

Meeting Minutes  
Savannah River Site (SRS) Citizens Advisory Board (CAB) – Informational Meeting  
Savannah Rapids Pavilion – Martinez, GA  
March 25<sup>th</sup> & 26<sup>th</sup>, 2019

Attendance – Monday, March 25<sup>th</sup>, 2019

<u>CAB</u> Gil Allensworth Julia Ball Carlos Cato Betty Cook David Eisele Thomas French Jim Guille AK Hasan Charles Hilton Ruth Hollingsworth Eleanor Hopson Douglas Howard Dan Kaminski Narinder Malik Jerry Mossbarger Gregg Murray Ken Sajwan Robert Smith Karl Steene Joyce Underwood David Vovakes Bobbie Williams
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<u>DOE/Contractors</u> Zack Todd, DOE-SR Jim Folk, DOE-SR Thomas Johnson, DOE-SR de'Lisa Carrico, DOE-SR Maxcine Maxted, DOE-SR Michael Mikolanis, DOE-SR Avery Hammett, DOE-SR Maatsi Ndingwan, DOE-SR Teresa Eddy, SRNS Kristin Huber, SRNS James Tanner, S&K Heather McWilliams, S&K Federica Staton, S&K
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<u>Agency Liaisons</u> Barbara Harris, SC DHEC Grace Anne Martin, SC DHEC Thomas Rolka, SC DHEC Jeff Joyner, SC DHEC Gregg O'Quinn, SC DHEC Heather Cathcart, SC DHEC Beth Cameron, SC DHEC Susan Fulmer, SC DHEC  <u>Stakeholders</u> Colin Demarst, Aiken Standard Larry Brede, Jacobs Art Osborne, SRSHF Museum Dara Glass, BWXT Greg Mason Liz Goodson Brinsley Thigpen, US Rep Rick Allen GA-12 Janie Scott, GA WAND
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CAB Chair Update: Gil Allensworth, CAB Chair

Mr. Allensworth summarized the recent New Member Orientation meeting which took place at SRS in February. Each CAB member was given the opportunity to introduce themselves to the new members. Mr. Allensworth let the board know Ashley Jacobs had resigned recently from the CAB since she accepted a new job. Mr. Allensworth also reviewed the 2019 Work Plan. He also encouraged members to attend the May Environmental Management Site Specific Advisory Board hosted by SRS CAB.

Meeting Rules & Agenda Review: James Tanner, CAB Facilitator

Mr. Tanner reviewed the meeting rules, agenda, and limiting questions to two per time. He also told the group tomorrow's meeting will have a panel.

## Agency Updates

Susan Fulmer, South Carolina Department of Health & Environmental Control (SC DHEC)

Ms. Fulmer provided an update on SC DHEC. As of February 26, Doctor Rick Toomey was sworn in as Director. The Federal Facility Agreement Soil & Groundwater updates, since January clean copies for wetland area of Dunbarton Bay. In mid-March SC DHEC completed a site visit with the Department of Energy (DOE) and Environmental Protection Agency (EPA) for 5-year review for land-use controls. The final report will be issued in February 2020. In February SC DHEC approved the Salt Waste Processing Facility (SWPF) start-up extension request.

Q&A Session

Mr. Malik asked about how many wetlands are at SRS. Ms. Fulmer said there are lots of wetlands at SRS. Mr. Malik asked if the wetlands could be used for industrial purposes. Ms. Fulmer said no, the wetlands would have to be filled in and it would be approved by SCDHEC or the Army Corp of Engineers.

Mr. Kaminski asked about the start-up date for SWPF. Ms. Fulmer said the start date she was given is November 2019.

Ms. Grace Anne Martin of SC DHEC mentioned SC DHEC published the Environmental Surveillance and Oversight Annual Report in February 2019. The report is published on the SC DHEC website and copies were available in the back of the room.

