

Meeting Minutes  
 Savannah River Site Citizens Advisory Board (CAB)—Combined Committees Meeting  
 Hilton Garden Inn, Augusta, GA  
 March 28, 2016

Monday, March 28, 2016, Attendance:

<p><u>CAB</u>          Gil Allensworth          Tom Barnes          Louie Chavis          Susan Corbett          Robert Doerr          Murlene Ennis –  <i>Absent</i>          Dawn Gillas          David Hoel          Eleanor Hopson          Virginia Jones          Daniel Kaminski          Jim Lyon – <i>Absent</i>          John McMichael          Clint Nangle – <i>Absent</i>          Cathy Patterson          Larry Powell          Bill Rhoten – <i>Absent</i>          Earl Sheppard          Harold Simon          George Snyder          Nina Spinelli          Ed Sturcken          Christopher Timmers          Louis Walters          Mary Weber</p>	<p><u>DOE/Contractors/Other</u>          Thomas Johnson, DOE-SR          Avery Hammett, DOE-SR          Jim Folk, DOE-SR          Tracy Williams, DOE-SR          Maatsi Ndingwan, DOE-SR          T. Spears, DOE-SR          Jeff Bentley, DOE-SR          Patrick McGuire, DOE-SR          Jack Craig, DOE-SR          Michael Mikolanis, DOE-SR          Gene Rhodes, SREL          Dean Campbell, SRR          Kristen Huber, SRNS          Jarrett Rize, Bechtel          Tina Watson, Time Solutions          James Tanner, Time Solutions          Eleanor Prator, Time          Solutions          Melissa Johnson, Time          Solutions          Tammy Robinson, USDA          Forest Service          Bill Crolley, USDA Forest          Service</p>	<p><u>Agency Liaisons</u>          Trey Reed, SCDHEC          Kim Brinkley, SCDHEC          Gregory O’Quinn, SCDHEC          Sandra Snyder, SCDHEC          Heather Cathcart, SCDHEC          Susan Fulmer, SCDHEC</p> <p><u>Stakeholders</u>          Dede Biles, <i>Aiken Standard</i>          Liz Goodson, Public          Dara Glass, BWXT          Bernice Johnson Howard, GA          WAND          Nancy Bobbitt, US Senator          Johnny Isakson          Kayla McCormick, AJAM</p>
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Opening: Harold Simon, CAB Chair

Mr. Simon convened the meeting. He thanked everyone for participating and welcomed them to Augusta, GA.

Meeting Rules & Agenda Review: Tina Watson, CAB Facilitator

Ms. Watson reminded the CAB to update their informational binders with the packet provided. She reminded everyone to sign-in and to speak clearly into the microphones. She reviewed the agenda and meeting rules.

Work Plan Update: Tina Watson, CAB Facilitator

Ms. Watson reviewed the CAB Committee work plans and outlined the topics for the Facilities Disposition & Site Remediation, Waste Management, Nuclear Materials, Administrative & Outreach, and Strategic & Legacy Management committees.

Nina Spinelli, CAB Vice Chair, asked whether the topic allocated to the Nuclear Materials Committee Work Plan regarding Workforce Sustainment would be better suited for the Strategic

& Legacy Management Committee Work Plan. Watson replied that a similar topic regarding workforce retention had been allocated for the S&LM Committee Work Plan.

Facilities Disposition & Site Remediation Committee Update: Tom Barnes, Chair

Mr. Barnes welcomed everyone to Augusta, GA, and introduced the committee members. He stated that there is currently one (1) open Recommendation, #332. Next committee meeting is April 13, 2016, 4:30-6:20 pm. He then introduced the presenter.

Presentation: Savannah River Ecology Lab Update, Dr. Gene Rhodes, SREL

Dr. Rhodes began his presentation with an historical overview of the SREL. In 1951, the Atomic Energy Commission (AEC) had concerns about the ecological impacts resulting from SRS operations. In 1954, a permanent lab was established at the site, and the current facilities were established in 1971. The mission of the ecology lab is “to enhance our understanding of the environment by acquiring and communicating knowledge that contributes to sound environmental stewardship and to provide the public with an independent evaluation of the ecological effects of SRS operations on the environment.”

SREL brings an interdisciplinary approach to the field and laboratory research conducted largely at SRS. The expectation has always been to publish the data and analyses of the research, with a focus on education and research training for undergraduate and graduate students, and service to the community through environmental outreach activities. Everyone at SREL is an employee of the U of Georgia.

SREL researchers have published 3,345 peer-reviewed scientific papers and 64 books to date. The educational program has supported the research efforts of 198 Master’s-level theses and 223 dissertations. SREL graduate students have received more than 125 awards and more than 700 undergraduates (representing all 50 states) have participated in sponsored research to date.

Dr. Rhodes described the SREL Environmental Outreach Program as the integration of SREL research into presentations for the general public, providing hands-on classroom and field experience for students, and conducting educator workshops. Outreach efforts touched more than 38,000 people in 2015 broken down as follows: 360 talks, 41 public tours, 20 exhibits at local or regional events, and 31 “Ecologist for a Day” events at local schools.

Disciplinary expertise at SREL includes aquatic and terrestrial ecology, geology/soil science, environmental microbiology, hydrology, molecular biology, environmental chemistry, radiation ecology, ecotoxicology and risk assessment, and wildlife ecology. The SREL scientists are currently researching areas of characterization and effects, ecological and health risks, and remediation and restoration.

Rhodes referenced a chart that better illustrated funding levels provided by the U of Georgia, DOE, and external sources. Rhodes discussed the advancements made in work scope for FY 2015: graduate and undergraduate education programs, general public outreach with more than 450 events, interdisciplinary research in collaboration with SRNL and the USDA Forest Service. SREL Serves as a site-wide source of ecological expertise including research support to area closures.

For 2016, the Ecology Lab expects to add a research scientist in disease ecology. Graduate student enrollment and experiential learning for undergraduates is expected to continue to grow, with further investments in research infrastructure, such as improvements to facilities. SREL expects to development new missions and to provide additional roles to SRS in radioecology and low-dose radiation effects, feral swine control on site, environmental justice, and metal and tritium ecotoxicology.

Dr. Rhodes summarized his overall presentation by stating that SREL has a diversity of expertise with a reinforced UGA commitment to keeping the laboratory funded and open. DOE-SR and NNSA are investing in SREL to use the laboratory to meet work scope. SREL will

continue to support the development of radioecology throughout the United States. SREL will also continue to invest in graduate education and serve as an independent source of expertise for SRS from the “atom to the ecosystem.” This presentation was the result of CAB Recommendation #317, “Fund an Independent Environmental Monitoring Program in Georgia,” adopted January 27, 2014.

