

Savannah River Site Citizens Advisory Board
- Combined Committee Meeting Minutes -
July 27, 2009
North Augusta Municipal Center
North Augusta, SC

Monday, July 27, 2009, Attendance

SRS CAB Members

Emile Bernard
Manuel Bettencourt
Donald Bridges
Edward Burke
Ric Castagna
Arthur Domby
Mercredi Giles

Kathe Golden
Judith Greene-McLeod
Rose Hayes
Stanley Howard
Kuppuswamy Jayaraman
Cleveland Latimore
Ranowul Jzar
Madeleine Marshall
Joseph Ortaldo
Marolyn Parson
Beverly Skinner
John Snedeker
Elizabeth Skyee Vereen
Gerald Wadley
Sarah Watson
Alex Williams

Agency Liaisons

Al Frazier, GADNR
Terry Spears, DOE-SR
Rob Pope, EPA
Shelly Wilson, SCDHEC
Kim Newell, SCDHEC

DOE/Other

Jeffrey Allison, DOE
Becky Craft, DOE
Bert Crapse, DOE
Gerri Flemming, DOE
Tremaine Garvin, DOE
Allen Gunter, DOE
Patrick McGuire, DOE
Mike Simmons, DOE
Sheron Smith, DOE
Sherry Southern, DOE
Latrincy Whitehurst, DOE

Stakeholders

Tom Clements
Liz Goodson
George Grady
Walter Howard
Joan Mobley
Jacob Paz
Gary Street

Regulators

Heather Cathcart, SCDHEC
Jennifer Hughes, SCDHEC
Van Keisler, SCDHEC

Contractors

Patricia Allen, SRR

Nancy Bethurene, SRR
Anna Cornelious, Techlaw
J.D. Chion, SRNS
Jenny Freeman, V3
Sonny Goldston, SRNS
Karen Guevara, SRS
Lyddie Hansen, SRNS
Jeanette Hyatt, SRNS
Keith Lawrence, USFS
Larry Ling, SRNS
Mindy Mets, V3
Rick Olsen, SRS
LaMesha Pressley, SRR
Paul Sauerborn, SRNS
Kent Sullivan
Charles Utley, BREDC
Debbie Wisham, V3
Elmer Wilhite, SRNL

The Savannah River Site (SRS) Citizens Advisory Board (CAB) Facilitator, Jenny Freeman, opened the meeting by welcoming everyone in attendance and covered the ground rules. She invited public participation and explained the correct process of participation. She then asked those wishing to make a Public Comment to sign up on a sheet located on the CAB documentation table at the meeting room entrance. She informed the audience that there were designated times during the afternoon for public comments and stated that during this Combined Committee meeting, the public may participate at any time. Jenny reviewed the agenda.

CAB members not in attendance were: Lee Harley-Fitts and Denise Long.

Waste Management Committee, Joe Ortaldo – Chair

Art Domby – Vice Chair (Liquid Waste); Alex Williams – Vice Chair (Solid Waste)

Mr. Ortaldo greeted the attendees and reviewed the purpose of the Waste Management Committee in reference to liquid waste and solid waste management.

The liquid waste portion consists of the tank farms, DWPF salt waste processing, and Saltstone. The major objective of all those programs is to empty out the liquid waste tanks (36–37 million gallons of high level liquid waste), eventually solidify it, and move the high level components offsite to a federal repository.

The solid waste program is involved in processing the low level waste at the Site. It is also responsible for removing all the Transuranic (TRU) waste built up on the Site over its 50 years of existence and, after some proper treatment and packaging, transmitting it to the Waste Isolation Pilot Plant (WIPP) in the state of New Mexico.

Mr. Ortaldo introduced the members of the Waste Management Committee: Alex Williams (Vice Chair–Solid Waste), Art Domby (Vice Chair–Liquid Waste), Ed Burke, Cleveland Latimore, Sarah Watson, Stan Howard, Denise Long, and Don Bridges.

Two pending recommendations were approved at the May 2009 CAB meeting. *Recommendation 263* concerns the disposition of spent nuclear fuel, surplus plutonium, and vitrified high level waste and is a joint recommendation with the Nuclear Materials Committee. *Recommendation 264* concerns the SRS Recovery Act footprint reduction and is a joint recommendation with the Facilities Disposition and Site Remediation Committee.

DOE responses to the recommendations have been received. Mr. Ortaldo asked the members of the Waste Management Committee to review the responses and provide comments. The decision will be made at the August 4 WMC meeting whether to move those recommendations from pending to open.

There are currently eight open WMC recommendations. Essentially every one of them addresses a critical path item on the waste program that DOE and the Management and Operations (M&O) contractors are implementing. The Waste Management Committee met on June 9, 2009, and compiled an excellent summary of ongoing solid waste activities. Bert Crapse presented that summary and will make a presentation today to bring you up to date.

The next meeting of the Waste Management Committee will be on August 4 in Aiken, and the topic will be Tank 48 status (critical path items on tank closure programs) and more details on the contract transition to SRR.

Mr. Ortaldo personally congratulated the staff members of DOE and the various M&O contractors over the years (DuPont, Westinghouse, Washington, and SRNS) for doing an excellent job of implementing this program. That is why Bill Lawless, CAB Technical Advisor, was asked to draft a congratulatory letter to bring to the attention of DOE that the CAB and the public understand we are making a lot of progress and to congratulate and commend them on the work being done.

Presentation – TRU Solid Waste Program Update – Bert Crapse, TRU Waste Program Manager, DOE–SR

Mr. Crapse presented updated information on CAB *Recommendation 258*, which asked for additional information within the TRU Waste Program. He also presented information on the status of the TRU disposition project.

Mr. Crapse defined Transuranic Waste (TRU) as a solid waste or trash generated on site during radioactive processes. DOE defines it as solid radioactive waste that contains alpha-emitting radionuclides with half-lives greater than 20 years, in concentrations greater than 100nCi/g, except HLW. For us, that is mainly Plutonium 238 or Plutonium 239. Today there are approximately 2,100 55-gallon drums of TRU waste. However, there are some larger container wastes generated, mainly through decontaminating and decommissioning (D&D) activities over the years from some major process changes. It can include pumps, ductwork, glove boxes, and other items of that size that are packaged in plywood boxes and shipped in a larger metal container to the burial ground. We started generating this waste back in the 1950s when we first started processing material on site at Savannah River. The Department did not define and start managing this waste differently until the 1970s. In 1970 DOE decided to manage this waste, and the definition of TRU became available. At times, it is referred to as pre-1970 TRU waste, which is any waste generated prior to that time. But today, we would process it as TRU waste.

One of the key activities started this year is TRU Pad 1. The significance is that TRU Pad 1 is one of the higher risk sites.

Photos of drum inventory were presented to demonstrate how it is stored on pads—mostly above grade and uncovered.

Question: *On Pad 1, what was the date you added soil over it?*

Answer: We disposed of that waste in 1972 and 1973 and covered it under that mound.

Question: *Do you routinely inventory each of the isotopes in a drum or box?*

Answer: We use historical data and scientists who can take the historical data and calculate what the decay life has been and what the activity level is expected to be. We have to do an assay before we can ship it to WIPP, so we actually do real time assay type on the waste before it goes to WIPP. From the standpoint of how we manage it and make sure it is safely stored, we are using historical data generated with the waste. We have computer data bases where we have kept this inventory. We have people constantly taking the data that we get on the waste as we characterize it to get it ready to go to WIPP and compare it to the historical data. It has a pretty good correlation so we have been comfortable with using the historical data.

Question: *Just out of curiosity because, not about the TRU waste but in general about the solid waste, generally for multiple solid wastes in other solid waste management work we consider also the liquid waste that is contained in that cylinder or in a thing can also be called solid waste though it may be containing liquid inside but outside for our purposes it is considered solid. So is there any such thing here under your definition of the solid waste or should only be "solid" solid waste inside the box?*

Answer: From a management standpoint, we do manage some liquids. Mike Simmons will be talking about a particular waste stream that was originally a liquid waste stream and how we managed to treat it and make it a solid waste and disposition it. So we do manage some liquid waste that is not considered high level liquid waste. From a TRU waste point, there is no liquid waste that can go to WIPP so if we have containers that have liquids in them. For example, for slurry that has Plutonium in it, we would have to solidify that material to get into a solid matrix form that would not leach out any of this material, and then we could ship it to WIPP. But if we left it as is, we could never disposition it to WIPP until we did some treatment to disposition the liquid aspect of it.

Question: *A good example that everyone would understand would be aerosol cans?*

Answer: Aerosol cans are considered reactive by EPA and they are considered a sealed container. Right now we have to disposition those aerosol cans. In the earlier days of the TRU Program, we actually removed those cans out of some of our remediation practices. Nowadays, we actually cut those cans in half to show that it does not have pressure in it and, of course, that it is no longer sealed at that point.

Question: *Could you describe for us some of the characteristics of the historical data?*

Answer: The historical data we receive will tell us what is in the container. For example, it may be a hut that was packed in the container, from H Canyon, generated in November 2001 or 1983. That would be the type of information we would have in our data base on that particular container. So it is fairly descriptive, and it gives us the type of concentration so that we can know how to address it as we store it.

We are now moving our efforts to box waste under the Recovery Act.

In 2009, we started a plan to wrap up the drum program. At that time, we had approximately 3,600 containers of TRU waste stored in 55-gallon drums. We started shipping that waste to WIPP this year. We freed up a lot of waste stored on those concrete pads that are part of the RCRA permitting under the state of South Carolina. We are now in the process of closing out those pads because we will not be generating these huge volumes of wastes in the future. So we are closing them under RCRA. We are also in the process of certifying the equipment that we had deployed that came to SRS to help characterize and certify the large boxes—wastes that we are going to be shipping to WIPP in the near future. We are now in the process of shipping some smaller waste types which we refer to as steel box waste. That will be part of our standard waste box shipments.

Question: *How many of the 2,200 drums have you shipped?*

Answer: I believe it was 1,600. We are making some shipments this week so that gets us to 1,600. We are averaging three to five shipments per week. We have had some significant milestones this year. We have completed 18 RH shipments, and we had a major milestone earlier last month with 1,000 WIPP shipments. I think some of you may have seen that in the local press release, and it was a big deal for us. We did it safely with no contamination or worker issues. If you are familiar with the WIPP shipping program, they have shipped over 7,000 shipments across the complex and have done that safely. In fact, we have probably the best shipping fleet of anybody in the country. I would just like to say thank you for the regulators from both the State of South Carolina and EPA who have assisted us with those shipments over the year.

Mr. Crapse showed a photo of the TRU pads that were closed this year. We are in the process of finalizing the final closure report to DHEC this week. We have roughly 24 pads—both covered and uncovered. These (7–13) were not covered. You can see at one time the volume of waste and the type of waste we had on them. The concrete culverts had the drums inside them. Most of the culverts have drums which we dispositioned to WIPP. We were able to move the large boxes on to other pads that had drums on them previously. Now that is a good success story to show in a picture what we have done with the waste—we have gotten rid of it.

The large box equipment I told you about is not on the shelf. This is technology we have developed over the last couple of years, and we are still working out the bugs on a piece of equipment referred to as an x-ray unit. Each container has to be assayed before we can ship it to WIPP to confirm the radioisotope and confirm the concentration levels to make sure it meets the definition of TRU waste. It also requires x-ray. Mr. Crapse described the process for x-raying the box. A WIPP certified operator verifies the contents of the container. The assay boxes sit in there for a couple of hours and they do counts of the radioactive material coming off to determine whether or not they are above 100 nanocuries per gram and qualify as a WIPP container.

We are currently working on finishing up the drum program. We have two more months in 2009 and we should be very close on achieving the 2,200 drums shipped. Our next inventory is the standard waste box. It can be shipped in the current shipping container, which contains polyboxes which contains filters generated through the glovebox and other ventilations we use in our process facilities. We have approximately 500 of these containers in the process of being characterized, and we will be shipping those to WIPP starting in the September or October time frame.

Mr. Crapse showed photographs of TRU Pad 1 and pointed out the progress between the dates of June 18, 2009, and July 14, 2009. He described how they removed the culverts and took one to a remote area to open it. These are concrete sealed at the top with a cap and sometime the seal is stronger than the concrete. Our lab developed what they called a culvert cracker. It looks like a crown when put on top of the culvert. It basically goes in at multiple areas all at one time. We cracked it, did some sampling, and found out that it had no contamination. That means we felt that the containers were in good shape. We opened up the culvert and the drums looked good. We started removing the drums and were able to remove all 12 drums out of it and one 85 gallon overpack. The containers looked good after being buried 40 years. The container integrity was one of our key assumptions for the success of Pad 1. So the first culvert, we removed it, got the containers out and now and are considered as unvented. They are required to be vented before we can do anything with them and make sure there is no hydrogen gas buildup or other hazardous gases. We are in the process of venting them over the next month or two. Once we do that, we can start characterizing and plan on dispositioning them to WIPP within the next four to six months.