Thomas Johnson, Deputy Manager, Department of Energy-Savannah River (DOE-SR) Mr. Johnson welcome the six new board members. The Management and Operations (M&O) contract did not have any updates and the contract ends July 31<sup>st</sup>, 2019. Liquid Waste (LW) contract solicitation was canceled on February 26, 2019 due to program management changes. Operations of H-Canyon and L Basin will be incorporated into the new Liquid Waste contract. The LW contractor, Savannah River Remediation (SRR), will continue to operate the facilities until a new contractor is selected. On March 11, 2019 the SRR contract was extended 18 months. On March 6, 2019 the final request for proposal for the paramilitary services was submitted. The current paramilitary contract is held by Centerra, LLC. Estimated value is \$600 to 1S billion over a period of 10 years. The contract ends October 6, 2019. The President's Budget Request for Fiscal Year (FY) 2020 was released on March 11, 2019 and SR received \$91 million above the FY19 enacted level. The details have not been released to the public yet. Mr. Johnson gave a brief description of FY20 requests and gave an update on general EM SRS projects.

### Q&A Session

Mr. Howard asked how long Centerra had the paramilitary contract. Mr. Johnson said Centerra has had the contract for 10 years. He hopes the contract won't have to be extended. Mr. Howard asked if another contractor got the contract how the transition would go. Mr. Johnson said there would be a 60 to 90-day transition period.

Mr. Vovakes asked about the \$50 million towards creating Advanced Manufacturing Collaborative (AMC) project. Mr. Johnson said the planned location for the AMC will be located outside of the site. The project will be a department funded facility. Some of the work is currently being done inside SRS now but their capacity is limited. The facility would help expand their capabilities.

Mr. Murray asked about the Memorandum of Understanding (MOU) with the Army Cyber School and if anything has been done with Augusta University Cyber school. Mr. Johnson said they are currently working on an agreement with Augusta University. The MOU with the Army Cyber School is intended to provide an economic benefit to the area. The site would be able to provide the Cyber School with a unique testing environment.

Mr. Kaminski asked about the FY20 budget request and if SR received what was needed. Mr. Budney said the request from the President is SR's request. The FY20 budgeting process is starting and SR is working with Congress to make sure the right amount has been requested.

Mr. Guille asked about old tanks being closed. Mr. Johnson said recent discussions with regulators on the tank closures schedules. Mr. Folk said the heavy focus in 9, 10, and 11 in the Tank Farm. They are four years away from the next tank closure. The key emphasis is removing the risk.

Mr. Allensworth asked if the new possible National Nuclear Security Administration (NNSA) scope and LW Contract solicitation being called off were connected. Mr. Johnson said EM and NNSA have discussed if NNSA should be the landlord of the site. A joint study was put together and submitted to headquarters in December 2018. No action has been taken on it yet. Mr. Johnson stated an extension would probably happen for the M&O contract.

Mr. Vovakes asked if any of scope changes would impact the Parsons contract. Mr. Johnson said no because Parsons contract is for the design, construction, and one year's operation of SWPF. After the one-year operation it would be turned over to the current LW contractor.

### Committee Updates

Administrative & Outreach (A&O) Committee Update: Eleanor Hopson, Chair

Ms. Hopson said the AO meeting would be held after the conclusion of today's Full Board meeting. She encouraged members to come on the CAB tours which would be offered in April and September of this year.

Facilities Disposition & Site Remediation (FDSR): Joyce Underwood, Chair

Ms. Underwood summarized the work plan agenda and current recommendation statuses for FDSR.

Nuclear Materials (NM): Charles Hilton, Chair

Mr. Hilton summarized the work plan agenda and current recommendation statuses for NM.

Strategic & Legacy Management (SLM): Tom French, Chair

Mr. French summarized the work plan agenda and current recommendation statuses for SLM.

## Waste Management (WM): Narinder Malik, Chair

Mr. Malik summarized the work plan agenda and current recommendation statuses for WM.

### Presentations

Presentation: SC DHEC Environmental Surveillance and Oversight Program 2017 Report – Ms. Grace Anne Martin, SC DHEC

Ms. Martin is part of the Environmental Surveillance and Oversight Program (ESOP). Mission of SC DHEC is to promote the health of people and the environment. SC DHEC is divided up into four regions. The primary function of the ESOP is to evaluate the effectiveness of the SRS's monitoring on and around the site. The program conducts evaluations of the monitoring program. Scientists collect air, water, soil, milk, vegetation, fish, and game samples. An air station collects air and water samples. Water samples from 21 locations in the Savannah River are done to test for radiological testing. Sediment is taken from 24 locations and the scientists are mostly focused on looking for cesium 137. Soil samples are taken from the SRS perimeter. Non-edible monitoring is done at 23 locations for Carolina laurel cherry, max myrtle, and laurel oak. Radiological nuclides are tested in edible vegetarian. Samples are also taken from milk. To receive fish samples, scientist utilize electro sampling. Those fish are harvested, filleted, and the bones are removed. The bones are then tested. Game samples come from hunters who hunt close to the site perimeter.