#### Q&A Session

Louis Walters, CAB Member, noted that the outreach does not include high schools. Mr. Walters asked about the reason why that was so, and what outreach efforts could increase that. Dr. Rhodes stated that resources and people impact the high school outreach. The organization just does not have enough of either to include high school outreach. Some STEM work is done at Aiken Technical College. They consciously decided not to overextend the organization by taking on more than they could support, and unfortunately, the high school outreach could not be covered with existing resources or staff. It all comes down to resource limitations. Mr. Walters reiterated that the CAB is eager to help if they will simply let them know how they can.

Dr. Rhodes explained sources of external funding to the lab, and stated that it receives NSF research funding, USDA feral hog research funding, and DOD funding for specific research topics such as species reintroduction and wildlife contaminant burdens, in addition to what comes from SRNS, DOE, SRNL, and UGA.

Susan Corbett, CAB Member, asked where the referenced publications could be found. Rhodes referred her to the SREL website. Corbett asked about the lab’s international presence and data sharing. Rhodes responded that the lab’s international presence included attendance at symposiums and publications in internationally peer-reviewed journals. He elaborated on the topic of Radioecologists by noting that there are many radioactivity specialists and many ecologists, but very few Radioecologists who could study an environment as unique as SRS. The U of Georgia and the lab are involved in a number of activities to raise awareness in specific populations about the opportunities available in radioecology. The U of Georgia offered a class in radioecology in the fall semester and expect to continue to offer more.

Ms. Corbett stated that she found the set-aside areas fascinating and wondered about their origins. Dr. Rhodes explained that when SRS became a national environmental research park in the 1980s, there was considerable interest in maintaining certain areas in their natural state to examine the evolution and ecology of those areas. Set-aside areas receive no interventions to alter either.

David Hoel, CAB member, asked if there were any potential environmental effects from the recent increase in military exercises at SRS that are being measured by SREL. Rhodes responded that these effects have not been analyzed yet due to limited facilities.

Harold Simon, CAB Chair, asked after the outreach program between SREL and GA WAND. Rhodes responded that a proposal has been prepared for a three-year period for SREL to focus solely on a portion of their outreach in community education on radiation and interpretation of their environmental collection data. They are using data in local communities.

Due to excess time, Tina Watson, CAB Facilitator, asked if Dr. Rhodes would mind opening the floor to public comments and questions. Rhodes confirmed.

Bernice Johnson Howard, GA WAND, asked about the cost of the collars placed on feral swine to track their movements and radiation levels. Rhodes responded that the collars cost \$2,000-3,000 each. Johnson asked why the radiation dose for an adult is identical to that of children.

Administrative and Outreach Committee Update: Eleanor Hopson, Chair  
Ms. Hopson welcomed everyone to Augusta, GA, and introduced the committee members. She stated that the CAB membership campaign had ended, but applications are still

available. The Fall 2015 *Board Beat* magazine is available. Ms. Hopson encouraged everyone to visit the CAB website for more information.

Nuclear Materials Committee Update: Larry Powell, Chair

Mr. Powell welcomed everyone to Augusta, GA, and introduced the committee members. The next committee meeting is scheduled for April 12. The committee has no open recommendations, but several draft recommendations are in process. Committee member David Hoel reviewed a draft recommendation on the topic of the acceptance and disposition of spent nuclear fuel containing US-origin HEU from Germany. A position statement on a deep geological depository for spent nuclear fuel and high-level waste is being redrafted. Committee member Ginny Jones referenced a draft recommendation on HB-Line incidents.

Tina Watson, CAB Facilitator, played the first video for CAB Member online training.

Waste Management Committee Update: Earl Sheppard, Chair

Mr. Sheppard welcomed everyone to Augusta, GA, and introduced the committee members. Waste Management had no open or pending recommendations. The next committee meeting will be held on April 12.

Presentation: Liquid Waste Overview: Dean Campbell, SRR

Mr. Campbell began his presentation with an overview of the liquid waste program, which protects the environment and enhances public safety, supports the US government's nuclear non-proliferation agenda, and operates the tank farm cleanup. SRR is committed to industrial, radiological, environmental, chemical, and overall safety. He reiterated SCDHEC's statement that high-level waste represents the single largest environmental risk in South Carolina.

The waste in the tanks, which are 36 million gallons by volume, is separated into salt (93%) and sludge (7%). This total volume represents 253 million curies of radioactivity, with 131 mCi in the sludge and 122 mCi in the salt. Processed sludge is sent to the Defense Waste Processing Facility (DWPF). Salt is sent to ARP/MCU, which leaves minimal high-level waste in the salt after processing. He played a video that demonstrates the process. Mr. Campbell used the example of trying to clean a cup that has been sitting for forty years with coffee in it to illustrate the difficulty of prepping tanks for grouting.

In 2015 DWPF produced 93 canisters, ARP/MCU processed 752,000 gallons, and 1.5 million gallons of grout were poured into SDUs. Operations are proceeding as planned with progress ongoing, and waste treatment and tank closure work reducing the overall risk.

#### Q&A Session

CAB member David Hoel asked the status of leak testing in SDU 6. Campbell stated that the report is still being finalized. Hoel asked the status of the double-stacking. Campbell responded that it is continuing, 135 of 150 slots have been prepared; they will soon complete the last 15 so that double-stacking can begin. Hoel asked for an elaboration of the current difficulty with the 3H Evaporator. Campbell stated the problem is being analyzed for possible evaporator repair or replacement. They do not pose any risks to the public or the environment. Hoel asked for the latest results for company information request on liquid waste services and design of SDUs. Campbell deferred to Jim Folk, DOE-SR. Folk responded that data and input will be provided in an alternatives analysis for SDU 7 with the results expected in the Fall timeframe. Folk addressed the initial leak test question and stated the report will be finalized with results in the coming weeks.

Harold Simon, CAB Chair, asked for the status of Tank 12 grouting. Campbell responded that the tank has been grouted, with specific sections, such as cooling coils, currently

undergoing grouting. Campbell also stated that this tank closure is proceeding on schedule and will meet FFA deadlines.

Ginny Jones, CAB Member, asked about the communication associated with the 3H Evaporator. Jim Giusti, DOE-SR, responded that incomplete information kept continuously being submitted, therefore, not allowing a complete update with no established path forward. They decided to wait until they had more complete and accurate information, however, the DNFSB released information on their own. Giusti said that he would have to clarify which categories of information were covered under the DOE for the specific incident.