Question: *I am trying to get a sense of scale on those poly boxes that you had three in the container—how big are those. Are they the size of drum?*

Answer: They are about the size of a drum. They are not quite as tall as a drum, but they are a little bit bigger from a square standpoint. You can almost put a 55-gallon drum in the polyboxes.

Question: *Do you actually have historical data on the drums that are in these culverts?*

Answer: That was one of the success stories on us being able to go in there. We knew there was some very high Plutonium 238 waste in there, so we cannot currently proceed without some additional safety reviews. We were able to pinpoint where this waste was located on the pad. After discussions with some of my colleagues at the National TRU, some of the other sites do not have the historical information. I have to say that DuPont did a good

job on them. We were able to have data that tells us what is in each container and where it was on the pad. So this confirmed that our data is good.

Question: *Any surprises on anything that you did not expect?*

Answer: We did this first one on Friday. We had about six inches of water in the bottom of the concrete culverts which we did not expect. That may create some problems down the road—but those containers looked good and the bottoms were not rusted.

Question: *Was there any contamination in that water?*

Answer: The water was clean; it wasn't contaminated.

With our current Recovery Act funding, between now and September 2011 we are targeting to disposition approximately 4,500 cubic meters of legacy TRU waste stored in E-area that includes about 1,500 miscellaneous boxed TRU waste containers and over 1,000 TRU waste containers stored under TRU Pad 1 containing over 250,000 curies of Plutonium 238.

Also, we have hazardous waste facilities in another facility outside of the burial ground, which is where 90% of our operations are located. We are going to eliminate that facility and bring it in and utilize some of the TRU pads that we are freeing up as we disposition the waste. We will be doing some consolidation, and that will take us to a smaller footprint and more cost effective approach to managing our solid waste program post ARRA.

Mr. Crapse provided an update on CAB Recommendation 258 (ensure there was funding; provide an update on the budget for the CAB; make sure that PAD 1 was part of that disposition in schedule and scope; and also some of the key areas to succeed with the box program as a TRUPACT-III).

I didn't really talk a lot about that, but for the box waste that you saw earlier that we can start characterizing in the foreseeable future, we still need a shipping container that is currently not available. We refer to it as a TRUPACT-III. The current containers look like a butane tank and can contain up to 14 drums or two of these standard waste boxes per container. For the box waste we need something square and fairly large like a sea-land type container you see on the backs of trucks. We need to have NRC license our TRUPACTs, but we need to have them fabricated and built. We have been working this technology with NRC and with the DOE organization in Carlsbad responsible for fabricating and licensing it. We have had some setbacks in that process. Right now we are in the process of drop testing that container, which is one of the requirements under DOT for Type B containers. Their integrity must be demonstrated for fire and submergibility and also drop testing on various objects and at various heights. We have completed one round with these drop testings, but we have had some issues. We believe we have fixed them and talked to NRC, and they believe we have fixed them. But, of course, we have to prove it. So we plan to drop one again in late September or early October. If it is successful, then we will submit the package to NRC to license the TRUPACT-III. By the time we get it licensed and then build some, we probably will not be able to ship this waste until 2011. So the last year of the Recovery Act funding is when we will be shipping the box waste in these TRUPACT-III shipping containers. The CAB was concerned about that and wanted us to keep up to date with them, so we did bring the Carlsbad manager in here last year to bring you an update.

Question: *If the schedule slips, would the Recovery Act funding be at risk?*

Answer: From what I understand, yes it would be. The funding is for a limited time. The bottom line on the recommendation is that we are going to support wrapping this up in 2011. We will continue to brief you on the technical challenges, such as the TRUPACT-III, and where we are with the technical challenges of TRU Pad 1.

Information was presented on project funding and risks. Slide showed funding available before ARRA with \$73M in 2008, then going to go down to \$62M. And now with the ARRA, we basically have about \$700M fully funded TRU program. So money is not the problem now—it is time and people.

Question: *The standard waste box—is that reusable or is buried and gone forever?*

Answer: All these containers are buried at WIPP. The facility at WIPP is not set up to do a lot of repackaging and opening and potentially exposing workers to contamination. They are basically taking it off the truck and putting it in the hole. It saves in funding and operational aspects on their end.

Presentation – PUREX Waste Program Update – Mike Simmons – DOE-SR

This presentation is an abbreviated version of information that we presented before. PUREX solvent is used in the Plutonium uranium extraction process. Back in the early days, it was degraded and stored in underground storage tanks for years. Liquid mixed waste very hard to get rid of. We are on schedule within the site treatment plan (under agreement with the State of South Carolina to get rid of all hazardous waste). It was being treated at a consolidated incineration facility in a very large incinerator designed for liquid and solid waste to burn benzene from a process that never came to be. It was quite expensive. Due to the nature of the actinides in the PUREX in the solvent, it was being diluted 100:1 before it was fed to the incinerator. We were burning mostly water and diesel fuel. The cost of keeping the incinerator running was \$20M per year. So very small volumes were being treated up to the year 2000, when the decision was made to suspend operations because it was just too expensive.

PUREX was not the only thing being scheduled to go there. Solid waste was also being fed through in boxes along with the liquids. Along with Idaho, we began to look for an alternative pathway, and found one for everything but this solvent. A focus group was formed to understand and make sure the right thing was being done. Alternative analyses were performed. Using a systems engineering approach, a solidification process was identified as a treatment technology. At this particular time of the century, we only had legacy waste (stored since the 1970s). We had about 12,000 gallons of the aqueous phase generated through the flushing process in transferring this PUREX between tanks and about 25,000 of the organic phase. Shortly thereafter we got into a large D&D campaign. The F Canyon mission was deactivated, resulting in 60,000 of organic PUREX much lower in activity—purely low level radioactive waste. In summary, we completed legacy PUREX treatment which was done in ETF in 2004. In 2007, we completed F Canyon PUREX waste using a combination of the Toxic Substances Control Act (TSCA) incinerator in Oak Ridge and commercial technologies. Using the commercial facility in Oak Ridge, we completed the treatment of the organic legacy PUREX in 2009. Unfortunately, the State of Nevada threw up a flag, and we got caught in a land use issue. They had been perturbed for years over the Land Withdrawal Act and how it pertained to the NTS. They felt the WPF should be addressed somewhat differently, and put a halt on any new shipments coming to the state of Nevada. It involved interactions with the Secretary of Energy, EPA, and the Department of the Interior, but they worked out an agreement to carve out a part of the NTS that would be DOE owned. Then shipments could be started again. The treated PUREX was being stored in stainless steel boxes at SRS at DOE facilities. Shipping restarted on July 9, 2009, with 39 of 129 boxes, at a rate of two shipments of five to six boxes per shipment. Shipments should be completed sometime in September.

We are really interested in footprint reduction. All this stored material is actually in an area not contiguous to our low-level disposal facility, called N-Area. It is three major buildings and several major pads in a fenced area. As part of our footprint reduction, we are doing RCRA closures on that facility and putting all operations within our operating fenced area and actually utilize a couple of the pads at 7013 to build another smaller fit-for-purpose facility. It will not be the capacity we have now. Now everything after ARA will be consolidated in E Area. Plus, another building in B Area, where we have a hazardous waste facility, is being closed off.

Status summary:

- Sufficient funding appears to be available to complete TRU disposition by 2013
- Significant staffing increase has begun
- Detail schedules and baselines are being developed

Near term challenges:

- Developing plans and obtaining personnel to implement tasks within ARRA window
- Resolving technical challenges with TRUPACT-III license
- WIPP large box certification program

Question: *In terms of treatment of PUREX legacy solvent waste, how much of that were opportunities opened based upon technology development? You mentioned Oak Ridge twice—new processes and stuff. Were there breakthroughs in technologies?*

Answer: Technology our laboratory developed onsite was used—we blazed the trail. That was not what we called best technology. Like we said, thermal treatment is the treatment standard. Lots of testing had to be performed—vibration, temperature changes, and compression to squeeze out liquids. Stabilizing an organic is not something that everyone does. So the commercial industry took what we developed back in the 2001 timeframe. We did burn a good portion of the F Canyon PUREX because it was lower in activity, and we were able to burn it at a DOE facility at little or no cost, and at a benefit for those guys because they use it as fuel.

Question: *To treat that organic waste, did it require much of a facility modification or development to have a facility to actually deal with including it in the state you shipped it in?*

Answer: Early on the biggest challenge was finding a container to ship it in. Being a liquid, because we didn't really treat any of it on the site. It required what we were calling an Industrial Package 2 (IP-2). We had to go to South Africa to get those containers fabricated, because no one in the United States would even mess with them.

Question: *But you had to put it into a solid state or it had been in a solid state?*

Answer: We shipped it as a liquid to a commercial facility called PermaFix, to one of their small facilities called Materials Energy Corporation—Oak Ridge which happens to be on the former K-25 Site. They had the capabilities so it was just a fixed price contract. I would estimate it was probably treated at one-tenth of what one year operating the CIF would cost. It was difficult, but it was probably a deal in the long run. It took nine years to get it all out—that includes F Canyon—so I think we have a good track record now on how to manage this material.

Question: *As it is now stored, what are its characteristics?*

Answer: It is solid and in a welded stainless steel box. No free liquids. This waste, from a radiation standpoint, is very little exposure because it's mostly an alpha emitter. If you take a reading level, there is not even a radiation area outside the boxes. So it is kind of misleading anytime you deal with TRU type waste. This is bordering on being a TRU because it is based on the alpha concentration. It is called microencapsulation, so it has double treatment associated with this material.

Presentation – Draft Congratulatory Letter to DOE – Joe Ortaldo, Chair, Waste Management Committee

This letter covers three areas. It is covering disposition of the legacy PUREX waste from the F Canyon and H Canyon operations over the life of the plant. It shows what is being done to accelerate the transfer of the TRU waste from the site and trying to get it to WIPP as soon as practical. It also showed us that they are beginning to get in there to find out what is at TRU Pad 1. If that is defined, then it will then enter the existing programs. The idea is to get it shipped off the site and to WIPP. One of our major objectives is to remove stuff that doesn't belong on the site, and that it is running along very well. It is one of these programs that runs under the radar a little bit and we don't hear a lot about it because things go pretty smoothly. That was the basic reason we thought it would be good to sum it all in a letter to DOE congratulating them for work well done over the past years and having an excellent program to move forward in the immediate future. The floor was opened for questions, and there were none.

Comment from Manuel: *A Summary and Path Forward was presented on the last slide of the briefing. I would like for the committee chairs and members to think about the fact that in the next month we have to come up with the top three that we are going to take to the Site Specific Advisory Board Chair's Meeting. It occurs to me that one of those top three items as a CAB concern might be developing plans and obtaining personnel to implement tasks within the ARRA window. That is something I would like for you to think about, and we will put out a data call to the committee chairs in the next few weeks.*

**Strategic and Legacy Management (S&LM) Committee, Judith Greene-McLeod – Co-Chair
Madeleine Marshall – Co-Chair**

Judith Greene-McLeod recognized the committee members: Madeleine Marshall, Co-Chair, Jerry Wadley, Beverly Skinner, Lee Harley Fitts, and Dr. K. Jayaraman.

She summarized the specific areas of interest for the committee: the development and deployment of technology, the SRS budget decision making process, our future land use, legacy management long term stewardship of the site, historic preservation, and relevant national environmental policy.

Topics discussed at the committee meeting on June 16: the SRS drought contingency planning, an informative presentation by Ben Gould, a budget update, and new SRS performance measures from Lance Schlag and from Doug Hintze.

The drought contingency plan was presented by Mr. Gould. The CAB members were significantly interested in this subject because of the SR and a good article in the Aiken Standard about the number of different states that draw water out of the Savannah River, including Georgia for use in the Atlanta Metro Area and also North Carolina. Some of the things the state of North Carolina wants to do with water issues might also affect the levels of the Savannah River. The CAB was interested in finding who approves how these water levels are determined, the water levels at L Lake and Par Pond, the quality of water being returned to the Savannah River, and whether steam is being recovered to reduce water loss. We intend to invite Col. Ed Kertis, head of the Savannah District Corp of Engineers to provide additional information on how the water is divided between states, how it is used, how it is allocated to places such as the Savannah River, and the priorities of the distribution.

Lance Schlag presented a budget briefing. The whole budget process is a little bit confusing because the budget is planned simultaneously for different criteria. We asked for clarification for the following:

- The difference between site budget requests
- The President's budget request
- If there is an embargo after a while for each year
- They are working on several budgets at time
- We are in one budget year and we are planning two more

There is also the complication of Recovery Act funding and the Integrated Priority List. We also had quite a discussion on pension plans and their effect on the budget. These affect the budget because so many pension plans have failed and federal regulations have changed about how much money and what percentage has to be set aside within a given budget to fund pension plans. This has affected the DOE site budget.

