

Meeting Minutes
Savannah River Site (SRS) Citizens Advisory Board (CAB) – Full Board Meeting
North Augusta Municipal Building – North Augusta, SC
March 19-20, 2018

Attendance – Monday, March 19th, 2018

<u>CAB</u> Gil Allensworth Carlos Cato Brian Chemsak Betty Cook Eric Crossan Thomas French Dawn Gillas Jim Guille Charles Hilton Eleanor Hopson Douglas Howard Ashley Jacobs Daniel Kaminski Narinder Malik John McMichael Gregg Murray Larry Powell Bob Smith Joyce Underwood David Vovakes Mary Weber Bobbie Williams	<u>DOE/Contractors</u> Avery Hammett, DOE-SR Jim Folk, DOE-SR Thomas Johnson, DOE-SR Maxcine Maxted, DOE-SR Terry Spears, DOE-SR Amy Boyette, DOE-SR James Tanner, S&K Chelsea Gitzen, S&K Federica Staton, S&K Ken Gray, S&K Teresa Haas, SRNS Kristin Huber, SRNS Mtesa Wright, SRNS	<u>Agency Liaisons</u> Heather Cathcart, SCDHEC Susan Fulmer, SCDHEC Gregg O'Quinn, SCDHEC Sandra Snyder, SCDHEC <u>Stakeholders</u> Tom Clements, SRS Watch Colin Demares, Aiken Standard James Marra, CNTA Martha Ruthven, Rep. Wilson Bret Leslie, USNWTRB
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CAB Chair Update: Gil Allensworth, CAB Chair

Mr. Allensworth asked every CAB member to introduce themselves and why they decided to join the CAB. He then provided a presentation with EM SSAB guidance which establishes the SRS CAB and their scope of work. After that, he provided photos of speaking engagements which various organizations asked for a representative of the SRS CAB to speak or provide a presentation and described those events.

Meeting Rules & Agenda Review: James Tanner, CAB Facilitator

Mr. Tanner reviewed the meeting rules and agenda.

Agency Updates

Michael Budney, Site Manager, Department of Energy – Savannah River (DOE-SR)

Mr. Budney summarized the status of various ongoing projects on the site.

Q&A Session

No questions were asked.

Shelly Wilson, South Carolina Department of Health & Environmental Control (SCDHEC)

Ms. Wilson provided an update regarding general projects under the SCDHEC purview, and then voiced her support for the IPL draft letter. She further noted SCDHEC shared similar priorities for their letter on the topic of budget for SRS. She then went into detail as to why SCDHEC chose those priorities.

Q&A Session

Ms. Weber noted her appreciation for Ms. Wilson's endorsement of the IPL draft letter.

Mr. Allensworth asked if the site created any issues with groundwater amounts in other areas. Ms. Wilson answered no.

Administrative & Outreach Committee Update: Eleanor Hopson, Chair

Ms. Hopson summarized the current activities of the AO committee.

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

Tom French, Chair

Mr. French provided a synopsis of why the BPS committee was formed and what their scope of work is. He then summarized the previous BPS committee meetings. He also summarized the upcoming events of the March BPS meeting.

Mr. Kaminski asked if there are currently enough members on this committee. Mr. French replied yes.

Ms. Wilson noted the pension was also mentioned in the SCDHEC FY20 priority list feedback given to DOE-SR. She then thanked Mr. French and the CAB for looking into the pension funding issue as it relates to budgetary impact.

Facilities Disposition and Site Remediation Committee Update: Joyce Underwood, Chair

Ms. Underwood noted there are no open or pending recommendations, and her plans for the next upcoming meeting.

Nuclear Materials Committee Update: Larry Powell, Chair

Mr. Powell noted there is currently one open recommendation pending DOE-SR feedback.

Strategic and Legacy Management Committee Update: Dan Kaminski, Chair

Mr. Kaminski read the committee purpose and explained it. He also noted there is currently one open and one pending recommendation.