### Q&A Session

Mr. Howard asked what would happen if a high amount of tritium was in the one of the samples. Mr. O'Quinn (SC DHEC) said they have a notification procedure for surface water. If a high amount of tritium was detected SC DHEC would notify groups downstream about it. Mr. Howard asked if the public would be notified about it. Mr. O'Quinn said they contact the drinking water companies and it's up to them to handle it.

Mr. Eisele asked if SC DHEC had their own lab to test the samples. Ms. Martin said they can test for tritium in their Aiken office, but most samples are sent to the Columbia office. The milk and surface water samples are sent to a contractor lab.

Mr. Malik asked if SC DHEC monitored the air quality along the SRS perimeter and how much radionuclides are in the air. Ms. Martin said SC DHEC has nine air monitoring stations on and off the site. The report listed the air monitoring results. Mr. Malik asked if Radon had ever been recorded in the groundwater wells. Mr. O'Quinn said years ago the Jackson well recorded Radon and those systems have since been modified.

Dr. Sajwan asked if SC DHEC studied humans. Ms. Martin said the program is not focused on the human side. The program evaluates how the environment would impact a human.

Ms. Underwood asked if bones were only taken from the fish. Ms. Martin said they only take bones from the fish. Ms. Underwood asked if a deer had strontium in its bones, then it spread to the herd, caused the death of the herd, would it impact the groundwater. Ms. Martin said it is possible, but they do not currently have the data to back it up.

Mr. Vovakes asked where the milk is collected. Ms. Martin said the farms are near the site, but they do reveal where the milk comes from.

Mr. Steene asked where the standards come from. Ms. Martin said their standards are based off the EPA or other science standards.

Mr. Allensworth asked how ESOP received their funding. Mr. O'Quinn said the program is part of a Remediation and Environmental Monitoring grant which is funded by DOE. The grant is on a five-year cycle and it was just recently renewed. Ms. Angelia Holmes (DOE-SR Deputy of Assistant Manager of Infrastructure and Environmental Stewardship) said the grant comes out of DOE budget.

### Recommendation Discussion

#### Draft Recommendation: Pollinator Management Programs

Ms. Underwood read the recommendation and provided a detailed background as to why this recommendation was important to the Facilities Disposition and Site Remediation Committee. The topic was first brought up in October 2018, taken to the November Full Board, and then it was discussed in the December Committee Meeting. Mr. Mossberger asked about the cost approving the recommendation. Ms. Underwood stated the goal of the CAB is to represent the community and their beliefs. Mr. Murray made suggestions to wording changes. Ms. Underwood and Mr. Murray worked together on editing the document, so the recommendation would be easier to comprehend.

Draft Recommendation: SRS National Environmental Research Park Support  
Mr. French provided a detailed background as to why this recommendation was created. He then read the recommendations section.

### Integrated Priority List

Mr. Tanner provided a summary of the Integrated Priority List (IPL) presentation John Lopez (DOE-SR Director of Integration and Planning) gave to the January 2019 Informational Meeting in Hilton Head, SC. The IPL from 2018 was used as a template. After a lengthy discussion Mr. Allensworth suggested the vote for the IPL to be pushed to the May meeting. The CAB required more time to learn about DOE funding.

### Public Comment

No Public Comments were made.