Doug Hintze provided a briefing on performance measures being tracked at SRS. He discussed the Strategic Plan, a document that we provided input into, which will be considered a living document. They identified 84 action items from the Strategic Plan that will be tracked throughout the coming years. Mr. Hintze accepted the action item to provide to the CAB by October 1 the strategic performance measures identified, to continue to brief our committee and the whole CAB as they change because it is a living document and priorities will change as funding levels change.

Several recommendations were closed at the committee meeting (*Recommendations 238, 240, 252, 253, and 254*). There were two responses that will be discussed whether to change their status from pending to open (*Recommendations 261 and 262*).

Jerry Wadley: Site Performance Metrics Recommendation

In 1997, the DOE EM established a set of 16 corporate measurements to be used by all EM sites. These measurements are an indicator of how EM is accomplishing its clean up mission. In addition to the corporate measures, briefly referred to as The Goal Metrics, performances were also tracked through establishment of a project baseline. These metrics measure operational performance against critical milestones for SRS and DOE management. Reporting performance against these metrics can provide the public with a sense of clean up progress and give citizens an opportunity to ask informed questions and offer better advice to improve the cleanup at SRS.

Madeleine: The motivation for this recommendation came from the presentation from Doug Hintze at our last full CAB meeting in May. Doug presented the corporate performance measures and the Goal Chart. Madeleine went

into detail to explain how the performance measures were established by EM Headquarters to uniformly track performance for all sites so the progress could be reported to Congress how the cleanup is progressing. Over the years the CAB has always had similar questions: what do these numbers really mean because we see life cycle numbers, quarterly numbers, annual numbers, and progress to date numbers. Often the questions pertain to the actual set of performance measures that have been identified—and there are 16 of them—their meaning, and how to relate these numbers to the kind of information given in the presentations.

We drafted this recommendation in June to present to DOE and discuss with them that we want a different set of performance measures, which would be more meaningful to us as representatives of the public communicating as to what is really happening in terms of progress. Doug Hintze's presentation indicated that DOE is also considering doing something about this. We have a new Strategic Plan with objectives and goals that have been identified and tracking progress against those goals. We are going to take each of those areas and break it down and assign measures to those areas (84 parameters identified). He indicated it would take approximately two years and he would report back to CAB on their progress.

She gave a history of how they came up with the recommendation and pointed out several items in the Comments, especially the last paragraph that summarized the recommendation.

Question: *On page 2, paragraph 2, "PBS 13... is "finished with its legacy solid waste program...". I am not sure I understand what that means.*

Answer: Question was referred to Bill for an answer. I think that is a mistake. What it is meant to say is there is more legacy Transuranic waste which was all about moving that out as rapidly as possible, so it is going to shift from maximizing the disposition of legacy low level solid waste to minimizing newly generated low level waste. It follows the logic that Jay was talking about earlier.

Question: *Can "finished" be changed to "finishing" or "nearly completed?"*

Answer: I think we can change it to "is nearing completion of its legacy solid waste program."

Question: *Do we have a feel for how long it will take for DOE to develop the new metrics? In other words, rather than focusing on developing revised metrics if they are going to get those out quickly, you might want to have them focus on the new metrics rather than revising the current ones.*

Answer: What we were told at the committee meeting was that it would be about a two year process to develop the complete set of metrics that they are going to tie to the strategic plan. What we thought we could do is that we could wait for those two years and hear as the metrics are being developed what that new set is going to be. Meanwhile, we would be getting information on this old set and what we are trying to do is get beyond the questions that always come up when this set of goal metrics comes up. So we decided to go forward with the recommendation, which is pretty much the recommendation we have. We have acknowledged this process that we were told about at the June committee meeting. We said let's go forward with these and if the way that DOE would like to respond to us is by saying that we have a big project in the works to develop a full set of metrics, but let us going ahead and do these first. So, if this is what DOE would be willing to do first and tell us about those, and then start reporting against them, we would be happy.

Question: *My concern is that any modified metrics for the gold metrics is going to have to go through the same management approval process. In other words, I doubt you are going to get revised metrics any quicker.*

Question: *I think that Doug understands that we are not asking for gold metrics, we are asking for CAB metrics, and that still has to be approved by Headquarters.*

Question: *SRS CAB metrics?*

Answer: Exactly. This is very specific, and perhaps we need a sentence in here to make sure that this is clear.

Question: *I imagine they could be the preliminary, unapproved SRS metrics?*

Comment by Jenny: So we will make that change, “preliminary, unapproved CAB SRS metrics.

Question: *On the top of page 3, where we ask that SRS publish the number of curies disposed of. Can we reword to have that information related to relevance; i.e., what percent of total curies on site of program goal would that be? If we ask for the number of curies disposed, that still does not tell us what percent, for instance, of the total has been disposed. We need to relate it to something and put it into context.*

Comment by Jenny: Bill, did you understand that change? Bill responded yes he got it.

Comment by Marilyn: I think that the important work that the CAB does, much of it is in these recommendations. If the public wants to come our web page and have an understanding of what the CAB does, I think the recommendations are very important part of that. I think we need to make a better conscious effort to eliminate acronyms. We have so many acronyms in this recommendation, that your eyes glaze over. Do we need to have all the acronyms? I understand that that it is going to make a two-page recommendation three pages maybe. But for ease of understanding and reading, I really think we need to make a conscious effort to get rid of all the acronyms. Spell the stuff out over and over if necessary because someone coming to the site to understand this at all, their eyes are going to glaze over and they are not going to easily understand the importance of what is being said. So, I would like to urge the writers of recommendations to make them more readable by not using as many acronyms. This is a great recommendation, an important recommendation, but lets it more readable to people beyond this small group of people here that are familiar with them.

Comment by Jenny: We will take that into consideration and that is a very important point.

Question: *Do we want to do that specifically for this recommendation or do we want to take that as an advisory for all future recommendations.*

Comment by Jenny: I think a scrub can be done to improve to make these clearer, but I don’t think we need to make a determination about that right now.

Question: *Just on the paragraph above the recommendation where it is written as “enhanced set of goal metrics.” And I think we discussed that it is not really what we want, we actually want a revised set. And that needs to agree to whatever we changed the title to.*

Answer: We have the change to be revised to “set of preliminary SRS CAB metrics.”

Bill read *Recommendation #265, Site Performance Metrics.*

Question: *On Part B, it reads “invert the measure for PBS 13”, but you said “invert the metric.” Should it be measure or metric?*

Answer: It should say metric rather than measure.

Question: *On B, do you want to replace the metric. I don’t understand what “invert” means.*

Answer: I would agree with you, Art, that “replace” does the job, and “invert” is confusing.

Comment by Bill: I think you are trying to do two things with B. One is you are trying to raise a new metric that is more functionally focused on newly generated waste and that makes sense to add a metric. Not only are you trying to measure with B, but you are trying to shift the operational goal is the implication. You are trying to do two things. My suggestion is you leave it focused on metrics if, in fact, you want a shift in goal or focus, then that probably should be a separate recommendation.

Nuclear Materials Committee, Donald Bridges – Chair
Stan Howard – Vice Chair and Ed Burke – Vice Chair

Don Bridges, Committee Chair, recognized and introduced the members of the committee: Stan Howard—Vice Chair, Ed Burke—Vice Chair, Marolyn Parson, Rose Hayes, Joe Ortaldo, Judith Green-McLeod, and John Snedeker.

The Nuclear Materials Committee has two open recommendations with one pending recommendation which is a joint recommendation with the waste committee. *Recommendation 250* was issued in 2007, the recommendation for that will be Ed Burke. *Recommendation 259* was issued in November 2008 and Stan Howard is the recommendation manager. *Recommendation 263* was issued in May, and we recently received a response, so it is still pending. If anyone has comments, please let the committee know.

We look at issues related to SRS nuclear materials that have been stored on site including planned material consolidation from off site and disposition materials involving SRS processing. The largest concern at this point involves plans for dealing with the disposition of Plutonium, which is the subject of *Recommendation 263*. DOE is involved in an ongoing study on the issue of Plutonium disposition. The plan is to complete it in late summer 2009, and by the time they get all the management approvals, it will extend well into the latter part of the year. They will brief us as soon as it is released.

NNSA announced on July 14 that one aspect of plutonium disposition is being addressed. TVA has signed a Letter of Intent expressing interest in the MOX fuel to be processed in the facility. This was a concern raised by many when Duke Power seemed not to be so interested.

The Nuclear Materials Committee met in Aiken on July 14, 2009. We were given a very informative briefing by Carl Lannigan and Dawn Gillis on the Enriched Uranium Disposition Program and the Spent Nuclear Fuel Program. Both programs are proceeding very nicely. Processing accomplishments include completion of the Livermore and Los Alamos HEU oxide campaigns, the SRS Neptunium campaign which was shipped to Idaho and Oak Ridge, and the Nevada Test Site Super KUKLA HEU campaign. The entire HEU program is projected to extend through 2019.

Mr. Bridges introduced Allen Gunter who will make a presentation update on plutonium storage, consolidation and disposition.

Presentation – Plutonium Consolidation Program Update – Allen Gunter, DOE-SR

This program involves 12.8 metric tons of surplus, non-pit Plutonium-239 in solid form that is stored in DOE approved containers. SRS is the only site within the DOE complex that meets the 2005 design basis threat guidance which is the security requirement. There is continuous surveillance to ensure safe storage. Mr. Gunter showed a picture of the container. It is a container that the material has been stabilized; it is a welded container designed to ASME Section 7 requirements to be a pressure vessel. It is designed to withstand 699 pounds per square inch. The 3013 containers go inside of a 9975 shipping container. Mr. Gunter showed a cross sectional view of the 9975 shipping container, which is how the material is stored at the facility.

Hanford has some unirradiated Fast Flux Test Facility material (FFTF). This material was originally stored at Hanford for possible future use. Since the decision was made not to use this unirradiated material, the Plutonium will be shipped to Savannah River for storage until we dispose it. Currently they are stored in a Hanford unirradiated materials package—a Type B Package. These are the same type of containers that MOX will use to ship its green fuel out when it comes online. These containers are not licensed by NRC, but have been certified by DOE. The first shipment has been received, and they are in storage.

Plutonium consolidation is 96% complete. Shipping sites completed in 3013 containers are:

- Savannah River—910 containers
- Rocky Flats—889 containers
- Hanford—2257 containers

Shipping in process is:

- Hanford Unirradiated (HU) Fast Flux Test Facility Fuel—13 HU Fuel Packages (Estimated Completion Date 2009)
- Lawrence Livermore National Laboratory—115 containers (Estimated Completion Date 2011)

- Los Alamos National Laboratory—96 containers (Estimated Completion Date 2011)

Question: *This report in HQ to decide disposition pathways for five metric tons and maybe there is no definitive decision of some of it were to go to WIPP. How would that material be down-blended to meet the WIPP acceptance criteria? What would be done if “X” number tons of that were to go to WIPP? How is that mixed in to the drums?*

Answer: The concept right now is that we do it just like Rocky Flats did. You down blend it with a mixture of materials that makes it very difficult to recover. Rocky Flats used the term “Stardust.” It was a classified material, but they blended it with the plutonium oxides. It makes it difficult to recover in a nitric acid type solution. You get it down below the 10% requirements for WIPP, you get a safeguards determination, and you basically put it into a pipe overpack.

Answer: *Do you think you have enough from that experience where you could repeat it?*

Answer: Rocky Flats did it, Hanford has done and one other site, and Los Alamos has a process going on. So the complex has been doing some. It may not have been on quite as rich a material as we have, but the process of how you do it is out there, as far as blending it, putting it in a pipe overpack, and meeting the WIPP waste acceptance requirements.

Question: *I noticed a document/little report that Savannah River prepared that a couple of the 9975 shipping containers that were received at the site, had some beetles in the cans and Savannah River is maybe doing some examination of this over the past year and they were actually eating through the Celotex protective coating that you showed, and they are eating some of the glue. What is status of these beetles attacking the 9975 containers.*

Answer: These are called Drug Store beetles.

Question: *Do they eat the Stardust?*

Answer: No they do not eat the Stardust. They do eat the Celotex. We have found them in two containers at the site. They were believed to have been in the Celotex when they fabricated the container. There was some Celotex, just for those two containers, that had been sitting around for an extended period of time in a warehouse. The belief is, and we have seen no other beetles except in those containers, and we have examined other additional containers. It was believed they got into the Celotex prior to putting it into the containers, and when we opened it up to do the surveillance on it, they saw literally some small, little bugs on the top of one of the containers inside. We got SRNL involved to figure out what was going on. Literally the common name for these is Drug Store Beetles. They are well known as early on as in the 1930s or 1940s to be in the cardboard packaging drug stores, where they stored things for extended periods of time. We have looked at it and determined that it is not an issue. Again, these were two specific containers. We were able to trace the Celotex and where it came through the manufacturing and believed that it was isolated strictly to those two containers. The material has been moved out of those containers. Those containers are now at SRNL and they are studying them.

