CAB Chair Opening and Update – Earl Sheppard, CAB Vice Chair

CAB Vice Chair Earl Sheppard opened the meeting and welcomed everyone.

Meeting Rules & Agenda Review: James Tanner, CAB Facilitator

Mr. Tanner reviewed the meeting rules and the agenda for the day.

Presentation: Annual Site Environmental Report – Maatsi Ndingwan, DOE-SR & Karen Vangelas, SRNS

Ms. Ndingwan summarized the history and purpose of the annual SRS site environmental report. She then introduced the ASER video. This video gave a detailed summary of what the ASER entails and why.

Ms. Vangelas went into great detail regarding each individual section of the ASER. This includes figures specifically mentioned in the 2016 ASER. She also went as far as comparing these figures to those found in years prior ASERs.

Q & A Session

Mr. Malik asked what SRS air permits existed besides title five air permits and to provide an update regarding lowered cadmium levels in streams which was a request by SCDHEC about seven or eight years ago. Ms. Vangelas noted the air permits are all identified in chapter three of the ASER. Ms. Ndingwan noted she would find an answer to the question regarding cadmium levels.

Ms. Corbett asked what kinds of renewable energies does SRS use which were noted in the ASER. Mr. Cauthen answered that wood waste is used in all boilers on site such as in the AMARESCO boilers, small boilers in K Area, L Area and S Area to provide heat for those facilities. Ms. Corbett went on to ask if tires are being burned also, which Mr. Mikolanis answered the main biomass plant is what burns tires. Ms. Corbett continued by asking where the permits were listed, which Ms. Vangelas is listed on the ASER 2016 and 2016 web pages including chapter three of the 2016 ASER. Ms. Corbett carried on her questioning by asking for an explanation regarding the increase in tritium releases in 2016 as noted in the ASER. Ms. Eddy answered the releases into the air are still below the 10-year average of 28,000 curies, but admitted it has gone up 14% to 21,700 curies which is mainly from operation processes from the tritium facilities which varies annually based on those processes.
Presentation: Radiological Education, Monitoring, and Outreach Project – Megan Winzeler, SREL

Ms. Winzeler summarized the REMOP program and why it was founded. She also noted when the upcoming meetings will be held and what topics will be covered.

Q &A Session

Ms. Gillas asked if more or different people come to their meetings so the public can provide input and receive the information given out. Ms. Winzeler noted that they’ve had great success with live streaming meetings on social media.

Mr. Howard asked what the main complaints are from Burke County residents. Ms. Winzeler answered that many people felt their health is negatively affected by living near the site, and most people in the county did not share that feeling. She further noted that through education those fears are resolved. Mr. Mikolanis added the REMOP program began because of a SRS CAB recommendation, and the community believed cancer rates in the community were high so targeted outreach & education was created in the form of REMOP. Mr. Howard asked if other communities around sites shared similar concerns, which Mr. Mikolanis responded that many sites have similar communities concerned in the surrounding areas which is why a complex-wide ASER is created annually.

Ms. Underwood asked if the Burke County Health Department is involved with REMOP, which Ms. Winzeler noted they are not but she is talking with them to find out what resources they have available to the public. Ms. Underwood continued to ask if other REMOP programs are available in other areas, which Ms. Winzeler noted currently there are not. Ms. Underwood went on further to ask where funding for this program comes from, which Ms. Winzeler answered by saying DOE funds REMOP.

Mr. Smith asked how is this disseminated to other communities at large so the teachers know the information is available and can be used for education purposes. Ms. Winzeler replied that REMOP is funded solely for Burke County, but the information they provide is available online.

Presentation: Tank Closure Cesium Removal – Jeff Bentley, DOE-SR & Pen Mayson, SRR

Mr. Bentley summarized the history and reasons behind forming the Tank Closure Cesium Removal program.

Q &A Session

Ms. Weber asked if this is proprietary technology and if this project is affected by the new liquid waste contract. Mr. Mayson answered that any contracts currently in place will extend to the new contractor, and Westinghouse has claimed limited rights and proprietary information and DOE has ruled that is not the case, so SRR has sent a letter back to Westinghouse asking them to remove any intellectual rights markings by the end of November. Ms. Weber asked for an update at the next full board meeting, which Mr. Mayson answered with a yes.