END OF DAY 1, March 25<sup>th</sup>, 2019

CAB  
Gil Allensworth  
Julia Ball  
Betty Cook  
David Eisele  
Jim Guille  
AK Hasan  
Charles Hilton  
Ruth Hollingsworth  
Eleanor Hopson  
Douglas Howard  
Dan Kaminski  
Narinder Malik  
Jerry Mossbarger  
Gregg Murray  
Ken Sajwan  
Robert Smith  
Karl Steene  
Joyce Underwood  
David Vovakes  
Bobbie Williams

DOE/Contractors  
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Thomas Johnson, DOE-SR  
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Michael Mikolanis, DOE-SR  
Jim Folk, DOE-SR  
Maxcine Maxted, DOE-SR  
Randy Clendenning  
Avery Hammett, DOE-SR  
Maatsi Ndingwan, DOE-SR  
Angelia Holmes, DOE-SR  
Jimmy McMillian, DOE-SR  
Linda Quarles, DOE-SR  
Chris Bergen, SRNS  
Lindsey MonBarren, SRNS  
Kristin Huber, SRNS  
Jimmy Winkler, SRNS  
Rick Burns, SRNS  
Wyatt Clark, SRNS  
Mike Lewczyk, SRNS  
Eloy Saldivar, SRNS  
Joe Rees, S&K  
James Tanner, S&K  
Heather McWilliams, S&K  
Federica Staton, S&K

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Jeff Joyner, SC DHEC  
Gregg O'Quinn, SC DHEC  
Heather Cathcart, SC DHEC  
Beth Cameron, SC DHEC  
Susan Fulmer, SC DHEC  
Jon Richards, EPA

Stakeholders  
Larry Brede, Jacobs  
Tom Clements, SRS Watch  
Dara Glass, BWXT  
Susan Rhodes, LWV/SC  
F Close, SRS Watch

Meeting Rules & Agenda Review: James Tanner, CAB Facilitator

Mr. Tanner reviewed the meeting rules and agenda. Unlike previous Full Board meetings, questions will be held until all three morning presentations have finished. Each presenter will be seated at the panel and available for questions.

Presentations

Presentation: Building 235-F: Deactivated State – Randy Clendenning, DOE-SR

Mr. Clendenning provided a presentation on 235-F facility. It was one of the earliest buildings at SRS. It is where the predominate amount of the plutonium must be removed. Manufactured components from 235-F were used for the construction of Radio Thermoelectric Generators (RTGs). RTGs were used by NASA for the space shuttle program. Mr. Clendenning also covered the layout for 235-F and what it looks like now.

Presentation: Building 235-F: Risk Reduction Status – Jeff Hasty, SRNS

Mr. Hasty from Savannah River Nuclear Solutions as the Risk Reduction Project Manager. 235-F is a Plutonium Fuel Form (PUFF) facility. Not a lot was taken when the facility was shut down. The intent was to restart it but due to mission changes and budget. The building sat vacant for many years. In 2012 the Defense Board wrote a recommendation to DOE to have the facility to be cleaned. If there was a seismic event followed by a full facility fire the surrounding area would give a general worker a dose of 11,900 rem (unit of radiation dosage). The DOE standard is 100 rem. The recommendation was written in May 2012 and DOE accepted it. From the recommendation the Risk Reduction Project was formed. Some of completed actions for the project are: isolate combustibles, isolated unneeded electrical items, run drills to test emergency response procedures, and completed better characterizations of what was in the building. New technology from Savannah River National Lab (SRNL) showed them where the hot spots were. Extreme measures are taken to avoid puncture wounds. Workers put on Two pair overalls, fresh air hood, lead apron (15 pounds which especially shields the chest area), lead sleeving, borated gloves, and glove box gloves. Workers complete work for 15 minutes and then another worker rotates in. Scientists are currently researching if and how a fire can happen in various areas of the building. They are also looking into deactivating the building.

Presentation: Building 235-F: Closure Activities – Brian Hennessey, DOE-SR

Mr. Hennessey from the DOE-SR Assistant Manager for Infrastructure and Environmental Stewardship organization provided a presentation SRS Closure Activities. For facilities which are no longer needed are deactivated and then it is decommissioned. There are two end states for closure projects. One is demolition and removal. The facility is completely gone at the end of decommissioning but the slab foundation might be left. The second, is In Place state. A significant part of the building's exterior remains in place after the facility has been placed in a stable protective configuration. Mr. Hennessey discussed the various D&D projects which have been completed at SRS.

Michael Mikolanis and John Richards from the EPA each provided a summary of the 235-F facility.