Question: *Your new preconceptual design for a new vault in K Area, is that simply relevant to more cost effective designs and how will it significantly differ from the current storage design for the vitrified material?*

Answer: It is not just for the more cost effective; this is an ability for Los Alamos to continue to make feed material for MOX. Los Alamos has determined they do not have adequate storage. We have space in K Area Complex that we can modify to make it into a vault-type room or vault to be able to store material. It was just the thought that it is more cost effective and more prudent if you are going to put additional storage, put it at the sight you are disposing of it at versus building at the other site. Plus, since we already have the security, we already have all the features as far as seismic and everything else, it is more prudent to put it at Savannah River.

Question: *When you are looking at alternatives---not to get into specifics---do you look at the schedule impact of the alternatives or are you just looking at the technical merits of alternatives? What is the scope of your endeavor, typically?*

Answer: All of it. Some of the criteria that we are using when we do the comparisons are environmental health and safety, stakeholder, security, cost, lifetime or life cycle cost, near term cost the next five years, and schedule. All of those factor into the decision, and it is a computer program that does a pair-wise comparison for each alternative.

Facilities Disposition & Site Remediation Committee, Kuppuswamy Jayaraman - Chair
Mercredi Giles – Vice Chair

Kuppuswamy Jayaraman stated the function of the committee which is to address the remediation of contaminated areas at SRS and address the various types of groundwater and surface waste contamination. He continued by saying that the committee deals with issues related to the Federal Facility Agreement (FFA), with risk management/risk assessment, regulatory processes, and other issues that pertain to environmental restoration. The committee also follows the deactivation and decommissioning (D&D) actions taken to reduce risks and costs following the shutdown of industrial, radioactive, or nuclear facilities.

Kuppuswamy Jayaraman introduced the members of the committee: Mercredi Giles–Vice Chair, Madeleine Marshall, Emile Bernard, Ric Castagna, and Elizabeth Skyye Vereen.

On June 23 we held a committee meeting in Aiken with very interesting and educational presentations by Emile on Active Processes, an ME&I Project Update by Rita Stubblefield, C, K, L and R Reactors Complex Early Action Proposed Plan by Ray Hannah, and Area Closure Projects–New Technologies on the Horizon by Chris Bergren.

Based on that June committee which dealt with C, K, L, and R Reactors, we had prepared quite a few comments. It was very interesting to note that with regard to these four reactors, three alternatives were presented: one is no action, one is in situ decommissioning with land use control, and the third one was complete removal. Out of these alternatives, the preferred proposed action was in situ decommissioning with land use control. There was a very strong basis for the proposed action, based on the support of the same analysis conducted on P Reactor Complex. The committee decided to address a letter to Paul Sauerborn to ask for additional comments on this particular issue. We feel that some much more convincing details should be presented for the public to understand about these alternatives. Secondly, a wide range of cost was mentioned and we thought that we should have a long-term time plan. We have requested additional details from Paul to help us understand better. After review of the comments from Paul and analysis of the information, we may be able to present a recommendation for our September meeting.

The next committee meeting will be held on August 18th in Aiken at the Municipal Conference Center.

Question: *Do we have any other meetings scheduled? I caught the 4th and the 18th.*

Answer: There is a workshop tomorrow night.

Question: *Dr. J, do you want to talk about the workshop tomorrow night?*

Answer: Based on the same presentations that we had last time, a workshop is scheduled to be held tomorrow evening from 6:00 p.m. to 8:00 p.m. right here in this building. If you have any special questions, you may contact Sheron or Paul for any details. It should be very interesting as you all remember, we had a similar workshops for P Reactor Complex, and it was discussed well in detail and received a very good public response and appreciation. So now we have got not just one reactor, we have C, K, L, and R reactors. It should very educational.

Administrative Committee, Sarah Watson – Chair

Sarah Watson, Committee Chair, introduced the members of the Administrative Committee: Kathe Golden–Vice Chair, Denise Long–Vice Chair, Alex Williams, Lee Harley-Fitts, Cleveland Latimore, and Joe Ortaldo.

The Administrative Committee would like to inform you on what to anticipate tomorrow. The new member campaign has resulted in 35 applications being received for 11 open positions on the Board. The committee

members will meet on August 19 to review the applications and prepare the ballot for the CAB. The full board will review the applications and vote for the candidates at the next board meeting in September.

Ms. Watson opened the floor for any applicants that would like to introduce themselves.

George Grady introduced himself. He added information about his background that was not included on his resume. He had been a negotiator on behalf of our government and felt that this experience would be a good addition for a position on the Board.

Mr. Grady was invited to speak at the meeting tomorrow as well as anyone else that is present tomorrow.

Ms. Watson reported that the Internet Committee meetings are in progress and there have been four successfully completed live, online e-meetings during the months of June and July. All committee meetings are e-meetings and the next committee meetings scheduled are on August 4 and August 18. E-mail notifications to join the online meetings will be sent out and those interested can go to the CAB web site (srsmeetings.webx.com). We would like to challenge you to sign up and check out our e-meetings.

The newsletter is scheduled to be released in November. Ms. Watson encouraged submission of articles and information on suggested topics to support the staff regarding the CAB.

Comment from Manuel: *Traditionally, one of the good articles has been written by somebody who went on a tour. I like those tours and I would encourage the committee chairs to schedule a tour because I like tours.*

Ms. Watson requested that everyone note their calendars for the upcoming retreat scheduled for October 22– 23, 2009, at Wild Dunes, The Isle of Palms.

Question: *Is that retreat two full eight-hour days?*

Answer: It is a full day on Thursday and a half day on Friday. They will arrive the Wednesday night before because the meetings will start early on Thursday morning.

Public Comments

Jenny Freeman stated that she had a list of people who would like to address the CAB. She recognized Dr. Paz and asked if he was present. He was not present. She also recognized George Grady, who spoke earlier.

There were no public comments.

~End of Public Comments ~

Ms. Freeman solicited comments from anyone at this point.

Comment from Alex Williams: *I would like to recommend that the committees, as they begin their report, to visualize their mission on the screen. I hear them reading them, but they don't sink in. But I think if I saw them and heard them, it would be more effective.*

Response from Jenny Freeman: *So you would like to see the mission of the committees on the screen so you can read it as their presentation is made? Good idea.*

Meeting adjourned at 4:15 p.m.

**Savannah River Site Citizens Advisory Board (CAB)
Full Board Meeting Minutes
July 28, 2009
North Augusta Municipal Center
North Augusta, SC**

Tuesday, July 28, 2009, Attendance

SRS CAB Members

Emile Bernard
Manuel Bettencourt
Donald Bridges
Ed Burke
Ric Castagna
Arthur Domby
Mercredi Giles
Kathe Golden
Judith Greene-McLeod
Lee Harley-Fitts
Rose Hayes
Stanley Howard
Kuppuswamy Jayaraman
Ranowul Jzar
Cleveland Latimore
Madeleine Marshall
Joseph Ortaldo
Marolyn Parson
Elizabeth Skyve Vereen
Beverly Skinner
John Snedeker
Gerald Wadley
Sarah Watson
Alex Williams

Agency Liaisons

Al Frazier, GADNR
Terrel Spears, DOE-SR
Kim Newell, SCDHEC
Shelly Wilson, SCDHEC
Rob Pope, EPA

DOE/Other

Jeffrey Allison, DOE
Kirsten Boessneck, DOE
Becky Craft, DOE
Tremaine Garvin, DOE
Karen Guevara, DOE
David Hoel, DOE-SR
Patrick McGuire, DOE
Rich Olsen, DOE
Lance Schlag, DOE
Sheron Smith, DOE
Jean Stump, DOE
Wade Whitaker, DOE
Latrincy Whitehurst, DOE

Stakeholders

Tom Clements, Friends of the Earth
Carol Connell, DHHS/ATSDR
Vanessa Golden, Forest Service
Liz Gordon
Karen Patterson
Chris Noah
Jacob Paz
Murray Riley
Walt Joseph, SRS Heritage Found.

Regulators

Heather Cathcart, SCDHEC
Van Keisler, SCDHEC
Angela Lindell, SCDHEC
Greg O'Quinn, SCDHEC

Contractors

Ginger Dichert, SRR
Jenny Freeman, V3
Doug Gladden, SRR
Howard Gnann, MAS
Sonny Goldston, SRNS
Lyddie Hansen, SRNS
Jeannette Hyatt, SRNS
Larry Ling, SRNS
Ken McLeod, SREL
Rick McLeod, SRSCRO
Mindy Mets, V3
Tom Moorer
LaMesha Pressley, SRR
Paul Sauerborn, SRNS
Mark Schmitz, URS
Kent Sullivan, Longenecker
Steve Thomas, SRR
Charles Utley, BREDL
Elmer Wilhite, SRNL
Debbie Wisham, V3
Mtesa C. Wright, SRNS

Alex Williams led the Pledge of Allegiance and recommended that in the future the National Anthem be sung after citing the Pledge of Allegiance. Terrel Spears, DOE-SR, served as the Deputy Designated Federal Official (DDFO) and Jenny Freeman served as Meeting Facilitator. Ms. Freeman covered the ground rules for the meeting and reviewed the agenda. The meeting was open to the public and posted in the *Federal Register* in accordance with the Federal Advisory Committee Act.

CAB Member Denise Long was unable to attend the meeting.

Approval of the Minutes

Meeting Chairperson Manuel Bettencourt opened the floor for comments and approval of the May 2009 full board meeting minutes. The CAB approved the May 2009 full board meeting minutes.

Department of Energy (DOE) Update – Mr. Jeff Allison, DOE-SR Site Manager

Mr. Allison recognized Chuck Munns, President of Savannah River Nuclear Solutions (SRNS); Jim French, President of the new liquid waste contractor, Savannah River Remediation (SRR); and Ben Rusche, Chair of the South Carolina Governor's Nuclear Advisory Council.

Mr. Allison noted that it was very important that the Deputy DDFO participate in CAB meetings, and the position may be rotated among the staff. Karen Guevara will be rotating on as the Co-DDFO replacing Pat McGuire. He expressed appreciation to Pat McGuire for doing a great job. He outlined Karen Guevara's expertise and strong points. Mr. Allison recognized and thanked the DOE Interns for their participation.

Mr. Allison highlighted the success of the five Recovery Act job fairs hosted in the local communities. Over 13,500 people attended those job fairs and were provided opportunities to talk with vendors and small businesses and submit resumes and applications for existing job openings.

Question: Did you find that people came from great distances to attend the job fair?

Answer: Most of the people were from the area where the job fair was held in the South Carolina/Georgia area. Some came to several job fairs, but not from other states.

Savannah River Nuclear Solutions (SRNS) – Mr. Chuck Munns, SRNS

Mr. Munns, President of SRNS, reported that work at the laboratory continues to progress this year with higher numbers than last year and there were also many opportunities for the future. Chemical separation continues right on track and, in most cases, they are ahead of schedule. Tritium has met every milestone for 50 years and that progress continues.

He stated that the conduct of operations is priority first thing in the morning and the last thing at night. Relative to the conduct of business, he reported that six months ago the goal was to take the Site and move to more modern processes around business. He said they are now toward the end of the completion of that transformation that will put them in place in September to launch a continuous improvement from a more project based structure. Mr. Munns reported that their biggest project is the Recovery Act.

Having been active in the community, the current focus for investment is education and quality of life. Jobs have come from the top four counties in South Carolina (Aiken, Barnwell, Lexington, and Orangeburg) and from Georgia (Columbia and Richmond). He reported having about 800 new employees so far with requisitions for 500 more in the system. The plan is to continue hiring through the summer and into the early fall as they move into phase two of the work of the Recovery Act.

Question: What is the most difficult task or area that required most attention your first year?

Answer: I can give you two—the conduct of operations and the Recovery Act. First, in the conduct of operations we knew we had to start on day one, join in partnership with our employees, and fight complacency. The employees have been on site for an average of 25 years, and they've done great work over that period of time. But that experience and that time can lead to complacency. It is insidious, and we fight that every day. I think we have been very successful at it and that is where we put our first attention. I would have to say business transformation because that is the next thing we jumped into and it is very important. But the Recovery Act came along at about the same time and the challenge of spending \$1.6B, hiring 3,000 people, and doing it safely so they do not contaminate the culture of safety on the Site was a big challenge. So those would be the top two.

Question: Do you have any plans to recruit in other counties in South Carolina, namely Beaufort County?

