

Summary Notes–August 9, 2016  
Savannah River Site (SRS) Citizens Advisory Board (CAB)  
Waste Management (WM) Committee

The FD&SR Committee held a meeting on Tuesday, August 9, 2015, from 6:30-8:20 p.m., at the New Ellenton Community Center in New Ellenton, South Carolina. It was also streamed online and posted to the CAB's website and YouTube page. The purpose of this meeting was to receive a presentation about expressing concentrations. There was also time set aside for committee discussion and public comments.

Attendees:

CAB:	DOE/Contractors/Others:
Earl Sheppard, NM Chair	Kim Cauthen, SRNS
Virginia Jones, NM Vice Chair	Jim Giusti, DOE-SR
Nina Spinelli, CAB Vice Chair	Monte Volk, DOE-SR
Dawn Gillas	Sonya Goines, DOE-SR
David Hoel	de'Lisa Carrico, DOE-SR
Susan Corbett	Richard E. Edwards, SRR
Daniel Kaminski	

Welcome and Introduction:

WM chair Earl Sheppard encouraged anyone with the desire to participate to sit at the committee table and comply with the rules. He also noted that the meeting was being recorded and asked any participants to step up to a microphone. WM chair Sheppard introduced Jim Giusti, DOE-SR, and invited him to introduce his new CAB liaisons. Mr. Giusti introduced Monte Volk, DOE-SR, and Sonya Goines, DOE-SR, who he said will help chairs to facilitate future meetings if needed. He also introduced James Tanner, Time Solutions, who he announced had been hired as the new CAB administrator.

Presentation: Point of Contact Status Update – Jean Ridley, DOE-SR

Ms. Ridley began her presentation stating a vendor had been selected by the contractor and awarded a contract under the tank closure Caesium removal project. She went on to announce that the Salt Waste Processing Facility commissioning is under way, operations expected to begin in December of 2018. She also noted that the Waste Isolation Pilot Project has issued changes to their acceptance criteria which are currently being evaluated.

Presentation: Defense Waste Processing Facility – Robert Gonzalez, DOE-SR

Mr. Gonzalez began his presentation with a diagram of the SRS Liquid Waste Program process, explaining each element on the visual. He continued with a diagram of how systems work with one another on SRS regarding waste management. He continued further with a diagram of the Vitrification Process which he also explained. He noted that we currently have 2 Glass Waste Storage buildings on site, one with a capacity of 2,262 positions, the other 2,340. Mr. Gonzalez announced that SRS is on schedule to produce the desired number of canisters this year. It was originally estimated, as he recalled, that 125-150 would be produced. As of July 25<sup>th</sup>, 2016, 114 have been produced. In 2017 an estimated 100 canisters would be produced in a shorter production year of 5 months due to an outage created by making new transfer lines to the Salt Waste Processing Facility.

He continued his presentation with photos of Monica Regalbuto's visit, including a ride on the SCT moving the 4,000<sup>th</sup> DWPF canister to the Glass Waste Storage Building 2 on May 12<sup>th</sup>, 2016. He noted that this was a big milestone for the team. He continued with information about the double stacking of canisters, mentioning that a third GWSB was not needed because of this solution which saved roughly about \$130 million. This adds space for double the canisters at about 2,264 locations. It is estimated that this would delay the need for additional storage until FY 2029. He further explained the double stacking method with two detailed diagrams. He then presented photos from inside the vault looking across rows of canister supports and inside the canister storage location, which are both mentioned in the previous diagrams. Next came pictures of the tool used to implement the changes to the canister storage which enables this double stacking effort. Currently 240 crossbars have been removed to enable the canisters to be double stacked. 150 of 150 positions planned have new plates and new plugs installed also as part of this effort at a rate of about 2 per day.

Mr. Gonzales continued by noting that DSA changes submitted by the contractor to enable the double stacking efforts have been approved and implementation is currently in progress. Some of these changes require the transporter software and hardware to be modified in order to lower the canisters all of the way to the bottom of the vault floor. Also the heat model supports canisters produced to date, revising and improving those calculations.

This presentation can be found on the CAB's website at: [cab.srs.gov](http://cab.srs.gov)

Presentation: Evaluation and Impacts of Mercury in the SRS Liquid Waste System - Update – Richard E. Edwards, SRR