Q&A Session for 235-F Presentations

Mr. Guille asked about accelerated project for funding the decommissioning of the building. Mr. Clendenning said they are currently on a path to deactivate the facility and he is optimistic they will be able to figure out how to get it done. He said it is essential to get the schedule figured out now. Mr. Mikolanis said the funding has not been fully figured out yet because they are still working on an implementation plan. The funding has not been defined yet but the deactivation plan has not been set yet.

Mr. Kaminski asked for the current limit of exposure for an SRS worker a year. Mr. Hasty said 250 mili REM a year. Mr. Kaminski asked if the size of team, the plan, and limit of exposure would delay the schedule. Mr. Hasty said it is a challenge which they are monitoring. They might have to ask for an extension but to date they are still fine. Mr. Kaminski asked if there was a contingency plan if a workers was exposed. Mr. Hasty said they have other individuals currently in training so they would be able to staff the project but it could delay things.

Mr. Smith asked if SRNS knows how much PU 238 was left in the cells. He also wanted to know what they would do if they couldn't remove it. Mr. Clendenning said their methods of removing plutonium has been improved as the project has progressed and the workers have found efficient ways to clean-up more PU 238.

Ms. Williams asked if this was a 24 hour a day project. Mr. Clendenning said it was a day time only operation. Ms. Williams asked about the amount of workers on the project. Mr. Hasty there are six technicians and six Rad-Con personnel. Ms. Williams asked if any of the workers have had puncture wounds. Mr. Hasty said they not.

Mr. Eisele asked about the fan houses and the fixative. Mr. Hasty said the fans will still be operating when it is turned over to closure. Mr. Jack Musall (SRNS) said the building will be deactivated to cold & dark. The building itself will have no electrical service to it but the fan house will remain operational. SRNS still figuring out if and when the fans get turned off though. It all depends on the decommissioning plan.

Mr. Murray asked if the accelerated project is done, what project is being put on hold? Mr. Mikolanis said if the work for celling out the cells is not done then they would focus on D&D. However it is better to accelerate the contamination program in order to have a more effective D&D plan. Jon Richards said when the 235-F project was proposed, it was implied it was bonus project so no other projects would be put on hold.

Ms. Underwood asked how many grams are in an ingots. Mr. Clendenning said the spehere ingot was 250 grams, the pellet was 150 grams. Ms. Underwood wanted to know if the material would get really hot if it was not secured. Mr. Musall said the amount of material was widely dispersed and it takes instruments to know where it is. It's evenly distributed on surfaces and that is why there is low risk for self heating.

Ms. Cook asked how workers were selected and how much training they receive. Mr. Bergren said the team was hand picked mainly from the TRU repacking process from 2009-2012. That group has a lot of PU and glove box experience. The training and procedures took about three years. Those in training now will not take as long since a training program has been developed.

Mr. Steene asked if the project is worried about the loss of information from those people who are retiring. Mr. Clendenning said they have reached out to workers who were in facility while it was in operation during the 1980s.

Mr. Howard asked if there are any other buildings that are contained like 235-F. Mr. Clendenning said no. Mr. Howard asked if DOE received all the funding they needed, would the project go much faster. Mr. Clendenning said he didn't think so. Running the project faster would increase the risk of an accident.

Mr. Allensworth asked about the overall cost and the similarities to Hanford project. Mr. Mikolanis said 235-F project would be different from Hanford because Hanford is taking the building down to the foundation. The cost of the project is still not fully known right now.

Mr. Guille asked what form the PU material is in and is any of it small enough to be aerial sized. Mr. Musall said it is fine particulate. When it was processed, it was grounded down. Mr. Guille wanted to know about the Aluminum corrosion. Mr. Musall said the plutonium is like a catalyst with the aluminum.

Ms. Underwood asked if 235-F could be put down to the ground like Hanford. Mr. Mikolanis said that option is always on the table. It was considered when the options were studied. Using Hanford as a case study, DOE-SR recommends not doing a similar procedure.

Presentation: Overview of Options for Operating H-Canyon – Maxcine Maxted, DOE-SR  
Ms. Maxted provided information on the mission of H Canyon facility. There is a DOE law which states H Canyon must be operational. Ms. Maxted gave a general summary of the projects which occur at H-Canyon. She also provided a brief budget summary.