Answer: We want to give an opportunity to everyone. We do not have plans for job fairs. The next phase of this is what we are calling The Road to Recovery. It will be a type of mobile van and we haven't staked out the counties yet, but we are going to where people need access and help writing resumes, so we will help them write the resume

and give them information about the Recovery Act. We will get those resumes to the employment agencies, and we will also get those resumes to monster.com, the State, etc.

Question: *What about newspaper ads—would you place those in the Beaufort papers?*

Answer: We don't have plans for that, but we certainly want to outreach. Let me take that and look to see what is possible.

Question: *Are there any skill sets that you are having difficulty hiring?*

Answer: Amazingly, no. I would have thought nuclear safety folks and engineers, but with 13,000 resumes there is some of everybody in that group. We have who we need so far. We are doing this in three phases. The first phase has been predominantly technical and those with experience so we can do the planning and get set up properly. So that in that group of 800, there are 58 retirees from the Site that are coming back. They have been retired quite a long time and giving us experience. We are now moving into the next phase where we start the work. It will be a different, probably less skilled, personnel and there are lots of those out there in that 13,000. But we have hired nurses, engineers, projects management people, and procurement people, so we have hired a little bit of everybody.

Question: *Approximately when do you think you will have the 3,000 positions filled?*

Answer: It is 2,000 to 3,000 and by middle of the fall we should be at the peak. By the end of this summer, we expect to have \$250M back into the community in small contracts for work, and we expect to have about 1,500 of the people hired.

Question: *Do these people require security clearances?*

Answer: Some do and some do not. They do not all require clearances, and we have worked hard to actually change some of our process and structures to include moving fence lines inside the site where we need to.

Question: *Did I hear that you say you had put \$250M in small business opportunities?*

Answer: Yes, \$250M by the end of the summer. We have more than \$90M in contracts today and of that \$50M has been awarded to 48 small local businesses. I sense that we are making an impact and it is good for the region and the state.

Question: *Will there be extensive training of some of the personnel?*

Answer: Yes, there will be training for everybody. We will start with safety training because most of the people do not understand the safety culture that we have on the Site and the safety required to deal with mixing materials. So there will be a set of training and then what we call a "booster shot" shortly after that to make sure that it took. For the people that will be doing the more difficult work, there will be a long series of training for that to train them to work in air vent hoods and to train to work with the radiological controls that is required, etc. A lot of training!

Question: *Will any of that training be tied into say the Aiken Technical College or the University?*

Answer: Yes, and we hope to touch several of the technical schools and universities. The one we have touched first is Aiken Tech. We have worked on radiological controls class with them. Susan actually started that before the Recovery Act monies came along—Recovery Act monies will help facilitate that. We are also using our people. One place she is having trouble is hiring a director for this course because they are so much in demand in other places and so we are trying to facilitate with maybe a loaned executive from us to do that.

Agency Updates

Department of Energy

Terry Spears continued with the DOE agency updates by talking about a safety topic, “Hot Temperatures and Hazardous Storms.” A handout was provided for the attendees (“Take 5 for Safety”). He encouraged everyone to read through the safety material because it contained information that may be useful.

Mr. Spears reported that Congress is continuing to work on the FY2010 Federal budget bills. The House and Senate Appropriation Committees have completed their FY2010 marks and there were no significant changes with respect to the EM Program activities from the President’s budget.

Mr. Spears reported that DOE issued its SRS Strategic Plan on May 30. The Strategic Plan ties the SRS mission and vision to the overarching strategic themes of the Department, including energy security, nuclear security, scientific discovery and innovation, environmental responsibility, and management excellence. The Savannah River Site plays a role in each and every one of those themes and this plan describes what that roll is and it is implemented. It includes 83 specific strategies. The draft recommendation discussed yesterday will help when considering the performance metrics that are applied to those 83 strategies.

Mr. Spears said the Defense Waste Processing Facility (DWPF) has produced over 2,750 High Level Waste canisters (almost 160 of those during FY2009). He said over 19.1M curies are in glass in a safe immobilized form.

Mr. Spears stated that the Saltstone Facility continues to safely treat and permanently disposition treated low-activity salt waste. This supports DOE’s ultimate priority to empty our liquid waste tanks and to reduce risk at the site. Savannah River is the only DOE complex site that is processing and dispositioning salt waste and likely will be for quite some time. In July, the Saltstone Facility met a milestone by processing over one million gallons of liquid waste this year.

Mr. Spears reported that the Integrated Salt Disposition Process (ISDP) which includes the Actinide Removal Process (ARP) and the Modular Caustic Side Solvent Extraction Unit (MCU) continues to operate well and has processed a total of 480,000 gallons of waste from Tank 49 to this point in time. The cesium and long-lived radionuclides from that material are put into DWPF canisters where they are safely immobilized and out of harm’s way. The facility is on track to set a new processing record of 135,000 gallons this month. The metrics are being monitored and they continue to improve over time.

Mr. Spears noted that the transition has been completed to Savannah River Remediation, LLC. There is excitement for the prospect under that contract for gaining more efficiency and acceleration of waste removal, tank cleaning, and closure activities.

Mr. Spears reported that SRNS continues on an accelerated pace to treat and disposition low level and mixed and transuranic (TRU) waste. In June, SRS celebrated the completion of the 1,000th shipment to the Waste Isolation Pilot Plant (WIPP) of TRU waste. Approximately 28,400 drums of TRU waste have been shipped to WIPP. Also in June, retrieval was initiated for plutonium (PU) 238 contaminated wastes from Pad 1, and that work continues. Shipment has been initiated for PUREX waste and is on track to complete that work by late September.

Mr. Spears also reported that construction of the Salt Waste Processing Facility (SWPF) by the Parsons Infrastructure and Technology Group is continuing. Drain pipe installation is 98% complete at this point, basemat concrete placement is 70%, and overall the construction completion is estimated to be at 10%. Work is continuing well on that facility. The forecast for hot operations is mid-2013.

Mr. Spears said in the area of nuclear material stabilization SRS continues to receive excess HEU from various DOE sites and that eliminates their need for safeguards and security upgrades which can be very costly to taxpayers. It also avoids building new storage facilities at those sites. He reported that, at present, they are on schedule to complete HEU receipts by September 2010. In recent days, the H-Canyon completed dissolution of 32 containers of uranium materials from Lawrence Livermore and it started the dissolution of the HEU-Molybdenum. That constitutes about one-third of that material source. During the last quarter, SSRS received and unloaded four casks

of Foreign Research Reactor fuel from Australia, and two casks of Domestic Research Reactor fuel from Oak Ridge and Missouri. That fuel is being safely stored in the L-Area storage basins.

In reference to Facility Disposition and Area Completion, Mr. Spears reported the SRS has now completed cleanup of 368 of its 515 waste units. Footprint and risk reduction activities funded by the Recovery Act are ramping up at SRS so you will see those metrics continue to climb.

Mr. Spears reported one noteworthy technology achievement under the Recovery Act was the deployment and first use of an in situ innovative thermal treatment system in D Area for removing tritium from excavated concrete and the underlying soil, thus precluding expensive offsite disposal. Now that has been demonstrated, additional thermal treatment systems will be constructed and will continue to be used to expedite D Area cleanup and completion.

He also reported that a workshop on the Early Action Proposed Plan for C, L, K, and R Reactors will be held this evening on the first floor of this building.

Mr. Spears reported that in the Infrastructure arena, DOE-SR signed a contract on May 15, 2009, with Ameresco Federal Solutions for the design, construction, and operation of the new cogeneration powerhouse in D Area and two smaller steam boilers in K and L Areas. The new biomass-fueled powerhouse will replace the 50 year old coal fired powerhouse and will be a major source of renewable energy for the Department. Construction is expected to begin in early September 2009.

In the area of Environmental Quality, Mr. Spears reported that the U.S. Environmental Protection Agency (EPA) is in the process of reassess compliance with the region of Clean Air Act requirements for ozone and particulates, basically smog, with final attainment designations for the area due in March 2010. While we believe the site maintains strict controls over our missions, we work hard to be good corporate citizens, so we are continuing to work with the State regulatory agency, the U.S. Forest Service, Aiken-Augusta Air Quality Alliance, and the Georgia Clean Air Campaign to do our part to even further reduce emissions and to improve our air quality, which will contribute to the community's improvement of air quality as well and hopefully avoid potential nonattainment designation for the region by the EPA when it renders its judgment.

He reported that SRS recently completed development of a strategy for consolidated management of all site industrial wastewater and storm water outfalls, to improve management efficiency, and to position the site to comply with anticipated new State permit requirements. This work is ongoing.

He reported a scoping meeting will be held on July 30, 2009, from 5:30 pm to 9:30 pm, at the North Augusta Municipal Center, on the Storage and Management of Elemental Mercury Environmental Impact Statement which is currently working its way through DOE. He encouraged everyone to participate. SRS is being evaluated as one of seven potential candidate sites for storage of that elemental mercury.

SRS anticipates a workshop will be held on August 18, 2009, on DOE's Energy Parks Initiative. Formal announcement has not been released. Since the CAB and the public have shown interest in this topic, it would be a worthwhile event to attend. This will be sponsored by DOE-HQ and it will include representation from SRS and there will be time for questions and discussions.

Mr. Spears reported on one topic relative to the CAB. Recently a new process was implemented for electronic meetings, a state-of-the-art approach to try to be more transparent and to expand reach into the public arena. In particular, it allows the public to attend CAB meetings without having to come to the meetings. This Board is the only EM SSAB across the country to offer electronic meetings. They are a great tool, and hopefully are reaching a broader public audience. It gives the CAB members a way to stay in touch since you can't always attend every meeting or every committee meeting but you have the opportunity to dial in from your home on the Internet. He encouraged everyone to use that tool. He pointed out the handouts on the tables for additional information and instructions on how to participate.

Question: *What is the background on the elemental mercury meeting?*

Response: There is an environmental impact statement that is working through the Department. The Department is going to be storing elemental mercury. I do not have all the details on that, so I will defer questions about that to Karen Guevara.

Response from Karen Guevara, DOE: There is a recent ban on the export of elemental mercury, and this is the DOE tasking assigned by Congress for us as an agency to look at where to safely store this. As Terry indicated, there are a total of seven sites, interestingly not all of which are DOE facilities. There are a couple of DOD facilities and one commercial facility that are thrown into this. But it is a result of the ban. I have the Notice of Intent on the preparation of the EIS, so anyone interested can stop and chat with me.

Comment/Question from Manuel: Congress passed this law and we need to understand that it has nothing to do with energy. Congress said DOE was responsible for consolidating all of this elemental mercury. This may be predecisional, but does anyone envision a commercial market for this mercury or is this just going to sit somewhere forever?

Response from Karen Guevara, DOE: The intent of the export ban was that the United States was among those countries that tended to export mercury for disposition to countries whose environmental laws were more lax than those in the United States. So it was an acknowledgement that we were contributing to environmental degradation in countries that did not safely dispose of this. So, this is us doing our part—again this is long term safe storage—it is not intended to be disposal, but there are not envisioned to be other beneficial uses for this. Again, this is the scoping meeting for beginning a process of an EIS that will, as part of the scoping meetings, try to identify what are the appropriate questions to be addressed in the scope of the EIS.

Comment/Question from Manuel: So this is a scoping meeting for DOE as opposed to SRS?

Response: Correct. We are simply an alternative site that is initially being contemplated in this initial scoping. The scope of the EIS is not yet determined. It is conceivable that some of the sites may fall out as a result of the scoping study. And again, I am willing to host any sidebar conversations that anyone wants to have.

Comment: Just for information, this has been reviewed with the CAB before, but we get so many things in these reviews that may have fallen through the cracks. DWPF recovers a very small amount of mercury during its operation, and this is mercury that was used back in the operation of the canyons to help in the dissolution of some of the fuels. So there is already some mercury on the SRS site, but very small amounts compared to what would be talked about in this EIS. But just so you are not surprised, that is there and it has been presented in the CAB, but it is down at a level that we may not have picked up unless you were really familiar with the operation.

Question: If the area became an actual nonattainment zone for ozone and fine particulates, what would the impact be on SRS activities?

Response from Karen Guevara, DOE: The SRS is, in fact, not envisioned as being a major contributor to air emissions problems in the region at large. But nonetheless, as Terry emphasized, we are a corporate citizen and trying to do what we can to continue to lower our emissions. Terry did mention the biomass plant that we are planning on bringing on board, indicating that it would be the replacement for a 50-year old power plant. That alone is envisioned as being a significant lessening of the emissions in the CSRA. So that is one of the key things that I think we will be doing. Other than that, it is just a matter of just trying to continue to clamp down on the sorts of emissions controls that we put on our various facilities.

Question: Do you have measurements that indicate the site's contribution to this potential area of concern.

Answer: Jeanette Hyatt will speak to that.