Mr. Malik asked regarding cesium resin transportation to DWPF – how it would be treated prior to sending it to DWPF. Mr. Mayson answered that after the columns are stored at an interim safe storage pad which is intended to carry a life span of 10 years or longer. Other disposition paths are being investigated during this time. Mr. Malik also asked if part of the air exhaust is part of the construction permit, which Mr. Mayson responded yes it is.

Ms. Underwood asked if Westinghouse responded “no” it would result in litigation. Mr. Bentley responded that it is already a legal issue and the legal department would respond if they gave that response. Ms. Underwood continued by asking if that would affect the contract with Westinghouse, which Mr. Bentley responded that it would not.

Ms. Gillas asked strontium is also an issue with salt waste. Mr. Mayson replied that those are not required to meet the saltstone life. Mr. Bentley responded that there isn’t enough strontium in the stream to violate the waste acceptance criteria of saltstone. Ms. Gillas then asked if that’s just the case with this tank or in general, to which Mr. Bentley answered that criteria is applied to all tanks.
Mr. Howard asked if Hanford would wait for tests to be completed for their own TCKR projects to be completed. Mr. Mayson replied that yes this was the case.

Ms. Corbett asked if the result of this project would be considered HLW, which Mr. Mayson replied it would not. Ms. Corbett then asked where this would be sent to, and Mr. Mayson responded that WCS of Texas is being considered but they do not have regulatory approvals for that yet. Ms. Corbett continued by asking if these containers would be highly radioactive, which Mr. Mayson replied they would not.

Mr. Hoel asked what the NEPA coverage is for this project. Mr. Mayson answered a NEPA checklist was completed at the beginning of this project as is the custom with all of their projects. Mr. Hoel asked if resin would be able to be sluiced out of the containers after ten years. Mr. Mayson responded that it is expected to be done without an issue based on lab analysis.

Mr. Allensworth asked how far the demonstration would be pushed out, and Mr. Mayson replied about a month to two months. Mr. Allensworth then asked what the project cost is, which Mr. Mayson noted it is slightly over $25 million with a max estimate of $30 million.

Mr. Smith asked what the projected advantage of this project are. Mr. Mayson answered the feasibility study will be done after the demonstration is complete which will include cost comparisons.

Presentation: Solid Waste Program Update/WIPP – Dan Ferguson, DOE-SR
Mr. Ferguson summarized the Solid Waste Program at SRS.

Q &A Session
Ms. Corbett asked if the naval reactors are also taken in by SRS including their waste. Ms. Maxted responded that SRS takes the east coast naval reactors’ waste and Hanford takes the west coast naval reactors’ waste which are core barrels which is what the reactor sits in, or heat exchanges – and none of their fuel, including those core barrels and heat exchanges from the two naval labs. Ms. Corbett then asked if any internal pieces are taken in by SRS, which Ms. Maxted replied that there may be some coils and things like that. Ms. Corbett continued by asking if there's any way for rainwater to come into contact with waste which is in the trenches. Mr. Ferguson answered that there is an impermeable cover over the trenches and an additional engineered cover will be placed on top – both of which will fail after time and rain water is expected to penetrate the covers – but that is thousands of years from happening.

Mr. Hoel asked if the site treatment plan has been completed and approved by DHEC. Ms. Wilson answered that DOE has submitted a site treatment plan which is currently being reviewed by SCDHEC. Mr. Hoel asked if a copy could be given to the CAB when it is approved.

Ms. Underwood asked if TRU waste is commercial transport. Mr. Ferguson noted it is not. Ms. Underwood asked regarding mixed waste drivers if they have any kind of dispensation from DOE if they need to be searched because they’re waste in them. Mr. Ferguson answered that DOE-SR shares legal liability for that waste even if the truck is searched or transported. Ms. Underwood then asked if the drivers need to open the containers for any reason. Mr. Ferguson noted they do not and once the waste is sealed prior to transport if the seal is broken it is sent back to SRS.

Ms. Weber asked what NORM is. Mr. Ferguson answered it is Naturally Occurring Radioactive Material.