#### Q&A Session

Mr. Eisele asked about who the customer is for Highly Enriched Uranium (HEU) material. Ms. Maxted said the HEU is for Research Reactors and some NNSA programs need it as well.

Mr. Hilton asked potentially electrolytic processing FCA material from Japan by exchanging out the stainless-steel fuel rods stored in L Basin. Ms. Maxted stated more research would have to be done but it would be a possibility.

Ms. Underwood asked why the law was put in place. Ms. Maxted believed the law was put in place when F Canyon was closed. If H-Canyon is shut down the United States would not have a production facility for Nuclear Materials.

#### Presentation: Spent Fuel Project Overview – Kela Lofton, SRNS

Ms. Lofton provided a background of L-Area Reactor and its missions. The L-Reactor was production reactor that was used for the safe production of special nuclear material. It began operating in the 1950s and shutdown in 1988. The L-Area Fuel Basin is used for storing Spent Fuel. The L-Area Fuel Basin has upcoming fuel receipts from Foreign Research Reactors and Domestic Research Reactors. Foreign Fuel receipts will last until 2029 and Domestic will last until 2035.

#### Q&A Session

Mr. Howard asked if funding was received from the foreign who send their spent nuclear fuel (SNF). Ms. Maxted said DOE does receive fuel fees but it's not offset, not a full cost recovery. The fees are set aside for infrastructure for L Area. Mr. Howard asked about the percentages they receive. Ms. Maxted said they roughly receive four million from the fuel receipts and around 40 million from EM.

Ms. Underwood asked if the Foreign Research Reactor Fuel was the German Fuel the CAB made a recommendation about it at a previous meeting. Ms. Maxted said no, the German Fuel was graphite fuel in a sphere form stored in dry casks.

Mr. Eisele asked if the extension of any other fuel receipts had been extended besides Japan. Ms. Maxted stated other ones have been extended including Finland and Canada. However Secretarial approval must be received.

Mr. Vovakes asked if the Japanese fuel reactors were stored at the site after they are processed. Ms. Maxted said the fuel would be handled like any other fuel. It will remain at SRS until a fuel repository is available.

Mr. Allensworth asked if H-Canyon wasn't operational where would the foreign fuel from the Atoms for Peace program go. Ms. Maxted said it would likely go to a storage facility until another processing system was determined.

Ms. Underwood asked who owned the facility. Ms. Maxted said EM owns the facility. Ms. Underwood asked if NNSA would take over H-Canyon when the EM mission is completed. Ms. Maxted was not able to answer that question.

Mr. Smith asked if the facility would just be a storage facility in 2025. Ms. Maxted said they would have to decide on a disposition path by 2025 because it can't just be a storage facility.

Mr. Allensworth asked if other sites give L-Basin material. Ms. Lofton said Oak Ridge, University of Missouri, and MIT for the DRR program. The FRR programs they receive it from various civilian sites.

#### Presentation: H-Canyon Facility Operations – Rick Burns, SRNS

Mr. Burns provided a detailed presentation on operations of H-Canyon. The facility has been in operation since 1955 and has never had an uncontrolled criticality accident. The primary objectives for the SRNS operation of H-Canyon are the following: Stabilize SRS and other DOE complex wide legacy material to support footprint reduction and Category 1 & 2 Nuclear Fuels de-inventory (Lawrence Livermore National Laboratory, Los Alamos National Laboratory, Y-12, Hanford), Working to resume

Blend Down of HEU with natural uranium to provide Tennessee Valley Authority with a Low Enriched Uranium (LEU) Nitrate to produce fuel for use in commercial power reactors, and Support U.S. non-proliferation goals. Mr. Burns said one of the major challenges with the program is that he can't hire until someone retires. Training the new person will take time. Another big challenge is maintaining the older equipment and the infrastructure. Mr. Burns explained the HEU process cycle.

#### Q&A Session

Mr. Howard asked how the H-Canyon was able to operate without ever having a criticality event. Mr. Burns said the safety culture which was developed early at the site has taught workers to operate by procedure. The nuclear industry it has matured over the years and workers continue to put additionally layers of safety into the process. Mr. Howard asked if the group was staffed at 100%. Mr. Burns said he is not staffed at 100% but they are adequately staffed to safely operate the facility. Mr. Howard asked about the attrition rate. Mr. Burns said overall the attrition rate is 10-12% per year. Mr. Howard asked if workers were cross trained. Mr. Burns said currently no but they are looking to change that.