Harold Simon stated that he receives information via DNFSB weekly reports posted to the website. He encouraged CAB Members to monitor this website for informational updates.

Strategic & Legacy Management Committee Update: Bob Doerr, Chair

Mr. Doerr welcomed everyone to Augusta, GA, and introduced the committee members. Doerr stated that Recommendation 323 remained open with periodic updates from DOE. The next committee meeting will be held on April 13 at 6:30-8:20 pm.

Presentation: Natural Resources Management Update: Bill Crolley, USDA Forest Service

Ranger Crolley reviewed the FY 2015 highlights for the USDA Forest Service at SRS for natural resources, fire, engineering, research, and community interaction. Crolley began with endangered species management within natural resources and noted the management of 94 Red-cockaded Woodpecker clusters with a total population of 330 birds, which had 4 birds in 1997. Research into the Red-cockaded Woodpeckers was re-analyzed with regional foraging habitat thresholds for comparison with SRS data. The Forest Service staff at SRS partnered with North Carolina State University to complete home range mapping of SRS populations to test foraging relationships to regional standards.

The USDA Forest Service Southern Research Station works closely with SREL to assist with feral hog research. Since 2005, more than 7,700 feral hogs have been removed from the site with aid from nuisance wildlife control contractors. The nuisance species management research to determine annual piglet survival and mortality allows them to better estimate feral hog populations. The organization continues to evaluate whole-sounder trapping (the entire social group) as a control technique.

Ranger Crolley noted that the volume of forest products sold rebounded to 8 million cubic feet after two years of declining volume.

Pollinator and native plant restoration efforts continue to establish 17 different pollinator species (including several bee species to prevent a monoculture) in a native wildflower garden developed in a 10-acre section of power line right of way. Native grass plugs continue as they have since 1994, with 20,000-70,000 planted each year.

Crolley reviewed the wildfire history at SRS for the past 10 years, noting that the number of wildfires started and number of acres burned declined in 2015. He offered a fuels analysis of the site that included 1,624 observations to determine the heat release potential and surface fuel load in tons/acre. These observations and analyses help to determine the frequency, priorities, and objectives of prescribed fires on SRS. Prescribed fires can minimize the impact of fire on on-site and off-site populations. In 2015, the USDA Forest Service initiated collaborations with SRNL and the USDA Forest Service Pacific Northwest Research Station to become one of five sites nationwide to study emissions and smoke plume development from prescribed fires. This work is funded externally by five agencies.

The engineering mission of the SRS-Forest Service collaboration manages the road system on site; assists with boundary maintenance and the soil and groundwater closure program by mowing, fertilizing, and pesticide spraying on approximately 586 caps; well management; and management of millions of gallons of material at the Mixed Waste Management Facility (Tritium Phytoremediation).

Savanna Restoration is the focus of current research.

The DOE energy efficiency and renewable energy project is also encompassed in the research program. It studies the impacts of bioenergy crop production and water quality and use, resulting in no negative impacts found in water quality or water use relative to sustainability.

Crolly highlighted community outreach efforts such as fire prevention and conservation education, career fairs, the SRS Ultimate Turkey Hunt and Fishing Challenge for mobility-impaired Wounded Warriors, the Savannah River Environmental Sciences Field Station, and special emphasis programs.

#### Q&A Session

Louis Walters, CAB Member, asked for an explanation of the decimation of the endangered woodpecker referenced. Are there other species in danger in the SRS area? Crolly responded that the habitat had been changed through lack of management and harvesting. Quality has been improved to allow population growth. They manage for four endangered species. Three are plant species. The fourth is the Red-cockaded Woodpecker.

Mary Weber, CAB Member, asked about the smoke production from prescribed burns and what notification system is in place to notify the general public of ongoing prescribed burns and the associated smoke production. Crolly stated that social media efforts are currently being established, but must be approved by DOE in Washington. Currently, firefighters call residents to notify them on the day of a prescribed burn, if they have requested to be on the notification list.

Bob Doerr, CAB Member, asked about the feral hogs nuisance removal process. Crolly stated that he can have an update presentation on the removal process strategy. Doerr asked for further elaboration on the volume of forest products sold and reforestation. Crolly responded that small areas (40 to 60 acres) are targeted with forest products yielded. The overall plan dictates reforestation.

David Hoel, CAB Member, asked for boundary maintenance information with an elaboration on maintaining the river boundary. Crolly stated that there is fencing and signage along the river boundary to prevent public access.

Susan Corbett, CAB Member, asked if the reforestation efforts included the prevention of a monoculture with the planting of indigenous trees such as Cypress and other hardwoods. Crolly stated that many hardwood trees are located in the set-asides, which are not managed. Cypress is included in bog areas on site, but they do not harvest it.

Gil Allensworth, CAB Member, asked how much damage would occur from the feral pig population if it were left unchecked and not maintained. Crolly stated that site destruction through digging and rooting would increase as the pigs would run rampant.

Susan Corbett asked if birth control can be baited to feral hogs to control population. Crolly stated that he is unaware of this population control method. It's quite possible that SREL would know more.

#### Review IPL Letter

Bob Doerr, CAB member, began the review of the IPL letter by stating that any structural or grammatical changes need to be reviewed so that it may be voted on. Doerr asked for an explanation regarding PBS 41. Michael Mikolanis, DOE-SR, responded that new PBSs have been assigned for 2018. Terry Spears, DOE-SR, stated that PBS 41 includes 235-F remediation.

Dawn Gillas, CAB Member, asked if any additional content changes can be made. Noted she would re-order nuclear materials by spent nuclear fuel, 235-F, and plutonium downblend.

Dan Kaminski, CAB Member, to Dawn Gillas that those three are equally weighted and listed as the second priority, collectively ranked.

Nina Spinelli, CAB Member, asked to remove the sentence, “We have ranked them in the following order.” Gillas remarked that removing the sentence would help.