Waste Management Committee Update: Dawn Gillas, Chair

Ms. Gillas noted she lives in New Ellenton very close to SRS. She then congratulated SRS on starting HFIR processing. After that, she noted there is one open and three pending recommendations. She continued by noting she has an idea for a future draft recommendation.

Voting

Integrated Priority List Letter Draft

Mr. Kaminski summarized the IPL letter draft and why it was created.

Ms. Gillas suggested a minor word change.

Mr. French suggested removing the recommendation to maintain min safe operations and instead suggest current operations. Mr. Kaminski noted that min safe is a baseline component for all PBS. Mr. Kaminski suggested taking that recommendation out altogether, which was accepted.

Mr. Hilton asked if any recommendations regarding plutonium downblending which would be done via MOX falls under the SRS CAB purview. Ms. Maxted noted this is non-MOX-able material which is under the EM scope and SRS CAB purview.

Ms. Underwood asked if maintaining current operations could replace the removed recommendation wording, "min safe." Mr. French noted this was covered under the first recommendation.

Ms. Gillas suggested taking out the word, "processing." This was accepted. She also suggested some minor wording changes which were also accepted.

Mr. Allensworth asked regarding 2A and 2C if WIPP and TVA needed to be mentioned. Mr. Kaminski noted he did not think so. Ms. Gillas noted these are the approved facilities currently which specifies these materials will not stay at SRS, which was accepted.

Ms. Underwood suggested a minor wording change.

Mr. Allensworth suggested another minor wording change, which was accepted.

Mr. Smith suggested a minor word change, which was accepted.

Mr. Kaminski asked if any changes could be made to the document now for the CAB to approve of since the following day would be for voting on this draft. Mr. Tanner accepted this and CAB support took the time to make those changes.

Ms. Underwood suggested a minor punctuation change, which was accepted.

Ms. Williams suggested a minor wording change which was accepted.

Mr. Howard also suggested a minor wording change.

Mr. Kaminski suggested punctuation changes which were accepted.

Mr. Murray asked why the second set of priorities began their numbering over again. Mr. Kaminski accepted those changes.

Mr. Kaminski suggested reordering 235-F as a lower priority since the facility is currently safe unless the building catches fire. Ms. Gillas disagreed due to the contaminants in that building and how dangerous they are. Mr. Allensworth noted deactivating this facility would cost a great deal of budget money. Ms. Maxted confirmed this, stating this year the site would use about \$3 million for risk-reduction activities, and to stay on track with deactivation about \$7 million per year is needed. Ms. Gillas asked for how many years would this continue, to which Ms. Maxted estimated five to eight years further. She also noted this is not including surveillance and maintenance. Mr. French noted that keeping 235-F deactivation on the list still shows its importance but there are items which are more important such as pension funding.

Ms. Gillas suggested removing a split between the two lists of priorities to make them both one long consecutive list in order of priority, which was accepted.

Public Comment

Bill Lawless expressed his disagreement with the recent SRS CAB recommendation to discontinue accepting foreign fuel.

Tom Clements provided some background on himself and his involvement to date with the SRS CAB. He then read materials he had brought with him from his local lobbyist group, SRS Watch.

Jim Marra provided some background on his local educational organization, CNTA and himself.

END OF DAY 1, March 19th, 2018

Attendance – Tuesday, March 20th, 2018

CAB
Gil Allensworth
Carlos Cato
Brian Chemsak
Betty Cook
Susan Corbett
Eric Crossan
Thomas French
Dawn Gillas
Jim Guille
Charles Hilton
Eleanor Hopson
Douglas Howard
Ashley Jacobs
Daniel Kaminski
Narinder Malik
John McMichael
Gregg Murray
Larry Powell
Bob Smith
Joyce Underwood
David Vovakes
Mary Weber
Bobbie Williams

DOE/Contractors
Avery Hammett, DOE-SR
Jim Folk, DOE-SR
Thomas Johnson, DOE-SR
Jeff Bentley, DOE-SR
Soni Blanco, DOE-SR
Maxcine Maxted, DOE-SR
Terry Spears, DOE-SR
Amy Boyette, DOE-SR
James Tanner, S&K
Chelsea Gitzen, S&K
Federica Staton, S&K
Eloy Saldivar, SRNS
Kristin Huber, SRNS
Mtesa Wright, SRNS
Rick Srague, SRNS