Ms. Underwood asked how materials move from the hot side to the warm side. Mr. Burns said there are piping in the concrete floor.

Mr. Steene asked if funding would be needed for infrastructure to keep the facility in operation. Mr. Burns said currently the building was operational but in the next 10 years he would need more money for infrastructure in order to keep the mission going.

Mr. Hilton asked if there were similar facilities in the world. Ms. Maxted from her knowledge France and Kazakhstan have facilities similar in size.

Mr. Guille asked about the minimum qualifications for new hires. Mr. Burns said they require individual to take Work Key Standards which applicants must pass before they can be hired. Local technical schools now provide nuclear/radiation contamination classes and programs which has given SRNS a great pool of candidates.

Mr. Hilton asked if the hot side went down, would the warm side be able to pick up the work. Mr. Burns said both sides are independent.

#### Presentation: Aluminum SNF Dry Storage Technology Challenges – Bill Bates, SRNL

Mr. Bates provided an overview on Dry Storage and the benefits of it. Mr. Bates also explained the differences between Aluminum Spent Nuclear Fuel (ASNf) and Commercial Fuel. ASNf is mostly Highly Enriched Uranium (HEU). Due to the HEU the fuel needs criticality control and it has security challenges. ASNf is more susceptible to corrosion.

#### Q&A Session

Mr. Vovakes asked if there was a fair amount of maintenance involved with dry storage due to the corrosion issues. Mr. Bates said they are currently working on a new design. They will perform a demonstration soon with a new lid. Mr. Bates said they are deciding if long-term surveillance inside the canister would be required.

Mr. Eisele asked if the Envision Transportation Package was Type B. Mr. Bates said yes but it's only conceptual design today.

Ms. Underwood asked if the corrosion was inside the canister. Mr. Bates said the corrosion today is on the fuel assemblies. The fuel assemblies are stored in the bundles located in the basin in the water. The main concern is if the corrosion will impact the fuel assembly itself. Ms. Maxted said the operators would not have contact with the corrosion.

Ms. Cook asked if the water in the basin is change out on a frequent basis. Ms. Lofton said the water is not take out but it filtered and recycled. Due to evaporation water is added periodically.

Mr. Howard asked if basin had divers to do work periodically. Ms. Maxted said in the past they had Nuclear Qualified divers come out to check a sealant. It is not a routine procedure.

#### Presentation: Overview of Options for Operating HCAN – Eloy Saldivar, SRNS

Mr. Saldivar reviewed the key mission decisions for H-Canyon. Mr. Saldivar discussed the following for H-Canyon: how fast does it run, how long it runs, what feed does it process, and what product is produced. Mr. Saldivar discussed how receiving funding for accelerating the production would help save 4 billion dollars.

#### Q&A Session

Mr. Eisele stated he appreciated the panel format and thought it made learning about the presentations easier.

Mr. Allensworth asked if H-Canyon should be replaced with a new facility. Ms. Maxted said her opinion is that it would be very difficult to get done in the current situations. Mr. Allensworth asked if H-Canyon would be operating in 20 plus years. Ms. Maxted said if they received funding for updates in infrastructure and maintenance they would be able to. Mr. Mikolanis said their capabilities are tied to receiving funding for infrastructure. The country has to invest in it, abandon it, or building something new.

Mr. Kaminski asked if DOE had included the infrastructure costs into their future budget. Ms. Maxted stated some of the options included the infrastructure funding. The presentations included footnotes to note those options. Mr. Kaminski mentioned smaller scale missions and if they would be feasible. Ms. Maxted was not sure. Mr. Kaminski asked if H-Canyon was built today would it have to be that big. Ms. Maxted said no, it would not have to be that big. Ms. Maxted said the shape ties them to size building they must maintain. There is little flexibility.

Ms. Cook asked if DOE could write something up about H-Canyon's history and how it is a positive mission. Ms. Maxted stated there were groups on site who put out positive new stores.