Answer from Jeanette Hyatt, SRNS: Yes, we do. We are in the final stages of preparing our annual environmental report that has all that emission data consolidated. Last year's report is available that contains that data. We are taking proactive approaches and entering into early action compacts with the states of South Carolina and Georgia demonstrating our endorsement of employees carpooling and reducing the personal carbon footprint and emissions that they are responsible for, as well as putting emission control devices on our heavy equipment. The emergency

diesel generators, although we happily don't put those into service because of an emergency, we do have a routine need to continue to test those so that we can confirm they are ready in case of emergency. Just using those diesel generators does put a fair amount of particulate into the air. So, we have submitted grants trying to encourage the placement emission reduction devices on all our heavy equipment. We are working with our subcontractors to encourage them to do that before they bring that equipment onto the site. We are also working with industry neighboring the SRS to make sure that what we are doing to reduce is not offset by changes in their process that would increase it. I think it important to note that nonattainment is not for the SRS, it is for the region. It would be for the Aiken-Augusta region. And so we are really looking beyond the site boundaries to see how we can, as a region, lower that as a whole.

Question: *Regarding the mercury situation, if we become a site for storage for elemental mercury, is that an EM jurisdiction and therefore will it be a concern of the CAB? Is it EM that will have that responsibility?*

Answer: The EM program has been designated within the DOE for this mercury storage mission, so yes, it would be within the purview of the EM program.

Comment: *In reference to the workshop coming up this afternoon on the reactors and the plan for the reactors, this is just to let everyone know that there is rumbling in the community about the preservation of artifacts that may be associated with that. The C Reactor, in particular, is identified in the Cultural Resources Management Plan (CRMP) as the area of great historic interest. I think this may come up in Helen's presentation as well about the acceleration of activities associated with reactors and the concern on the part of the citizens that the CRMP goals will be acknowledged and addressed in that work, particularly as activities are accelerated. For the regional plan for the CRMP, the original intention was that it be reviewed on a five-year basis as needed. That five-year time is coming up—it was signed in December 2004—so we are coming up to that point in time. So, I just wanted to let everybody know that the radar is up in terms of the impact of accelerated work at the reactor sites with respect to the CRMP.*

Question: *You said 135,000 gallons of feed to ARP MCU, is that gallons of salt solution or is that gallons of prepared feed?*

Answer: Gallons of prepared feed from Tank 49, which is our feed tank. It is prepared feed and that is a record. And every month, if you go back and look at our statistics, we continue to climb in terms of throughput and productivity for that plant. So we are real pleased for that.

Environmental Protection Agency (EPA), Region 4

Mr. Rob Pope, EPA, reported they have a new Assistant Administrator for the Office of Solid Waste Emergency Response. The position is roughly equivalent to the Assistant Secretary for Environment Management. So that person has been named and appointed. Mathy Stanislaus, who has been in and out of EPA and has experience doing environmental work. I have not seen anything come directly out of his office, but we have been told there will be a re-energizing focus on community involvement and environmental justice issues in general. As far as the local regional staff everything has been very stable for some time, and that is very good for the people who work on SRS from EPA.

Pertaining to Recovery Act work, Mr. Pope reported that all enforceable milestones will be met by the end of FY2009. New work has been initiated and is on-going which normally would be enforceable milestones, but they are coming in so early and so fast that they are way ahead of schedule, as was intended with the Recovery Act. To that end, he thinks that EPA as a regulator is very pleased that DOE has been able to meet all those milestones and accelerate many other milestones. Of course, as a result, the work is coming much faster and it is a very compressed process. For some things that would be expected to be stretched out over a few years are really going very quickly into months instead of a few years. As a result, some very innovative things are being done, and SRS is coming up with some very innovative solutions and is working well.

On the high level waste tanks, he reported that it is moving forward very well. Tanks 18 and 19 are basically empty and considered clean. We are still waiting on how the waste determination will move forward and how that will be done, but the internal team of the U.S. Environmental Protection Agency (EPA), South Carolina Department of

Health and Environmental Control (DHEC), the U.S. Department of Energy (DOE), and Savannah River Remediation (SRR) are moving forward and holding very good discussions. Also, it appears that Tanks 5 and 6 are quite ahead of schedule. So the enforceable milestones for the tanks looks like they will be met well ahead a schedule too. That is not a result of Recovery Act work, it is just a result of them doing their job very well.

As SRNS is adding staff to do Recovery Work, we are also quite stressed and having to add some staff. Our contractor has already added a few staff to do this and we are on site a great deal more doing field oversight work than we have ever been before. We also hope in the next few months that EPA will add staff. And we are hoping to do something similar to what DOE does and have something that shares this position with me.

Next CAB meeting we will have a presentation about the SRS Superfund Job Training Initiative. We had a little presentation on that about six months ago and it has run its course for the first phase. It was actually not part of the Recovery Act. It was started about this time last year before the Recovery Act was envisioned. We were having discussions with SRS and about identifying and training people from the community, and finding a few positions for them. We were also trying to find other positions in the community where they could be hired. EPA works with a contractor who finds people to give them a second chance and EPA pays to train them. SRS said they could possibly find 10 positions. As the Recovery Act got passed, it got to be 15 positions, and now it seems that all 20 people that were trained will likely be hired. Anna Cornelius is with Techlaw, our support contractor in this region. She worked very hard with the EPA Headquarters contractor, EPA Headquarters personnel, and personnel from SRNS and Parsons, who were involved in getting these people trained and ready to work at SRNS. We will be giving a presentation on this in September.

He encouraged the attendees to attend the public workshop on the C, K, L and R Reactors. He told them that basically the decision for these reactors is exactly the same as what has already done in P Reactor. All this decision (Proposed Plan and follow-on Record of Decision) will do is state that the end state for these reactors is to close them in place. The decision is on what is taken down, what is left behind, what is preserved, especially in the case of C Reactor, what is preserved for history and as artifacts. All those decisions will actually be made in follow-on decision documents that will be very specific to each reactor. This decision says that we have already worked out how P Reactor will be closed and we see no reason that the next four reactors can't be closed the same way. This decision will say that when the mission is completed this reactor will be closed in place.

Question: *Yes, you mentioned the Superfund Job Training Initiative as a second chance. Please explain.*

Answer: The whole idea of this program, which has been used throughout the country at other superfund sites, is to try to find people who live in the community around the site. It has been used often in the rust belt of the northern Midwest, but it has been used in other places as well. We relate to them that you may not have the opportunity to work on site because you don't have a college degree or you are not a health physicist, but there are things that you could do on the site if you had the proper training. These people were identified and they used a similar process as going out to the job fairs. They went out to several places and held meetings. The focus is the environmental justice community, mostly minorities. We go out to them and said here are jobs that you might do at SRS—who is interested? Come and interview and give us your resume. There is a try-out process so they are vetted on how committed they are to the process. It is a six week program. You might think of it as people who headed down one pathway in life and realized it might be good to try a different pathway and this is an opportunity for them to do it.

Suggestion from CAB Member: *Around the table and in the room today we all understand what you mean by reactor. But as we start talking to the public, it may be helpful to start saying reactor building because the reactor is not active. I think the public needs to fully understand that.*

Question: *You used a term Environmental Justice. I am not familiar with that one. What is Webster's Abridged description?*

Answer: The term Environmental Justice came about quite some time ago. It is a term that has come to mean several things, but basically, there are statistics and facts that have shown that many communities, minority communities, and low or socio-economic communities are more heavily impacted by superfund sites and by environmental contamination in general. Sometimes this is because property is often cheap in the lesser expensive parts of town. And also people who have lower-level jobs often live very close to the place they work and end up settling in that area

or the property around a certain place. Because it is smelly or smoky, land is cheap and that is where inexpensive housing gets set up. Those people are impacted adversely and more often than people who live further away from the facilities. In general, this has impacted minority communities around the country. Here in the Southeast we mainly think of the African-American community. But it also happens when you get to other places, such as the places where the Vietnamese community has moved. They move to the less desirable places to live because property is cheaper. There are certainly many examples in Appalachia where it is not an African-American community; it is a very Caucasian community that is impacted. It is people that are more heavily impacted because of their socioeconomic status and where they live by hazardous waste sites.

***Comment:** I would like to make a follow-up comment about how environmental justice can take on an international dimension. I was really pleased with Karen's response to the questions about the storage of elemental mercury. Because we have, as a nation, taken the opportunity to ship material out of the country to countries that have less stringent environment laws, and that is an environmental justice issue as well.*

South Carolina Department of Health and Environmental Control (SCDHEC)

Ms. Shelley Wilson, SCDHEC, revisited some issues already raised. Regarding air quality, for South Carolina it's not that the air quality is getting worse—the air quality standards are getting stricter. As a result of that, we see more of the areas within South Carolina that are in danger of not meeting those new more stringent standards. So South Carolina DHEC moved very aggressively to develop early action compacts with most of the counties in South Carolina. And that was an effort to work with the local governments and industries for each area to devise their own reductions and emissions and attempt to figure out how they wanted to reduce emissions before the regulatory nonattainment deadline fell imposing more rigid restrictions on that area that would especially affect new industry. So, again, we do appreciate the work of the early action compact in this area and SRS is part of that that the Biomass Facilities certainly do help with the air quality. The diesel emissions that Jeanette mentioned those things very much help the area hopefully avoid that nonattainment designation.

In relation to new hires, Ms. Wilson reports that she saw first-hand last week a big group of DHEC people at the badging office getting ready to go on a tour at Savannah River. We were there over an hour because of all the Recovery Act new hires that were trying to go to work at the site. So it was a very tangible example of a great thing—new hires trying to go to work. We are interviewing for some additional people at DHEC—about eight positions. We have one position that will be a permanent position. They will be more of a point person for the high level waste tank closures. Hopefully, this person will be much more visible to you and a good person to ask your general or specific questions. It will be an engineer by nature and that person will be onboard very soon for you to meet.

She reported that SCDHEC is tracking the development of the notice of intent to prepare the draft environmental impact statement for the long term mercury storage. We plan to submit comments to DOE on that draft Notice of Intent. As a separate but related issue, DHEC has also developed a draft mercury reduction strategy for the state. That has recently been put on our website and she invited everyone to take a look at it. This draft mercury strategy basically coalesces all of the monitoring data that we have throughout the state for air, surface water and for fish tissue. It explains the major exposure pathways for mercury to humans, which would be primarily fish consumption of some species in some areas that have mercury contamination and also exposure due to breakage of mercury-containing products. It recommends reduction strategy for the state so that the risk to humans can be reduced.

Ms. Wilson expressed appreciation to the SRS. We had Ginger Dickert and Steve Thomas come and speak to a group of the DHEC professional engineers about the high level waste tanks and that whole system and the closure process. For us, that helps spread and disseminate some broader knowledge throughout DHEC of SRS activities and we appreciate their effort and time.

Ms. Wilson introduced Mr. Van Keisler as the manager of the DHEC Federal Facility Agreement section. He will discuss our recent meeting with the State Historic Preservation Office on how to coordinate some of our activities and how to communicate with them about cleanup efforts.

Mr. Keisler stated that he would like to talk about is the decommissioning of the C Reactor complex and how the

Historical Preservation Office had come into play on making that decision. In the last two weeks, discussions have been held with DOE, EPA, and DHEC on adding additional language to the proposed plan for those reactor complex buildings—some that recognize that the historical preservation issue was out there, that there was some uncertainty in that, and how we can address that in our process. All three parties seem to be happy with that language.

Regarding hiring, we are interviewing people for our stimulus related positions. We have had tremendous interest and have had people drive from Illinois, Texas, and Florida to interview for these positions. Savannah River Site is having a far-reaching impact on providing people with jobs.

Comment: *I am thrilled to hear the positive feedback on the Recovery Act. I have a nephew who is shouting joy because of the Recovery Act and I have a son-in-law who is back to work because of the Recovery Act. So, Recovery Act, bring it on.*

Question: *On the mercury issue where you were talking about the fish contamination and the source of that mercury aside from isolated sites or facilities, in general is it the consensus still that most of that mercury is coming from coal-burning power plants?*

Answer: Yes, it is. What we have in the current environment is accumulative addition and contribution from years of combustion activities, primarily fossil fuels and waste combustion. So, it is primarily the air emissions ever since the industrialized period began and all of that collectively building up into this global cycle that continually cycles throughout the media—the sediments, the surface water, the air, and on the land. Since mercury can travel thousands of miles in the atmosphere, it makes it a global issue. We have the ongoing emissions, the cumulative historical emissions, and there are also some natural mercury emissions into the environment. In South Carolina, in the Edisto and PeeDee areas, those natural river systems actually make the mercury bioaccumulate faster in the fish, not really associated with the air emissions, but associated with the natural characteristics of those river systems. It is a low pH and a high total organic carbon. And so, it is rather unfortunate for us that the natural characteristics make the mercury bioaccumulate in the fish faster, but again since many of you may live near and Edisto area, it might be of particular interest.