Mr. Edwards began his presentation by noting the last update on this topic was in November of 2015. He continued by reminding the CAB that Mercury is present in the Liquid Waste System and must be removed and dispositioned. He displayed and explained a diagram that showcased this process more in depth. He announced that this process is not functioning due to a number of chemistry and equipment issues creating the challenge of finding additional methods of removing aforementioned Mercury from the LW. He also mentioned that increased concentrations of Organomercury had been observed on the salt side of their processing which was a new compound to the Mercury Issue Coordination Team. This presents new issues due to the fact that it is flammable at very low levels of heat, meeting Mercury retention in Saltstone requirements, and protection issues regarding industrial hygiene and general protection for workers. Initial actions taken include communications with workers, Methylmercury permeability testing of latex gloves and other protective materials, and a significant amount other precautions such as “sniffers” to detect mercury are present before performing work. This includes 4 different types of instruments with 2 different types of detection methods by 2 different manufacturers. Control levels are set extremely low far below the guidelines. Any time Mercury is detected at the action control limit, breathing protection is implemented in addition to all other default protection. Testing was completed in an off-site independent laboratory and all materials passed. A tank farm safety analysis was completed and compensatory actions were implemented pending minor evaporator modifications. Also Mr. Edwards continued by noting an additional Saltstone safety analysis was changed to address Mercury levels that affect worker and facility safety. A performance assessment impact was completed with no impacts documented.

Mr. Edwards announced that a long-term Mercury management action plan is currently being implemented to address overall Mercury management and removal. It is near completion and expected to be finished by the end of August 2016. It includes 2 phases, the first being a review of the LW inventory and chemical processing behavior. The second being an integrated assessment which included extensive sampling on a system-by-system basis to find out the type and effects of this Mercury. There were in total between 60 and 70 samples process through an off-site laboratory in Washington state. He noted that there are only 2 labs in the country with the capability to complete this testing. This management plan will enable LW to begin Mercury processing again in a safe manner. Mr. Edwards announced that a Mercury panel review was completed July 28<sup>th</sup>, 2016. The draft report following that panel had just been received which will enable the Mercury Issue Coordination Team to finalize their action plan. Mr. Edwards noted that there is an established relationship with UCOR to share information on this action plan to integrate Mercury-related efforts with SRS. He also noted that Mercury Issue Coordination Team is integrated with the EM-1 program.

He announced the results of the DWPF evaluation as part of this action plan: the pH needed to be increased in the Slurry Mix Evaporator Condensate Tank to collect additional Mercury and prevent losses to the tank farm, and to re-establish/repair the Mercury Purification Process Cell operation. He further announced that the facility implementation is targeted for mid-2017. He also explained the long term Mercury management recommendations made by systems engineering evaluation including: the removal of ionic Mercury via reductant with a chemical additive to the evaporator system to enhance current mercury removal, pursuing the removal of organic Mercury via photoreaction in parallel with enhanced retention of Mercury in Saltstone, development of methods to measure Mercury in sludge, and using target process vessels for mechanical removal of Mercury. \$615,00 had been allocated for 2016 funding alternate Mercury removal technology. Mr. Edwards further explained these long-term actions with a diagram.

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#### Committee Discussion:

CAB member David Hoel asked what effect the planned changes to the Mercury processing have on maintaining the Saltstone waste form. Mr. Edwards responded that requirements would be met while still sending more quantity to the SPF. CAB member Hoel asked Mr. Edwards to expand on the last entry of the long-term actions diagram stating that certified lab to lab comparison on Hg TCLP results for variability had been initiated by SRR/SRNL. Mr. Edwards answered that the purpose was to ensure that results were confirmed on those test results in both labs. He noted that there had been a spike in results after a recent lab change causing the necessity for confirmation of those results by two different labs. There had been a change in labs from one in Charleston, SC to Southwest Research in Texas.

CAB Vice Chair Nina Spinelli proposed changes to LW Revision 20. This included the removal of the words “while removing Caesium,” changing “this revision” to “the revision,” “are completed” to “are complete,” “in my part” to “in part,” removal of the sentence “Double-stacking of completed glass canisters increased canister storage capacity by over 2,000 storage spaces at Glass Waste Storage Waste Building (Number 1).” Also moving the sentence starting with “Revision 19” to the end of that paragraph.

She went on to summarize the revision, stating that the beginning was a synopsis of the Liquid Waste Disposition Program, noting that its purpose is to ensure the safe storage of waste and minimize extension of the remaining time and risk associated with legacy high level waste storage in aging tanks, noting a further change of “at risk” to “and risk.” She continued to read the revision out loud.

CAB member Hoel suggested the removal of the mention of the environmental threat in the recommendation, stating that it has no validity and is only the result of a report done by a state newspaper. NM chair Sheppard agreed. CAB member Hoel compromised with moving that statement to the background section of the revision. Member of the public Paul Croll commented on the need for information to be backed by facts as well as analysis and not opinion, specifically referring to the suggestion by CAB member Hoel. CAB Vice Chair Spinelli agreed on moving the statement to the background section as suggested by CAB member Hoel.

Public Comments:

NM chair Sheppard adjourned the NM Committee meeting.

The next WM Committee Meeting will be held on Tuesday, October 4, 2016, from 6:30-8:20 p.m., at the DOE Meeting Center in Aiken, SC.

The online recording of this meeting is located on the CAB’s website at:  
[cab.srs.gov](http://cab.srs.gov)