Public Comment Session

Tom Clements, SRS Watch, stated the DNFSB weekly reports referenced earlier had not regularly been published, as they are coordinated with DOE regarding the information provided. Clements reiterated the importance of these weekly reports. In reference to the draft EA on German spent fuel, he reiterated that the fuel can safely be left in Germany.  
END OF DAY 1, MARCH 28, 2016

Meeting Minutes  
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Tuesday, March 29, 2016, Attendance:

<p><u>CAB</u>          Gil Allensworth          Tom Barnes          Louie Chavis          Susan Corbett          Robert Doerr          Murlene Ennis          Dawn Gillas          David Hoel          Eleanor Hopson          Virginia Jones          Daniel Kaminski          Jim Lyon – <i>Absent</i>          John McMichael          Clint Nangle – <i>Absent</i>          Cathy Patterson          Larry Powell          Bill Rhoten          Earl Sheppard          Harold Simon          George Snyder          Nina Spinelli          Ed Sturcken          Christopher Timmers          Louis Walters          Mary Weber</p>	<p><u>DOE/Contractors/Others</u>          Maxcine Maxted, DOE-SR          Jim Folk, DOE-SR          Pat McGuire, DOE-SR          Jeff Bentley, DOE-SR          T. Spears, DOE-SR          T. Williams, DOE-SR          Avery Hammett, DOE-SR          Thomas Johnson, DOE-SR          Crissy Waller, DOE-SR          Jay Ray, DOE-SR          de’Lisa Carrico, SOE-SR          Michael Mikolanis, DOE-SR          Ed Lyman, Union of          Concerned Scientists          Frank von Hippel, Princeton          University          Kristin Huber, SRNS          Ron Jones, SRNS          Bill Bates, SRNL          Melissa Johnson, Time          Solutions          Eleanor Prator, Time Solutions          Tina Watson, Time Solutions          James Tanner, Time Solutions          Kenji Shimizu, Mainichi</p>	<p><u>Agency Liaisons</u>          Susan Fulmer, SCDHEC          Heather Cathcart, SCDHEC          Sandra Snyder, SCDHEC          Thomas Rollsa, SCDHEC          Sean Hayes, GADNR</p> <p><u>Stakeholders</u>          Dede Biles, <i>Aiken Standard</i>          Jeff Allender, Public          Becky Rafter, GA WAND          Walter Jones, <i>Augusta          Chronicle</i>          Che Long, GA WAND          Tom Clements, SRS Watch          Elena Richards, Savannah          Riverkeeper          Bernice Johnson Howard,          GA WAND          Art Domby, Public          K. Patterson SCNAC          Connie Young, Public          Donald Bridges, CNTA          Frazier L., SN3          Frances ?, SRW          Nancy Bobbitt, US Senator          Johnny Isakson          Rick McLeod, SRSCRO          Dara Glass, BWXT</p>
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Opening Ceremonies: Harold Simon, CAB Chair

Mr. Simon led the CAB Members and other attendees in the Pledge of Allegiance and the National Anthem. Mr. Simon welcomed everyone to Augusta, GA, and noted that another Augusta, GA, meeting will be held in September, with the intent of reaching more members of the general public.

Motion to approve the meeting minutes. Seconded. Approved: 21 Yes, 0 Opposed, 1 Abstention.

Kathy Patterson and Jim Lyon were introduced as new CAB Members.

Simon discussed the informed decision-making refresher provided to CAB Members in February. In addition to the refresher, internal processes with standard operating procedures were provided as well.

Jim Giusti, DOE-SR, gave an overview of the education video production schedule.

Each year the CAB sends one member to the Waste Management Symposium in Arizona. Simon asked the CAB Support team to take over the management of CAB attendance at conferences and symposia, so that all members have an opportunity to attend with appropriate preparation.

Meeting Rules and Agenda Review: Tina Watson, CAB Facilitator  
Ms. Watson reviewed the meeting rules and agenda.

Department of Energy Agency Update: Jack Craig, DOE-SR

*Budget:* The FY 2017 Presidential budget request for the Environmental Management programs at SRS was \$111 million more than the FY 2016 budget. The FY 2017 budget is \$1.45 billion and includes: production of 100-110 canisters of vitrified high-level waste at DWPF, processing up to 1.7 mgal of salt waste through two (2) interim treatment systems (ARP/MCU), SWPF construction completion and start up testing and commissioning [SWPF is expected to significantly increase DOE-SR ability to process salt waste (90 percent of the volume)], Tank Farm piping and equipment updates to support SWPF start up, ongoing SDU-6 construction activities, design activities for SDU-7, downblend activities for EM-owned plutonium at K-Area for future disposal at WIPP, Building 235-F risk reduction activities as per Defense Nuclear Facilities Safety Board Recommendation 2012-1, continued community and regulatory support (CAB, SCDHEC, SCDNR, and PILT payments to Aiken, Allendale, and Barnwell counties), and investments to address needs for site-wide general purpose infrastructure.

SRS EM and NNSA budgets are available on the Savannah River Operations office website: [sro.srs.gov/index.html](http://sro.srs.gov/index.html). The budget increase was the largest within EM and reflects positively on the work that is being accomplished at SRS.

*Operational Pause:* All EM facilities except HB-Line have exited Deliberate Operations (DO). HB-Line should exit DO in April. Sustainment pauses continue to be conducted by all SRNS organizations. SRNS has completed a resource analysis for QA, Procedures, Training, and Contractor Assurance. They developed a plan and schedule to establish a path for Facility Assessments and Improvement, as well as Functional Area Assessment and Improvement.

*Liquid Waste Operations:* On March 12, the DWPF turned 20. For 2016, DWPF has poured 69 canisters (total 4,039 canisters). Since operations began in 1996, DWPF has poured more than 15.4 million pounds of glass. DWPF lifecycle is expected to produce 8,000 canisters.

*Tank Closure:* Tank 12 closure is ahead of schedule to meet the May 31, 2016, FFA commitment.

*Tank Closure Cesium Removal:* SRR continues to evaluate proposals to pursue commercial treatment to remove cesium component of bulk waste. This effort does not impact the startup of the SWPF. The tank cesium project is properly funded with \$15 million.

*Saltstone Processing Facility:* The facility just entered a month-long outage to support tie-in work for SDU-6 and the SWPF. Saltstone has processed more than 420,000 gallons of LLW into grout since the beginning of the year. A Readiness Review on the first of two 60,000-gallon salt solution receipt tanks is scheduled to start in late April.

*Interim Salt Processing:* The new “next-generation solvent” is removing more cesium than the previous solvent (200 x more efficient), and they now achieve more than 99.99 percent removal of cesium. ARP/MCU has now processed more than 5.7 million gallons since the facilities began radioactive operations in April 2008. ARP/MCU has processed more than 365,000 gallons of salt waste so far in 2016.

*Saltstone Disposal Unit-6:* SDU-6 is 90 percent complete. The water tightness test did not meet requirements. A repair method and path forward are in process. The infrastructure to connect the disposal cell to the SPF is currently being installed.