Presentation: 235-F Deactivation – Randy Clendenning, DOE-SR
Mr. Clandenning gave a status update regarding 235-F Deactivation, including what had been done since the previous year’s CAB presentation.

Q &A Session
Mr. Kaminski asked what amount of material removal it would take to reduce the catastrophic issues under the 100 mrem goal. Mr. Clandenning answered that there are multiple variables and items which need to be removed to meet that goal, and all of the transient combustibles have been removed including equipment; a little bit of items removed goes a long way. Mr. Kaminski asked how many grams are in each cell, which Mr. Clandenning answered there is about 16.5 grams total in cells 3, 4 and 5 according to information taken in 2006, and about 1.78 grams in cell 6, and 1.8 grams in that entire side of cells.

Ms. Gillas asked if the measurements taken during the analysis period prior to any removal are matching up to the measurements taken during the deactivation and removal period. Mr. Clandenning replied that the tools which were used during the analysis period were taking more general readings than the tools currently being used which are more precise – but there are no major changes between the two readings.
Mr. French asked with regards to the accident scenario if the dose mentioned is from heating the material or dispersing the material. Mr. Clandenning answered that it is from both.

Ms. Corbett asked if the building could be entombed and if it could spontaneously combust. Mr. Clandenning noted that plutonium-238 will not spontaneously combust and entombing the building was analyzed before a decision was made as to what to do with 235-F and such a suggestion would make the building irrecoverable in the event that something needs to be removed later. Mr. Mikolanis noted that an irrecoverable action could be the end result after deactivation efforts hit a curve with regards to diminishing returns which would be spending a great deal of effort or funding to remove very little if at all contamination.

Presentation: EM Performance Metrics – Zach Todd, DOE-SR

Mr. Todd provided and summarized the EM performance metrics for FY 17.

Q &A Session

Mr. Vovakes asked who sets the targets noted in the metrics. Mr. Todd answered that multiple variables come into play when creating these targets including input from SCDHEC.

Mr. Powell asked with regards to not meeting the target for saltstone production what the reason was. Mr. Todd answered that it was also a result of the melter failure.

Mr. Hoel asked if the mixed LLW limitations is due to regulations. Mr. Spears responded that once the legacy waste was removed there would be expectations set to avoid building up new legacies of waste that is not dispositioned, not imposed by DHEC.

Mr. Vovakes asked how many targets were missed in prior FY. Mr. Todd noted that historically SRS does pretty well at meeting each target and each year the bar is set higher.

Mr. Kaminski asked for more detailed metrics showing trends over previous years, which Mr. Mikolanis committed to looking at as a possibility for the 2018 CAB work plan.

Public Comment

Tom Clements spoke about the goals and purpose of the Defense Nuclear Facility Safety Boards.

Rose Hayes reiterated what Tom Clements noted regarding the DNFSBs.

Mr. Tanner collected these votes.

Voting: CAB Chair and Vice Chair

Voting: Recommendation 347 Curation Facility

Mr. Hoel summarized this recommendation’s response and motioned to vote to close it which was seconded. The recommendation was closed with a majority vote.

Voting: Draft Recommendation

SRNL Funding

Ms. Spinelli summarized the status of this recommendation and asked for a motion to vote on it which was made and seconded. The draft recommendation passed with a majority vote.

Voting: Draft Recommendation

Glass Waste Storage Building

Ms. Spinelli asked for a motion to vote on this recommendation which was made and seconded. The draft recommendation passed with a majority vote.

Mr. Kaminski noted that anyone who abstained has the right to comment, which no one took.

Voting: Draft Recommendation

DWPF Additional Failed Equipment Storage

Mr. Malik noted changes which he had made based on recommendations from fellow CAB members and the public.
Ms. Weber asked what the final point of the recommendation is regarding the timing. Mr. Tanner read the final recommendation.

Mr. Vovakes asked what the maintenance costs would be on an annual basis. Mr. Malik noted it would entail weekly inspections. Ms. Spinelli asked for a motion to vote, which was given and seconded. This recommendation passed with a majority vote.

~Meeting adjoumed

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