Agency Liaisons
Gregory O'Quinn, SCDHEC
Sandra Snyder, SCDHEC
Heather Cathcart, SCDHEC
Grace Anne Martin,
SCDHEC

Stakeholders
Tom Clements, SRS Watch
Karyn Severson, US NWTRB
Bret Leslie, US NWTRB
Lee Lee Anderson, WAND
Annie Laura Howard
Stephens, WAND
Lindsay Harper, GA WAND
Martha Ruthren, Rep. Joe
Wilson
LF Foodson
Chelsey Mclendon
Lisa Darden, SRS Watch

Meeting Rules & Agenda Review: James Tanner, CAB Facilitator

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

Presentation: SRS Remediation Projects – Cathy Lewis, SRNS

Ms. Lewis provided a summary on current and previous SRS remediation projects.

Q&A Session

Mr. Malik asked when thermotechnology is applied if there is any admission of chemicals and are these monitored. Ms. Lewis answered that lots of monitoring occurs which is also reviewed by regulators but the focus is on VOCs or what exists first and what is left later. Mr. Malik asked if DNAP materials were successfully removed. Ms. Lewis replied that it had not all been removed yet. Mr. Malik went on to ask when a reactor is grouted if it's monitored afterwards. Ms. Lewis responded yes.

Ms. Underwood asked regarding groundwater plumes if there is a rate of contamination in streams which feed into the Savannah River. Ms. Lewis answered that in some places SRS is already impacting streams but for further contamination they're attempting mitigation to prevent it. Ms. Underwood asked what the groundwater flow rate is towards the streams, to which Ms. Lewis replied about 100 feet per year. Ms. Underwood continued on by asking once contamination reaches the streams how fast would it flow towards the Savannah River, to which Ms. Lewis responded it would be instant movement. Ms. Underwood yet again asked if buildings could be used after they're grouted and shut down, to which Ms. Lewis answered no.

Ms. Corbett asked if the grout itself becomes radioactive after it's poured into reactor buildings when they're shut down. Ms. Lewis replied that to some extent yes. Ms. Corbett then asked what the life expectancy of this grout is. Ms. Lewis responded she did not know. Ms. Corbett went on again to ask if it was a good idea to continue to remove contaminants from the groundwater and release them into the air. Ms. Lewis answered that it is a lot less toxic in the air, and all levels of contaminants are well below the permitted level which is what is deemed as safe, this also dilutes the contaminants and UV light helps to break down VOCs.

Mr. Cato asked if there are any containment efforts for SRS groundwater. Ms. Lewis replied that right now none of the contaminants are entering public water supplies, and the 310 square miles allows an advantage for these to be contaminated in the SRS groundwater plumes. She further noted that SRS is actively taking steps to prevent these contaminants from entering streams where they would flow to outside of SRS water sources.

Mr. Vovakes asked what the end life cycle for SRS is which is when all contaminants across the site would be cleaned up, since he had previously heard it was 2031 and the presentation from Ms. Lewis stated it was 2050. Ms. Lewis responded that she did not know the answer. Ms. Maxted noted that the life cycle end date is updated each year as funding for the site changes. Mr.

Vovakes then asked if the EPA and DHEC are the only regulators for SRS. Ms. Lewis answered there are also others such as sub-organizations under the CDC.

Mr. Powell asked what occurred at SRS to make them say they should start cleanup and stop contamination and when did that occur. Ms. Lewis replied that super fund, RCRA and CRCLA were responsible for that.

Mr. Guille asked how long the low permeability caps are estimated to maintain their integrity. Ms. Lewis responded that since constant maintenance is done they are estimated to maintain their integrity indefinitely, and since they're buried erosion is a non factor. She added that they're inspected regularly to ensure this.

Presentation: Management and Disposal of DOE SNF – Bret Leslie, NWTRB

Mr. Leslie provided a presentation on who the NWTRB is and what they do in addition to their perspectives on the management and disposal of SNF.