*Solid Waste Management Facility:* The facility has disposed of 1,860 cubic meters of low-level solid waste. TRU is currently stored at SWMF. TRU waste shipments from SRS will

resume following the reopening of the WIPP in New Mexico. The shipment schedule has not been developed yet. Planning by the National TRU Program through the TRU Waste Corporate Board will consider the needs of the waste generators around the DOE complex and the actual capacity to receive waste at WIPP, which will be known after resumption of operations.

*3H Evaporator:* On February 17, 2016, the SRS 3H Evaporator developed a leak. The evaporator was de-inventoried, and operations were shut down. The leak was contained in a controlled radiological area inside the concrete evaporator cell lined with stainless steel. Increased radiological levels were safely retained inside the building, away from workers. There is no risk to people or the environment. Operations are suspended pending a determination of repair and replacement options. The 3H Evaporator outage should not impact H-Canyon activities, and it will not impact the Liquid Waste Program for up to three years.

*Salt Waste Processing Facility:* Construction is 96.4 percent complete and commission and operation startup is 21.3 percent complete. Project remains on track to complete construction in late-April/early-May timeframe. The SWPF project of DOE-SR and Parsons received the DOE Project Improvement Award—the only EM project to be recognized this year at the DOE Project Management Workshop.

*SRS Liquid Waste Contract Solicitation:* DOE plans to release the draft Request For Proposal (RFP) for the SRS Radioactive Liquid Waste work (worth between \$1-3 billion) by the end of March 2016 for industry comment. The final RFP is expected by June, with an award to follow by March 2017.

*Nuclear Materials:* On March 8, 2016, DOE extended the public comment period for the draft EA for the acceptance and disposition of SNF containing US-origin HEU for the Federal Republic of Germany to March 25, 2016. They resumed plutonium oxide production in HB-Line and entered Hot Operations by starting precipitation operations. This represented a major effort by the facility and site following the Operational Pause that began last fall. Enhancements to operational procedures, training, and systems help to assure the stability of operations.

The Target Residue Material Project in H-Canyon was declared construction complete, which allowed startup testing and training on the equipment to begin. Operations are expected to start in the summer.

K-Area completed 3,013 Destructive Evaluation (DE) Surveillance #1 in the KIS Glovebox. Six DEs are required in FY16 prior to starting plutonium downblend activities.

*SRNL:* The Advanced Chemical Manufacturing Collaborative (AMC) announced its selection of the Aiken Advanced Manufacturing Partnership (AAMP), LLC, to develop a proposal for the location of the collaborative at the University of South Carolina-Aiken (USC-A). The AMC team expects to deliver a fully developed and vetted lease package to the DOE by mid-August.

SRNL is managing eight (8) studies, two (2) of which SRNL is performing, in support of the Hanford Tank Vapors Assessment Team. Washington River Protection Solutions provided \$3.2 million to SRNL for the effort.

Dr. Ralph James accepted the position of Associate Laboratory Director for Science and Technology. Dr. James came from Brookhaven National Laboratory. He will be the SRNL Chief Research Officer.

*Area Completion Project:* D-Area Ash Project is currently placing the first layer of cover material on the consolidated ash from the first unit. The DOE Federal Project Director is working with regulators to develop a water management methodology for the remainder of the project.

#### Q&A Session

Bill Rhoten, CAB Member, asked which test SDU-6 failed. Mr. Craig responded that it failed the first test. Jim Folk, DOE-SR, elaborated by saying that a full tank is 42-feet high, and even at 42 feet, they saw leakage. They attempted some repairs and re-filled the tank up to 3-4

feet, but then saw additional leakage. The decision was made to bring in subject matter experts (SME) who could advise them on how to move forward. The SME review is going on now, and their report is due soon.

David Hoel, CAB Member, asked if there had been any EM or DOE order violations or non-compliances in the past three (3) months. Mr. Craig replied that there were some order non-compliances, but the details were not yet available.

Mr. Hoel asked for the status of negotiations with DHEC on SWPF. Mr. Craig stated that they are ongoing. The agencies have conducted sessions over the past four-to-five (4-5) months, and he believed progress was being made.

Mr. Hoel asked for the DOE reaction to Governor Haley's letter on suspending shipments to SRS. Mr. Craig was unable to comment.

Mr. Hoel asked if the lawsuit blocking shipments to Idaho is successful, would the shipments come to SRS. Mr. Craig stated that there was no plan for that at the time.

Mr. Hoel asked if there is a deadline relating to resumption of TRU waste transport. Mr. Craig replied that the operators of WIPP may open by the end of the calendar year. Shippers from SRS, Oak Ridge, and Idaho are the second priority once WIPP reopens and clears aboveground radioactivity.

Mr. Hoel asked if the Centerra and Parsons contracts have award fee components. Mr. Craig replied that Parsons is not part of the same award fee component structure. Centerra receives an award fee on a 6 month basis.

Louis Walters, CAB Member, asked for the original cost of the SWPF. Terry Spears, DOE-SR, replied that the original 2002 design was for a smaller and less-seismic facility, and it was estimated at \$400 million. Mr. Walters asked how many employees the \$1-3 Billion Liquid Waste budget would cover. Mr. Craig stated the estimate is for around 2,000+ employees, but may include more if additional operations are needed or requested. Mr. Walters asked if there was any flexibility in the payment of the pension funds? Mr. Craig stated there was not as it is a legally dictated requirement. The Arisa minimum amount changes every year, but the calculations are legally dictated as well.

#### Environmental Protection Agency Update: Rob Pope, EPA

Mr. Pope reviewed the schedule to be submitted by DOE for tank closures and soil and water cleanup. The schedule was submitted, and the EPA proposed changes to it. The next two years are considered enforceable—meaning that milestones must be met. The EPA has been monitoring the use of C-Area and C-Reactor and are considering accelerating closure. Security training is held in this area, which is factored into the closure schedule.

EPA and the state of South Carolina have approved the five-year review of land use control and soil covers, landfill caps, and aged seepage basins. Land use controls and soil covers were recently approved by the EPA. The disposal site located outside the C-Area has recently had land use controls placed on it such that it can be left in place if not disturbed. There was an unintended disturbance by the USDA Forest Service, however SRS reported it immediately, and there was no violation. EPA continues to review SRS institutional controls. The current closure date is a negotiated re-schedule that represents an eight-month delay on Tank 12 from the original closure date. Two tanks have bulk waste removal milestones in September.

D-Area ash project is making great progress on two (2) basins. There are ongoing water management issue from extra rain. There are four (4) more basins to do.