Mr. Howard stated the panel format was very helpful. Mr. Howard asked if the potential pit production have an impact on that they were doing. Ms. Maxted stated the pit production is a NNSA mission. They are unsure if NNSA would ask to use any of their facilities.

Mr. Hasan asked if DOE was concerned the CAB would make a recommendation for new construction. Ms. Maxted said the CAB is willing to go in any direction. Ms. Maxted said they have considered the possibility of H-Canyon closing, but they have explored all paths.

Ms. Underwood asked why the law posted in the presentation had two different dates. Ms. Maxted said it started out in one code and then moved to another.

Mr. Smith asked what cost of a revamp would be. Ms. Maxted said it would be roughly 100 million dollars a year. Mr. Smith asked it would be a 2.2 billion cost over a 22-year period. Ms. Maxted said that would be accurate.

Mr. Allensworth asked if the 50 million dollars in the President's budget for the AMC would come out of H-Canyons budget. Ms. Maxted said she could not answer. Mr. Budney said it was a separate issue. Mr. Allensworth said the AMC was a great idea, but he hoped it wouldn't impact the budget for H-Canyon.

Mr. Budney stated wanted to clarify two items. One being the law listed on Maxcine's presentation. The law is not designed to keep H-Canyon open, it is designed to provide the nation to do chemical separations of SNF. Mr. Budney said the nation must decide if it requires the capability to process SNF. If not, then DOE must decide has to disposition the facilities.

## Public Comment

Susan Rhodes is representing the State League of Women Voters. The group has two concerns. One of them is the tanks which are large and very old. She is thrilled that there is measurable progress on the removal of tanks. The other concern is constant need of bringing in foreign waste. Her group is against it due to fact other countries like Germany and Canada can handle their own fuel plus shipping the fuel is problematic. Ms. Rhodes stated she strongly opposed the Pit Production. The job growth would not be worth all the problems.

Tom Clements from Savannah River Site Watch gave a brief update on the German Fuel situation. Mr. Clements was surprised there was no mention of the Exhaust Tunnel. He recommended the Nuclear Materials committee should find the report from the Safety Board.

## Voting

### Integrated Priority Letter

Mr. Allensworth suggested the IPL should be tabled until the May Full Board Meeting. Mr. Allensworth called for a motion to table the letter which was granted by Mr. Malik and seconded by Ms. Underwood. No discussion was needed. The motion was passed and accepted with a vote of 19 yay, 1 nay, 0 abstain.

### Recommendation 361: Pollinator Management Plan

Mr. Allensworth called for a motion to vote to close this recommendation which was granted by Mr. Murray and seconded by Mr. Hilton. This recommendation was passed for closure with a vote of 19 yay, 0 nay, 1 abstain.

### Recommendation 362: NERP Support

Mr. Allensworth called for a motion to vote to accept it as a recommendation which was granted by Mr. Smith and seconded by Dr. Sajwan. Mr. Vovakes stated the comments provided yesterday were included in the recommendation. This draft recommendation was passed and accepted as a recommendation with a vote of 20 yay, 0 nay, 0 abstain.

## Housekeeping Items

Ms. Underwood asked when Draft Recommendations would be for the next set of committee meetings.

Mr. Eisele stated he really enjoyed the panel set-up and hoped it would be used in the future. Mr. Allensworth agreed with Mr. Eisele and wanted to incorporate in for more meetings. Mr. Smith agreed with the statement.

Mr. Hasan said he was excited to meet a new and exciting group of people. He appreciated the presentations from DOE. Mr. Hasan was happy to give input on behalf of the citizens of Richmond County.

Mr. Tanner reminded that all CAB Members need to turn in Travel Vouchers to Heather McWilliams and all attendees need to sign-in.

Mr. Allensworth reminded everyone about the committee meetings for April but he highly encouraged people to come to the Nuclear Materials meeting on April 16. Mr. Allensworth thanked Mr. Budney for his comments on H-Canyon. Mr. Allensworth said CAB needed to work hard on the upcoming draft recommendations.

END OF DAY 2, March 26<sup>th</sup>, 2019

All presentations are available for review on the SRS CAB's website: [cab.srs.gov](http://cab.srs.gov)