Q&A Session

Mr. Howard asked if the lack of progress mentioned is due to funding, technical issues or political issues. Mr. Leslie answered their focus is on the technical and scientific. Mr. Howard then asked if any of this report is classified, to which Mr. Leslie replied no.

Mr. Murray asked what the NWTRB would like the SRS CAB to do with this information. Mr. Leslie admitted that they had not thought about that. He noted their goal is to provide information that is accessible to the public, Congress and the Secretary of Energy.

Mr. Powell asked how the NWTRB would prioritize a permanent repository. Mr. Leslie responded SNF wouldn't be transported without a destination, and from their perspective interim storage off site is not something that DOE is actively pursuing.

Mr. Kaminski asked what the NWTRB sees as the number one concern for SRS with regards to SNF. Mr. Leslie answered that understanding how to dry all materials so when technology needs to be implemented they're ready to do so.

Ms. Corbett asked if the multi-purpose canisters would have to last 50-60 years. Mr. Leslie replied yes. Ms. Corbett then asked if these canisters, when repackaged, are able to be monitored. Mr. Leslie responded that the fuel is already damaged before going into the canisters and all materials inside the canisters are assumed to potentially dissolve if the canisters were opened or damaged. Ms. Corbett went on again to ask if the inside of the canisters are able to be monitored. Mr. Leslie answered the inside of the canisters is not able to be monitored, and DOE considered a design where that was possible and the NWTRB made a recommendation to support that design.

Presentation: SONAR Mapping Technology – Jeff Bentley, DOE-SR

Mr. Bentley provided a detailed presentation on DOE-SR testing SONAR mapping technology on site to find out if it would be a better option for mapping the materials inside of tanks.

Q&A Session

Mr. Malik asked if this technology is different than what was used from 2004-2006 for mapping the tanks. Mr. Bentley replied that he did not know, but he believed visual mapping was used back then. Mr. Malik then asked if there is any interference with visual mapping due to the cooling coils. Mr. Bentley responded yes.

Mr. French asked what kind of accuracy is available vertically with regard to sludge height. Mr. Bentley answered that he did not know the answer.

Mr. Kaminski asked if there was a 3D model of the tanks available before they were filled. Mr. Bentley replied that photos were taken to provide this info but no digital model exists. Mr. Kaminski then asked if the sonar technology is ultrasonic-based or something more traditional. Mr. Bentley responded that he did not know the answer. Mr. Kaminski asked what the data gained from this technology would be beneficial for. Mr. Bentley answered that it would be used for an overall volume estimate for the solids inside of a tank for purposes such as bulk waste removal.

Ms. Gillas asked if they're measuring density or volume. Mr. Bentley replied they're measuring density and volume would be calculated from those results.

Mr. Vovakes asked if anyone prepared a formal cost benefit analysis. Mr. Bentley responded they did but he didn't have it with him.

Presentation: H-Canyon and Aluminum Clad HEU – Maxcine Maxted, DOE-SR

Ms. Maxted summarized the current and future projects and operations associated with H-Canyon and Aluminum Clad HEU.

Q&A Session

Ms. Corbett asked if after the current bundles are processed SRS is finished processing bundles. Ms. Maxted answered there are still receipts of bundles coming in.

Mr. Allensworth asked what the current funding level is for H-Canyon. Ms. Maxted replied that it is currently funded under a CR. Mr. Allensworth then asked what is needed in the budget to run H-Canyon 24/7. Ms. Maxted responded that about \$30 million more is needed on top of what is being allocated right now which includes some infrastructure dollars. Mr. Allensworth continued by asking what happens to the materials which would have been processed through H-Canyon if it is shut down. Ms. Maxted answered that dry storage would be an option or melt and dilute would be another option, along with building another H-Canyon which would cost over \$1 billion.

Presentation: SR Archaeology – George Wingard, SRARP

Mr. Wingard provided a presentation on some of the history of the area surrounding SRS including what occurred when the site was built. He also provided information on artifacts which had recently been uncovered on site as well as other current projects of SRARP.