Mr. Pope described an Environmental Justice meeting that was held last week at Voorhees College with Nina Spinelli, CAB Vice-Chair. He noted that there is an Emergency Management degree program at Voorhees College that looks very promising for future SRS EM personnel.

#### Q&A Session

David Hoel, CAB Member, asked for the EPA perspective on DHEC's oversight of lead in the drinking water. Pope responded that he does not have any knowledge regarding the drinking water enforcement and oversight for EPA. Pope stated that the drinking water oversight and enforcement is mostly delegated to the state. Pope is assigned to Superfund efforts.

Nina Spinelli, CAB Member, stated that water in Columbia, SC, had not been tested for lead in more than ten years. She asked how EPA and SCDHEC collaborate on the issue. Pope reiterated his previous statements regarding state-level enforcement and oversight. Earl Sheppard, CAB Member, stated that it is up to the water utility company to spot test in their regions.

Thomas Johnson, DOE-SR, referenced the breakdown of the PBS in the Community Forum presentation packet provided to CAB Members in reference to specific funding requirements.

SC Department of Health and Environmental Control Update: Susan Fulmer, SCDHEC

Ms. Fulmer stated that the state of South Carolina recently approved FFA Appendix E and a core team meeting would follow soon. Five-year reviews have been broken down regarding remedies with site visits conducted. DHEC appreciated the prompt notice on the land use violation referenced in the EPA update. Sampling will be conducted to see if contamination has spread past land use boundaries. SWPF missed milestones and discussions continue between DOE and SCDHEC.

Fulmer summarized the SCDHEC position on the Germany Fuel EA by stating that SRS stores more than its fair share of nuclear materials and waste, and SCDHEC does not believe that the DOE should bring additional spent fuel to SRS unless an equitable amount of risk is reduced for both Georgia and South Carolina citizens. All work and decisions regarding receipt of SNF should be in consultation and under a schedule with state representatives.

- The draft EA noted an interdisciplinary research center funded by the German government will bear the cost of management of German spent fuel; additional fuel will cost time for risk reduction and, therefore, money.
- All equitable cost arrangements would factor in money for accelerated treatment before additional spent fuel is received, in addition to money to manage German spent fuel.
- Section S2 of the summary noted the capabilities of the SRS liquid waste facilities do not exist elsewhere in the United States, but facilities do not exist at SRS as they are not complete. DOE has not funded the liquid waste facilities to run at optimal capacities since FY 14.
- Section S4 states any decision by participants to precede with acceptance, processing, and disposition of spent fuel depends on compliance with all applicable requirements of US law. SRS is out of compliance with the Saltstone facility permit. SRS should be in compliance before accepting new spent fuel.
- New waste streams require DHEC approval before placement in Saltstone disposal facility.
- Additional disposal of radioactive waste in SC from waste not currently at SRS potentially causes conflicts with common goals agreed to by SRS, DHEC, and the governor's nuclear advisory council

#### Q&A Session

Nina Spinelli, CAB Member, asked for the presentation to be sent to CAB Members.

David Hoel, CAB Member, asked for the status of negotiations of startup for SWPF. Fulmer stated that this is ongoing, and she is unaware of current details. Hoel asked if SRS has been given any deferment for sampling of lead in the drinking water. Fulmer stated that she will follow-up.

Georgia Department of Natural Resources Update, Sean Hayes, GADNR  
Sean Hayes (GADNR) began his update by stating that Plant Farley evaluations have been completed, with Vogtle to be evaluated in the upcoming months.

[NOTE: The audio files for the remainder of Mr. Hayes' update, the Public Comment Session that immediately followed, and a portion of the "Alternatives to MOX" presentation were unavailable for transcription.]

Presentation: Control Alternatives to MOX: Dr. Frank von Hippel and Dr. Edwin Lyman  
Dr. Frank von Hippel and Dr. Edwin Lyman began their presentation with an overall outline of topics to be discussed and then proceeded to discuss each in detail:

*US excess separated plutonium*: US excess separated plutonium equals approximately 60 metric tons broken out as follows: 4 MT ZPPR Fuel; 7 MT Unseparated Used Fuel; 3.2 MT in Other Forms (scraps and residues); 1.1 MT WIPP or H-Canyon/HB-Line to DWPF Disposal with HLW; 5.1 MT Non-Pit Metal and Oxide; 34 MT Pits, Metal, and Oxide (MOX Fuel Fabrication, including pit disassembly and conversion); and 7.1 MT Surplus Pit Plutonium. Thirty-four (34) MT are covered by an agreement with Russia. Thirteen (13) tons belong either to DOE-EM or NNSA.

*Why did MOX become "unaffordable"?* Some of the reasons for escalation include the need to clean the gallium out of the pit plutonium and to clean other plutonium, weak DOE project oversight with construction initiation prior to design completion, MOX services and CBI project management, a scarcity of nuclear qualified construction workers, and a high rework rate. A 2015 Red Team Report for the DOE demonstrated that a dilute and dispose strategy would be much less costly.

*Plutonium Disposition (Executive) Agreement with Russia*: The 2000 plutonium disposition agreement with Russia stated that Russia would dispose of 34 MT in MOX. The US and its allies agreed to pay at least \$200 million toward the effort. In addition, the US would dispose of 26.6 MT in MOX and produce 8.4 tons of vitrified HLW. By 2010, the Russian MOX program had become too costly, and Russia asked to use the plutonium in its on-going plutonium breeder reactor program. The United States agreed to the proposal despite the fact that it would mean that the plutonium disposal would not be permanent. In addition, this created storage security issues.

Drs. von Hippel and Lyman anticipate the Russians will object if the US wants to change to direct disposal because its MOX program has become too costly. However, there is not much Russia can do, since they are doing what they want to do anyway.

*Direct Disposal Alternatives to MOX*: The cancellation of the immobilization program in 2002 caused major problems for non-pit plutonium disposal. Between 2000 and 2013, the DOE proposed changes to its strategy to dispose of 13 MT of plutonium no fewer than eight (8) times. Drs. von Hippel and Lyman presented the following alternatives for direct disposal:

1. Canisters containing about 1 kg of plutonium each, embedded in vitrified radioactive waste. Vitrification of HLW at SRS is currently scheduled to complete by 2039, with vitrification to begin at Hanford in 2019. Past studies suggest that if a plutonium immobilization process starts at K-Area by 2025, then disposal of 24 MT would not significantly impact the waste vitrification schedule. Plutonium canister production at K-Area with vitrification at Hanford may be impractical, but should be further studied.