Georgia Department of Natural Resources/Environmental Protection Division (GA DNR/EPD)

Mr. Al Frazier reported that he participated as a member of the Savannah Area Committee in re-evaluating the Savannah area response plan. Area committees are part of a larger universe of The Regional Response Team which is co-chaired by the U.S. EPA and the U.S. Coast Guard as part of the National Contingency Plan. The Savannah area committee encompasses the entire Georgia coast, some of the coast of South Carolina, and some of the east coast of Florida. The Savannah Area Contingency Plan is a document showing how to address an oil spill or chemical spill that occurs along the coastline. The Contingency Plan indicates sensitive areas (state parks, national parks, shell fish harvesting areas, fishing areas) that would suffer damage by an oil or chemical spill. The Contingency Plan also has strategies for booming such as containment of diversion booms, how much boom is required, where to put the boom, and available boat ramps to get marine craft in the water to lay the boom. It is a plan that has not been overhauled in about 10 years. The State of Georgia EPD, Coastal Resources Division, NOAA, local emergency response contractors on the coast, and the Florida Department of Fish and Game, whose GIS personnel were contracted by the Coast Guard, are putting the final product together which eventually will be distributed to everyone.

Mr. Frazier reported that June 30th ended the submission date for industries subject to the Toxic Release Inventory. The Toxic Release Inventory is a requirement of Title 3 of the Superfund Amendment and Reauthorization Act (SARA) in 1986 and requires any industry nationwide having any applicable chemicals that goes up the stack, goes out the wastewater stream, is disposed in a landfill, or is released in a spill has to be reported to both U.S. EPA and the particular state. The state EPA publishes a yearly Toxic Release Inventory Report. The last day for reporting for the 2008 year was June 30, 2009. The Toxic Release Inventory Report should be released by January or February 2010. This is an important requirement of SARA Title 3, also known as the Emergency Planning Community Right to Know Act, in that the public has the right to know what chemicals are getting into the environment, in what amounts, and in what states from what facilities. We receive any requests for information and the states and EPA are required to divulge that information if asked to do so.

Mr. Frazier reported that in June the Governor of Georgia lifted the watering restrictions due to the drought. There are 55 counties in northern Georgia not allowed to do anything outside with water. Many other counties in the rest of the state were severely restricted, but now we are in a non-drought status. The Water Councils are gearing up as required under the state-wide Water Plan. There are approximately 10–12 Water Councils whose members are being nominated and put in place. A Water Conservation Implementation Plan has been approved for the newly formed Water Councils to use in developing conservation plans. Information can be found at www.georgiawaterplanning.org. That web site will show a map where you can click on the local water council to find out the next scheduled meeting, the agenda, and also material covered previous meetings.

Mr. Frazier reported that last week the Governor of Georgia ordered the Office of Planning and Budget to direct every state agency to require that every state employee be furloughed for at least three days between now and the end of the state fiscal year (June 30, 2010). In addition to three mandatory furlough days, each agency had to come up with an additional 5% cut in budget to be implemented no later than the end of August. EPD elected to take the 5% cut in budget and implement that through nine additional furlough days for EPD employees. The plan now is to virtually close down EPD the last Friday of every month. All offices will be closed, which is an interesting concept. It basically results in a 5% salary cut for all EPD employees.

Question: *Relative to your contingency planning for the oil spill. What is the closest scenario to test that? Have you run across anything close?*

Answer: Back in July 2006, a German flagged vessel came into Savannah Harbor and a report of an oil spill was initially called in with no known source and no known amount. The Coast Guard and the state responded. Initially it was estimated to be approximately 3,000-5,000 gallons of oil released from the suspected ship. After a couple of days of working the spill, it was determined that the spill was in excess of 50,000 gallons which heavily impacted Ft. Pulaski National Park in Savannah. It impacted the Georgia side of the Savannah River pretty much from Melba Island all the way down to Tybee. The South Carolina side was lightly oiled. That is still tied up in litigation. Right now I am participating in a process where the National Pollution Fund Center, which is basically Coast Guard, has released some monies from OPA to do a pre-assessment report to look at what was affected in 2006, what could potentially be affected in the future, and then the Trustees (State of Georgia National Park Service, South Carolina) would determine whether we would want to proceed with the damage assessment phase which would get a little bit more detailed. And then with a remediation phase, all the funding for this work would be paid by OPA funds, federal funds released by Coast Guard with the hope that the Coast Guard could come back at a future date and go after the shipping company for trip damages. Right now we are at the point the affects of the spill two and a half years later doesn't look like it will be an issue in the future, and the Trustees probably will recommend no further action. Of course, the Coast Guard is going to proceed with legal action against the shipping company. So, yes, something like that happened just a couple of years ago with a major oil spill in the harbor.

Question: *I would like to know specifically, what in the DNR or any other department in the state of Georgia is specifically concerned with studying the impacts of SRS on the river, on the aquifer, on the soil, or on the air. Is there anything specifically oriented towards studying the impact in your sections. Or, in other words, are there specific personnel or department or any kind of police that are being carried out—can you brief something on that?*

Answer: Yes. Our emergency response teams deal with the response to the release, find out who is responsible for it, and get the freed product removed from the environment. After that it may get into a long-term remediation phase in which there are other parts of EPD that would pick up at that point. If there were issues with marsh contamination or long term issues in the marsh, our Coastal Resources Division would probably pick up the ball then. Perhaps our Watershed Protection Branch would get involved. So, to answer your question, yes there are other entities within EPD that would take on the task of long term remediation. And I believe South Carolina is set up the same way. They have an emergency response team that responds to spills and releases and probably would hand the issues in the same manner as we do.

Question: *It doesn't seem to me that your assessment of the water situation in Georgia is in concert with the reports that I receive over the news. For example, the Federal Court ruling in the emergency meetings—what is the status of that situation?*

Answer: Are you talking about the use of the Savannah River?

Question: Yes, use of the Savannah River?

Answer: I apologize that I am not quite up-to-speed on the recent developments of those issues. But that has always been in the back of people's minds in the environmental area—the Savannah River being robbed of water for Atlanta. Could it happen? Will it happen? I cannot speculate, but the issues in Atlanta, from what I have read, are issues from overdevelopment and a dwindling resource. Of course, that has been why the Water Councils have been formed around the state to come up with Conservation Plans in their area that would be approved by the Governor. Each area is going to be different. The conservation plan for the Atlanta area is not going to be the same for the Savannah area. The councils are given discretion in coming up with their conservation plan.

Comment: I know Judy had mentioned yesterday and maybe this will come up in our committee report, we are considering inviting the Army Corp of Engineers and they do some management of the usage of the Savannah River.

Comment: Colonel Curtis with the Corp of Engineers will be willing to give a presentation, I think.

Question: I also hear lots in the news about who is taking the most water, who is entitled to what amount, and there is a lot going on about that right now. You may have heard in the past, and I just wanted to bring it up again, that there is a committee established which has representatives from Georgia and South Carolina from their respective environmental departments, and some political representation as well, to work on how the resources of the Savannah River would be appropriately allotted, used, or shared and loading to the Savannah River. So that is one committee I know that is trying to work cooperatively to solve some of those issues. The other is that, for the past two years South Carolina DHEC has been trying to put in place a surface water permitting program. And the reason for that is to actually delineate or designate who gets what amount of water from the rivers so that we can play fairly with Georgia and North Carolina in terms of water allotment. In other words, we can't make any sort of deals with our sister states about how much water they are going to get, how much water we are going to get, if we can't, in some way, tie that down within our own state. So that is where the surface water permitting program is very important and so far none of the proposed legislation has gotten any where that would enable that kind of program.

Question: Yes, Al, hopefully we are not to the place financially where we are going to have to say you have spilled 50,000 gallons of oil you clean it up because we don't have the money?

Answer: The state is not in the hands-on aspect of cleaning up the spill. We are going to make sure the responsible party secures a contractor who will clean up the spill at the responsible party's cost. The state, EPA, and Coast Guard do have programs in effect where if the responsible party will not agree and does not have the money, then OPA funds or state funds can be paid by the state to clean it up. No, it is not going to just stay there. After the cleanup is completed, the State, EPA or Coast Guard can take legal action against the responsible party and sue for three times the damages that it cost to clean up the spill. I think one interesting aspect of EPD's commitment to emergency response is that the emergency response team members are the only EPD employees who do not have to take the 12 day furlough. They only have to take the three day furlough; the other nine days the emergency response team members do not have to take. That shows the commitment Georgia has to emergency response.

Comment: The spill response program is part of the CERCLA cleanup law and when it comes to spills in waterways and the ocean, it is the Coast Guard that is the lead agency. If it is a spill on land, EPA becomes the lead agency with state support. But, in all these programs the whole idea is that the polluter pays and if EPA, the State, or Coast Guard has to use federal funds to clean it up, that is when you go after a company for trouble three times the cost because they are being recalcitrant. They are not doing their job. They made the mess, so they should clean it up. That is the big stick that superfund has against private entities. Either you do the clean up or if we have to do it for you, it is going to cost you three times as much. So, the whole idea is that if you make the mess, you clean up the mess.

Public Comments

Tom Clements, Friends of the Earth, Columbia, South Carolina, wanted to make some observations. Concerning the mercury scoping EIS that was brought up, he has spoken with some of the largest environmental groups in the state of South Carolina, and he thinks there is a general agreement that at least part of the effort with this process to consolidate mercury and to get it out of circulation is a good step. As far as whether SRS is the place to do it, he thinks that is an open question. He said there will be some representatives from organizations at the Thursday meeting, and he will be there to observe. He also noted that the governors of the states of Idaho and Oregon said that there is no way that facility is going to come to their states. He was unsure of their basis for that statement, but thinks it is connected to potential future uses for the site (clean uses or dirty uses) that we need to be mindful of.

Mr. Clements also pointed out that if you are concerned to know where the nuclear regulatory commission stands on the salt issue, they are in an observation role with no regulatory authority. There is a meeting in Rockville, MD, at the NRC Headquarters August 5. You can call into that meeting and he can tell you how to find out how to do that. He said he planned to be on that call and that the Natural Resources Defense Council, which has a settlement with DOE over salt waste, will also be on the call.

He reported that one very interesting thing he thought was very good news for Georgia and South Carolina had happened since the last meeting was that the Global Nuclear Energy Partnership Environmental Impact Statement has been officially cancelled. There was an attempt under the Bush administration, as some of you know, to rush along a decision to choose a technology for reprocessing and to select a site. It was quite apparent that this has run into trouble along the way and due to concern in Washington and the new administration, this has been officially cancelled. But he thinks there is going to be reprocessing research and development that will continue. But the full speed ahead approach that had been pushed is now totally off the rails and he appreciated the Government finally having listened to some reality about problems with reprocessing.

Mr. Clements had one final point related to that issue. He was glad to hear that Terry mentioned that there is an August 18th meeting about the Energy Parks. As some of you may know, DOE at both Savannah River and Piketon have attempted to push ahead with the Energy Park approach which he is quite concerned might be related to spent fuel storage or reprocessing or something else that is going to create more nuclear waste at the site. They pushed ahead without involving the public, and he has spoken to some of the SSAB members in Piketon. In fact, the Future Use Committee at the Piketon CAB was not informed about an announcement that came out related to a new nuclear reactor project that a couple of companies wanted to have. He thinks that DOE is having to backtrack and now involve the public in some of the decision making concerning the Energy Parks. Because you do have on your official statement that the future use of the site is of concern to you, he encouraged participation in the August 18th meeting. He said he would like to hear more about what it is and will be asking about that. He noted that he planned to be there as well.

Elizabeth Skyye Vereen introduced herself and expressed appreciation to the CAB for making her feel welcome. She reported that she has two jobs. She is chief of the Pee Dee Indian Nation in Orangeburg County and she also works for the South Carolina Employment Security Commission in the Labor Market Information Division. So I do know what everyone is talking about when it comes to the job fairs and what is going on between Georgia and South Carolina. There is a lot going on and one of the reasons I have been out a good bit recently. With 12.1% unemployment, I make the Governor mad. My unit is the one that sends out this unemployment number and those figures. We process a lot of unemployment claims. We do quite a bit throughout the state doing the job fairs. So it is good to hear about the job fairs that Savannah River is doing. Many people ask about that and it is nice to be able to relate some good information on it. She explained the Native American background of her name. She related that she enjoyed the public comments because it helps her to understand where the public is and also where the CAB is.