Q&A Session

Mr. French asked if there are remains of the Robert E. Lee paddlewheel on site, to which Mr. Wingard replied yes.

Mr. Howard asked if there were any African American employees on site when it began. Mr. Wingard responded not to his knowledge and research there were not. Ms. Williams added that her father worked at the site in 1952 and was one of the first few people granted a security clearance. She further noted he is now 93 years old. Mr. Wingard asked what his job was, to which Ms. Williams answered he was a concrete finisher.

Ms. Underwood asked if there are structures remaining on site today. Mr. Wingard replied there are still structures on site currently.

Mr. Vovakes asked what names were given to SRS in its early days. Mr. Wingard responded it was the Savannah River Project, then the Savannah River Plan when it was in operation, then eventually the Savannah River Site.

Ms. Gillas asked if a record is kept of where buildings which used to exist on the site were moved to during site construction. Mr. Wingard answered that the SRARP knows where some of those structures are today.

Mr. Howard asked if livestock animals were left on site as people relocated, to which Mr. Wingard replied yes.

Presentation: SCDHEC ESOP Overview –
Beth Cameron, SCDHEC

Ms. Cameron provided a presentation on the SCDHEC mission with regards to regulator responsibilities at SRS and included general information about the goals of SCDHEC. Ms. Corbett then asked if in the drinking water adjacent to SRS the well

Q&A Session

Ms. Corbett asked if the public can access the SCDHEC raw data and if so where. Ms. Cameron responded yes and it is available on their website. Ms. Corbett then asked what is being tested for in the air. Ms. Cameron answered that any contaminants are being tested for in the air. Ms. Corbett then asked what gamma radiation would be from if shown in those test results. Ms. Cameron answered she did not know the answer.

Ms. Hopson asked if SCDHEC monitors any areas in GA. Ms. Cameron replied they do a small amount of testing in GA, but the majority is done in SC.

Mr. Kaminski asked how has the correlation looked over the years between SCDHEC and SRS monitoring. Ms. Cameron responded that the data compared is very close. Mr. Kaminski asked if SRS is or isn't effectively monitoring the environment from SCDHEC's perspective. Ms. Cameron answered that they believe both SCDHEC and SRS are effectively monitoring all media in the environment.

Ms. Underwood asked if GA has a DHEC. Ms. Cameron replied that GA has EPD but they do not do the same monitoring methods that SCDHEC does, she further noted they used to but do not any more.

Mr. Murray asked what are the max individual and average dose. Ms. Cameron responded that they are averages from sampling in 2016. Mr. Murray then asked if the dose found in meat referred to animals on SRS or the average meat product consumed by SC citizens. Ms. Cameron answered these are calculated averages related to animals on SRS. Mr. Murray then asked if the max dose for people on SRS would also apply to locals living close to the site boundaries. Mr. O'Quinn replied that the dose referred to is that of individuals working on site in an environment where they are exposed to the highest concentration of each media.

Mr. McMichael asked how often the reports are updated. Ms. Cameron responded that they are updated annually. Mr. McMichael then asked if there is a collaboration between the site and SCDHEC to create these reports, to which Ms. Cameron answered yes.

Public Comment

Lindsay Harper stated her involvement in GA WAND and their opinions about NNSA projects.

Anna Howard Stephens asked why people were moved on the SC side and not the GA side when SRS was constructed.

Cici Anderson stated her disappointment with the fact that public comment periods are held at the end of the day at SRS CAB meetings and expanded why she disagrees with that format. She also stated she is a research scientist and disagrees with the fact that monitoring is done mostly in SC and very little is done in GA.

Voting

Discussion of Integrated Priority List Letter Draft

Mr. Allensworth read the letter in its entirety as edited the previous day. He then asked for a motion to vote to accept this draft, which was given and seconded. He then asked if anyone wanted to discuss this draft, which no one expressed such a desire. Mr. Allensworth then opened the voting. This draft passed with a majority vote.

~Meeting adjourned

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