2. Three-mile deep boreholes is a technique developed for drilling oil and geothermal wells. The DOE is mounting a demonstration project with non-radioactive material. The cost is comparable with WIPP, but borehole siting will be a consideration.

3. Plutonium downblending and disposal. The DOE has proposed to dispose of at least six (6) MT of excess plutonium in the WIPP in New Mexico by dilution. This procedure would allow the termination of safeguards on disposal packages. Advanced packaging options may enable disposal of all excess plutonium in WIPP without changing the Land Withdrawal Act. Increased security at WIPP and resolution of current safety issues need to occur before this strategy could be enacted with New Mexico's consent. However, this is likely to be the most affordable option with an annual commitment of \$400 million until the 2040s. It would also be the least risky and, likely, the quickest if WIPP reopens as scheduled.

4. Dilute and Disposal Process from the Red Team plutonium-disposition report. Downblending will pose fewer safety risks comparatively to MOX as it requires no dissolution and purification. Downblending is a room-temperature process that requires no dissolution and purification ("aqueous polishing") and does not produce a high-alpha liquid waste stream, thus, removing the need for a Waste Solidification Building.

Drs. von Hippel and Lyman presented a detailed chart of the basic flow of the dilute and dispose approach. They introduced downblending variants by asking the question, "How much plutonium can be loaded into a single waste drum?" A Conventional Pipe Overpack Container (POC) can hold 200 fissile gram (PU-239) equivalents (FGE) maximum. A Criticality Control Overpack (CCO) can hold 380 FGE maximum. Currently, container variants of up to 1 kg per package are under consideration.

Monolithic concrete waste form is another possibility to achieve greater dilution, stability, and plutonium loading.

Drs. von Hippel and Lyman offered additional considerations to the CAB by suggesting that the existing SRS infrastructure could be leveraged to support the proposed alternatives, although upgrades to existing facilities or some new construction may also be needed. The K-Area Complex, DWPF, H-Canyon/HB-Line, and the Waste Solidification Building were called out as potential leverage points. Upgraded and repurposed sections of the unfinished MOX facility could support the alternatives as well. They noted that domestic requirements and international assurances dictate that security issues associated with the alternatives need to be addressed.

Drs. von Hippel and Lyman closed the presentation by offering the following recommendations: A step-by-step approach that calls for the installation of two (2) more glovebox lines at KAMS; 300 grams of plutonium per 55-gal container would take about six (6) years to process 13 MT—perhaps less, if the HB-Line is also used in parallel; and, the DOE should examine the other direct disposal options as well as WIPP for the remaining 41+ MT of excess plutonium.

#### Q&A Session

Nina Spinelli, CAB Member, asked how the geological depository is taken into consideration as it is not a current option for dilution and disposal. Lyman stated that this is specific to WIPP, and DOE's plan to resume WIPP.

Chris Timmers, CAB Member, asked for the definition of pit plutonium. Dr. von Hippel responded that every nuclear material has a fission trigger, labeled the pit.

Susan Corbett, CAB, asked how concerned the doctors were about the true risk of global stockpiles. Dr. Lyman responded that the Union of Concerned Scientists (UCS) has been looking at global security programs for many years, and they have long opposed MOX, because it could increase the risk of theft by terrorist organizations.

Dawn Gillas, CAB Member, asked how much plutonium had been diverted from plutonium proliferation to commercial applications. The doctors responded that they did not know.

Gil Allensworth, CAB Member, asked if MOX served a non-proliferation function.

Rose Hayes, public, stated that when they first tested at Catawba, it was controversial, European MOX was questioned as to whether it was equal to weapons grade MOX. Ms. Hayes asked if the doctors saw an essential difference between European commercial MOX and weapons grade MOX from pit processing. Dr. Lyman responded that they are close, but their safety issues are less well known and less understood. Dr. von Hippel concurred.

Art Domby, public, asked if the doctors would recommend to pursue all 3 or if there was a preferred alternative. Dr. von Hippel stated that in the long term you should not put all of your plutonium in one basket. Vitrification and borehole ideas are the best options.

Don Bridges, CNTA suggested to the CAB that they invite some MOX people to give their perspective on some of the issues the doctors have discussed.

Administrative and Outreach Committee Update: Eleanor Hopson, Chair  
Ms. Hopson welcomed everyone to Augusta, GA, and introduced the committee members.

Facilities Disposition & Site Remediation Committee Update: Tom Barnes, Chair  
Mr. Barnes welcomed everyone to Augusta, GA, and introduced the committee members. The committee had one open recommendation, which will be discussed at next the committee meeting held April 13, 4:30-6:20 pm.

Presentation: Understanding Risk: Expressing Concentrations: Walt Kubilius, DOE-SR  
Concentration is defined as the amount of something within something else. Mr. Kubilius explained the measurements used for concentrations:

Non-radioactive materials are expressed in parts per million (ppm) and parts per billion (ppb).

Radioactive materials are measured with a Geiger counter, which clicks to represent the disintegration of one atom. The disintegration rate or disintegrations per minute, reveals how much radioactive material is present. The disintegration rate is expressed in Curies (Ci), with one (1) Curie equaling about two (2) trillion disintegrations per minute. One picocurie (pCi) equals one-trillionth ( $1/1,000,000,000,000$  or  $.0000000001$ ) of a Curie. Curies are specifically used for high level waste.

Environmental samples have much less radioactivity, so a smaller unit is used for soil, water, and tissue. Mr. Kubilius reiterated that radioactivity exists naturally everywhere with uncontaminated soil having about twenty-five (25) pCi per gram. Uncontaminated groundwater measures about ten-to-fifty (10-50) pCi per liter.

Mr. Kubilius calculated the concentration of ethanol in fuel to demonstrate how to arrive at the percentages and fractions used to express concentrations.

Concentrations of SRS contaminants are much less than 10 percent, and even much less than 1 percent. To illustrate, Mr. Kubilius compared non-radioactive and radioactive materials to illustrate the level of risk:

- 1 part per million (1 ppm) is 1 grain of salt in 12 ounces of water.
- 1 ppm equals 1 drop of dye in 12 gallons of water.
- 1 ppm equals 1 milligram (mg) of lead per kilogram (kg) of soil, expressed as mg/kg.
- 1 mg of TCE per liter of water is expressed as mg/L and equals 1 ppm.

He also illustrated parts per billion in the same fashion.

Q&A Session

No questions.

Waste Management Committee Update: Earl Sheppard, Chair

Mr. Sheppard welcomed everyone to Augusta, GA, and introduced the committee members. No open, pending, or draft recommendations. The next committee meeting will be held April 12, 6:30-8:20 pm.

Presentation: Crawling Along, Again: Tim Chandler and Greg Arthur, SRR, Robotics Team

Mr. Chandler narrated a video of robots working inside a tank during tank closure preparation.

Mr. Arthur performed a robotics demonstration.

The operators run the robots remotely from a command trailer that can be up to 500 feet from the tank.

Each of the four tank types are different, but the largest are 75-85 feet in diameter with a 27-foot-high roof and another nine (9) feet underground. There are five (5) miles of pipe and cooling coils running through the tanks.

#### Q&A Session

Susan Corbett, CAB Member, asked if the robot ever comes out. Mr. Chandler replied that the robot comes out only to be moved to another location within the same tank. Ms. Corbett asked if the robot is radioactive. Mr. Chandler replied yes. She then asked how the samples come out of the tank. Mr. Chandler replied that there is a hole in the roof about 2 feet in diameter.

Louis Walters, CAB Member, asked what industry the technology comes from. Mr. Chandler replied that the primary purchaser of the off-the-shelf technology is city industry to do large pipe or cave inspections. Mr. Walters then asked why the mesh of cooling coils was all over the tank interior. Mr. Arthur gave some historical background on the tank cleaning process. Originally, the material could be boiling and bubbling as it came into the tank. The chromium water in the coils was a safety measure to prevent the material from overheating.

Gil Allensworth, CAB Member, asked how the samples were taken before the robotic technology was available. Mr. Chandler replied that previously closed tanks 17 and 20 were type 4 tanks and had no cooling coils. At that time, operators used cups on a very long pole. Mr. Allensworth followed up by asking how much radiation workers were exposed to with the robots. Mr. Arthur replied that the exposure rate is very little compared to the older methods. The robot goes into the tank clean and is left there when the tank is sealed, except on the very rare occasion when it needed to be moved to another location within the same tank.

Susan Corbett, CAB Member, asked the purpose of the sampling. Mr. Chandler replied that when a tank was closed, the DOE had to give an inventory of what is left behind: everything, including isotopes and chemicals. Corbett asked how many curies were left behind. Mr. Arthur replied that the organization had to get permission from the state and EPA to retrieve samples, and the lab does the testing and analysis.

Rob Pope, EPA, stated that the organization had to prove to EPA and SCDHEC that they can cease removal of the waste using physical and photographic evidence. If the EPA and the state disagree that waste removal can be ceased, the DOE must move forward to re-clean the tank. Mr. Pope noted that the department has never had a problem with proving they meet performance objectives before removal cessation on previously closed tanks.

An unidentified speaker asked if the organization supported any local First Robotics Teams. Mr. Chandler replied that he had given presentations and demonstrations, and his coworkers have worked at local schools to encourage STEM areas.

Nuclear Materials Committee Update: Larry Powell, Chair

Mr. Powell welcomed everyone to Augusta, GA, and introduced the committee members.

Strategic & Legacy Management Committee Update: Bob Doerr, Chair

Mr. Doerr welcomed everyone to Augusta, GA, and introduced the committee members. The committee has open recommendation #323 and plans to keep it open for updates. There are no pending or draft recommendations. The next committee meeting will be held on April 13, 6:30-8:20 pm.

Presentation: Environmental Management Cleanup Program Performance Measure: FY 2015 Actuals, FY 2016 Targets: Rich Olsen, DOE-SR

The presentation reviewed FY 2015 actual performance results and provided targets for FY 2016 and actuals through January 2016. The major areas of the SRS Cleanup Program include: Radioactive Liquid Waste: Vitrify Highly Radioactive Component, Process Low Level Component (Saltstone), and Tank Closures; Solid Waste: Transuranic (TRU) Waste and Mixed and Low Level Waste; Nuclear Materials: Nuclear Materials Disposition and Spent Nuclear Fuel Receipt, Storage, and Disposition; and, Soil, Water, and Facilities: Waste Site Remediation and Facilities Deactivation and Decommission

The SRS Cleanup Program made progress in FY 2015...

- Vitrified 93 canisters of radio liquid waste
- Completed operational closure of Tank 16
- Continued dissolution of foreign and domestic research reactor fuel for uranium recovery and completed L-Basin modifications for Canadian fuel receipts acceptance
- Prepared plutonium for disposition
- Continued receipt, safe storage, and shipment of NM, including SNF
- Made significant progress toward D-Area Ash Basin closure
- Completed site infrastructure upgrades to rooves, the telephone system, and targeted laboratories
- Met 100% of FY 2015 FFA and RCRA Regulatory milestones

...but faced challenges as well:

- The temporary closing of WIPP delayed TRU shipments
- Higher than expected Mercury levels in Liquid Waste impacted operation of the Saltstone Facility and DWPF
- Antifoam issue in DWPF impacted canister production and ARP/MCU operations
- The HB-Line Agitator Event and Operational Pause impacted NM operations

The performance and target charts of each EM area are available on pages 8-15 of the presentation located at <http://cab.srs.gov/library/meetings/2016/fb/2015-2016PerformanceMetrics.pdf>

Mr. Olsen noted the SRS Workforce was 11,419 at the end of December 2015. He concluded by stating that DOE-SR will continue to track and monitor performance measures for the key operational areas of EM cleanup operations.

#### Q&A SESSION

Dan Kaminski, CAB Member, asked if the soil and water efforts at other sites were easier or harder than SRS, comparatively speaking. Michael Mikolanis replied, but his response was unintelligible due to low microphone.

Vote on IPL Letter

Mr. Doerr noted that one sentence was removed in paragraph 2 during the Day 1 proceedings. All changes to the letter were complete. Harold Simon, CAB Chair, made a motion to vote on the letter's approval. Seconded. Votes: 20 Yes, 0 Opposed, 0 Abstain. The motion carried, and the letter was approved.

#### Public Comment Session

Bernice Johnson Howard, GA-WAND, made a statement regarding the two new nuclear reactors at Plant Vogtle, and their potential impact on the ecosystem of Shell Bluff, GA.

#### Closing Ceremonies: Harold Simon, CAB Chair

Mr. Simon thanked everyone for their active participation in the bimonthly full board meeting. He asked for feedback on how the CAB is functioning. He welcomed any ideas on improvements to CAB Operations.

Jim Giusti, DOE-SR, told everyone to be prepared to be on live TV at the next meeting.  
MEETING ADJOURNED