~End of Public Comments ~

Presentation – Recovery Act Project Update – Helen Belencan, DOE–SR

Helen Belencan expressed appreciation to the CAB for the opportunity to update and share information with them. She reiterated the President and the Congress passed the Recovery Act Project to jumpstart the economy, to get people back to work, and to accomplish some important missions that various Federal agencies have. For DOE–SR

it happens to be an opportunity to get some environmental cleanup work done that, under the normal appropriations and budgeting process, we would have had to delay for many years. So the site accrues the benefit of accelerating the environmental cleanup, the community gets the benefit of the dollars that are going to flow back from the site through the community, and people get a chance to go back to work. She attended the job fair in Augusta, and a tremendous amount of people steadily poured the facility getting an opportunity to present their resume and their qualifications. We hope they get a chance on this job. If not, at least they have their paperwork into these agencies and maybe they can find work elsewhere.

Ms. Belencan wanted to update everyone at the very top level of the program. She said that Bert Crapse and Mike Simmons spoke yesterday about TRU and Solid Waste Projects, and she was counting on the Federal project directors to give you the details, either through the committees or through the full board meetings, about the individual projects. She stated her challenge was to give the CAB the perspective of the entirety of the Recovery Act project and also to give some perspective on how the SRS is doing with respect to the other sites in the EM complex who also receive funding.

Ms. Belencan showed a picture of where work is being performed. The key projects that are really the four key pillars that hold up the whole program are (1) the completion of M Area, (2) D Area, (3) the reactors in P, and (4) R Area. There is other work to accelerate cleanup in the various areas around the site, and the pole in the middle that holds up the top of roof of this project is the TRU Waste Program—working on the legacy TRU waste and recovering the waste from Pad 1 and getting that either characterized and shipped offsite or characterized and ready to be shipped offsite.

Ms. Belencan presented a slide showing how the project was organized. The dollars were appropriated to the site in four areas: P and R Area completion (those are the reactors), M Area, and D Area completion. M Area is where we produced fuel in targets that were used in the reactors. Those buildings have been decommissioned, but we have the soil and groundwater cleanup. We are completing D Area where we produced heavy water. We have work in A Area, C and F Area, a key project area where we will be decommissioning the Consolidated Incineration Facility and doing the source term removal from the Building 235F where metallurgical work was performed and materials produced that were used in the space probe batteries. G Area where Heavy Water Components Test Reactor (HECTR), a domed facility that has been out of service for many years, but this project will take it to its final decommissioned end state. K and N Area we have some decommissioning the cooling tower in K area and some facilities that were taking out of use as storage facilities for RCRA waste so that we can consolidate our waste activities in E Area or into the center of the site.

She noted that operations and field support was the ongoing soil and groundwater monitoring, maintenance of systems that have been installed for groundwater remediation, and continuation of maintenance. DOE-SR is contemplating decommissioning and relocating Building 703A, the former Administration Building, and constructing a new EOC. It is being considered because this is one that has not been finalized. Although the scope is 90% finalized, there are still some changes that may happen and this is one of those areas.

She pointed out the continuation of the list and down one side TRU Waste and Solid Waste Operations, Depleted Uranium Oxide. They are going to ship the last of the Depleted Uranium Oxide offsite. She mentioned consolidating the waste storage. DOE-SR is considering consolidating all the hazardous waste storage facilities into a single area so that operations can be more efficient.

She noted that they were contemplating whether or not to expand onsite disposal capabilities in E Area. But as the project has matured, they realized that is not something we need to do now. Some geotechnical work will be done, and that will be the full scope.

Ms. Belencan said that this does give you that sense of how they are organized and how you could expect to see progress reported from the Federal project directors as they go through and as they present to the individual committees.

Ms. Belencan said that to the best of her counting, today is day 111, and there have been some terrific accomplishments so far.

- The 1,000th TRU shipment. TRU waste has been shipped all along, but the Recovery Act funding allowed accelerated shipping.
- H TRU waste was shipped.
- Started TRU Pad 1 retrieval of the waste that had been stored on that earthen covered pad. (She noted that the CAB has been very interested in this subject and she offered to show additional pictures.)

In Area completion she talked about work on the Heavy Water Components Test Reactor (HECTR) that is underway. Some work is being done on the groundwater in P Area. There is a great project with interesting technology in D Area. A pilot test was performed where heating probes were put down on the ground and some contaminated concrete was put on top of them, the area was covered with a little roof, and jersey bouncers were placed along the side. When the switch is flipped, the probes are heated up to a very high temperature, which evaporates the concrete. It drives all the moisture, including the tritium, out of the concrete and turns it to dust after it was completed. It looked like the original cement before it was turned into concrete. But it proved to be a successful way to remediate the contamination in that concrete. That pilot test will be continued on soil. So this will provide an effective, cost efficient way to complete the remediation in D Area. She expected Diana Hannah to talk to the CAB in the coming months.

She presented a slide on TRU Pad 1 and pointed out the earthen cover that was on a concrete pad and the culvert buried underneath it. She presented pictures that showed that one of the culverts was moved to an area that is set up to open the culverts and you could see the top being carefully opened. She also pointed out the picture with the top off, and a picture of radiological personnel doing their surveys to make sure they were in a safe condition to proceed. The pictures continued to show the progression to the last crews going in to do the marking for the drums. This key project was a good start.

Question: *Obviously, the tops were grouted when they were put in place?*

Answer: Yes, the caps are sealed and a special device was fabricated about a year ago when we had done some work with other culverts that goes in and squeezes on it and pops the top off of it.

Comment from Art: *Helen, this was simply a protective covering to preclude access and also shielding. This was not a cap that you would have on a disposal site.*

Ms. Belencan stated that this was not to be confused with the cap that was installed as a final remedial action at either T Area or at the radiological waste burial ground. Those caps are defined very specifically to minimize or almost avoid rainwater intrusion. They have certain layers with either manmade material or certain clay material. They provide a more impervious layer to other material they are trying to protect. As Art explained, this was not ever intended to be a permanent disposition for these and the soil was placed over them initially to provide more protection to the workers from any potential radiation emanating from those materials.

Question: *What is the construction material of those drums?*

Answer: They are carbon steel.

Question: *Is it common to use carbon steel in an environment that might get contaminated with water?*

Answer: I would imagine that when those drums were filled, no one knew where they would end up. Remember, this is waste that was generated decades ago in the 1960s and 1970s. At the time, I think the people involved did what they thought was best as far as what to put the waste in, how to put it in these culverts which afforded greater protection, to put the lids on them, to put them under an earthen cover, and just as we have evolved to where we are in this room with a wireless Internet connection today, so have we evolved in our approach to waste management. So things that we did 40–50 years ago that seemed a great thing, but we have evolved in so many ways and waste management is certainly one of them. That is why we are taking the action now to recover these culverts, take the drums out, get them characterized, and get them shipped to the WIPP which we do believe is the place for TRU waste and have demonstrated that it is a facility capable of keeping this waste isolated for many, many years.

Comment from Art: *The CAB has always been concerned about these drums because nobody knew what the condition was going to be when we uncovered them. So, this is really not a surprise.*

Answer from Terry: You are absolutely correct. As we stated, one of the concerns was that there could be some corrosion or deterioration of those drums over time because they were carbon steel and out in the environment. Part of the work planning for this was to approach this very carefully to confirm that they were intact. We are very pleased that they were.

Ms. Belencan introduced a presentation show that put a face and voice to the numbers of people hired through the job fairs. The presentation was interviews with people who were hired. She noted that 810 jobs had been created so far.

Ms. Belencan's presentation then showed how DOE-SR compared to the other States that host DOE sites. As of June 30, 2009, we were at 612 and the leader of all the sites. In other metric accomplishments we don't often talk about how fast we are spending the money. In the Recovery Act, that is a metric because Congress is very interested in seeing that the money they have appropriated is moving out into the economy. EM made the case that we have a machine in place that can really do this and we are tracking our expenditures very carefully to make sure we are spending it wisely and that we report that progress. As the end of June 2009, we had \$51M back out into the system. And compared with the other sites, we are in the lead.

Chuck Munns spoke about how we are doing with our small business. We are taking advantage of getting funding to local businesses, small businesses, and other interests and recognizing they are a key part of our economy.

She stated that safety is the priority for DOE-SR. One of the things being done to instill the safety culture in the new workers is the use of the Conduct of Operations Mentors. Some of the people that have returned—retirees or previous workers with experience—are working as mentors with the new hires. In addition to the briefings, reading, and learning the material in a classroom, the new hires have someone experienced to help them learn this safety culture.

Regarding project oversight, Ms. Belencan stated that in April DOE-HQ reviewed to make sure that DOE-SRS had the right systems in place, etc., and received a good report. DOE-HQ performed a detail review of DOE-SRS cost estimates of all work scope and concluded that the estimating was good and they were of a quality to be accepted as documentation and final support for the project. Currently, a DOE-HQ team is reviewing the total scope, cost, and schedule against what we track our progress. There are monthly program reviews. The GAO audit is now scheduled for the week of August 17.

She noted that working with the regulatory agencies, EPA and DHEC, are an important part of the project.

One topic not often discussed is the National Environmental Policy Act (NEPA). She presented information showing how DOE-SRS is complying with the requirements of NEPA. There was some concern expressed early on that with the environmental work being accelerated, some environmental rules may not be followed or somehow would be waived. She stated that this was not the case. While the area completion work is done under CERCLA, CERCLA embraces the NEPA values and stands as a surrogate for it. In the waste disposition activities, a review is being performed that assures that the waste work being done is covered by either the SR Waste Management EIS or the WIPP Final Supplement. There is also an Environmental Checklist to determine if the action has been addressed or if it can be categorically excluded. So far all the projects have been determined to be addressed in an existing document or have been excluded. She showed two slides with more specific details. One showed which actions that have already been covered under an existing NEPA review. The other slide provided a list of actions that have been reviewed and are categorically excluded from NEPA. She stated that Drew Grainger, DOE NEPA Compliance Officer, is supporting the Recovery Act by working with the DOE Office of Energy, Efficiency and Renewable Energy in helping them review State applications for energy grants to make sure that those actions are also appropriately addressed by NEPA.

In reference to communications, Ms. Belencan presented the Twitter address and the recovery website. The website is being updated with more timely information and more project status information. It was originally set up to provide information on job applications and for businesses to work with the site to obtain contracts.

Question: Two questions—one on infrastructure, the other on technology. In reference to infrastructure, in the recommendation that was accepted at the last full CAB meeting, we asked that any beneficial side effects of these projects on infrastructure which would position the site to be ready for future missions, looking far ahead with a strategic plan be reviewed. So, I am interested in a comment on whether anything that is happening so far you see as having that kind of benefit? Regarding technology, with accelerating these projects since technology development can necessarily be accelerated, is there is any technology development that is being enabled or disabled by the work that is being viewed to date?

Answer on Infrastructure: By virtue of completing the work in the various areas, we are positioning the site to bring in new missions. That is what we have an eye toward. So, we are not taking any steps that would make an area irreparably available for the future. This may be a vague answer, but that is something we are keeping an eye on, and we are keeping that in mind as we go forward.

Answer on Technology: The project I talked about in D Area, the detritiation where we are heating up the concrete, we are going to perform another test on soils. That is an example where the application of technology is helping us implement the project. It really is a development opportunity we are doing as a treatability study because it was not a proven technology up to this point. So technology is helping us in the projects and there are also some work scope that continues to look at technology development. It is certainly not something that we have walked away from. It is something that we continue to embrace because we see it as a way to ensure that we meet our goals.

Chair Update

Mr. Manuel Bettencourt, CAB Chair, paid tribute to a past member, Wade Waters who recently passed away.

Mr. Bettencourt reminded CAB members to bring their CAB information booklets to all meetings and that updates were passed out at the last two meetings. He emphasized that on page 3, the purpose of the Savannah River Site Citizens Advisory Board is to provide independent advice and recommendations to the Department of Energy, Assistant Secretary for EM and for the Manager of Savannah River Site Operations Office. The SRS CAB draws on diverse community viewpoints to provide its advice and recommendations with a goal of directly involving stakeholders in EM planning and decision-making processes on the SRS cleanup. The Board will provide advice and recommendations in response to changes issued by EM or the SRS Manager. He stated there were several objectives listed and encouraged the CAB members to read those objectives before every meeting, before every committee meeting, and to focus on those objectives.

Facilitator Update

Ms. Freeman, CAB Facilitator, discussed the status of the SRS CAB's recommendations as follows: no recommendations are awaiting Agency response, four recommendations approved since the last CAB meeting, and five have been closed. The full recommendation report may be viewed at the CAB's website.

Administrative Committee, Sarah Watson – Chair Kathe Golden – Vice Chair; Denise Long – Vice Chair

Committee Chair, Sara Watson, welcomed everyone. Ms. Watson introduced the members of the Administrative Committee: Kathe Golden–Vice Chair, Denise Long–Vice Chair, Mercredi Giles, Lee Harley-Fitts, Cleveland Latimore, Joe Ortaldo, and Alex Williams.

Ms. Watson stated that the CAB is in the midst of a membership campaign with 35 applications for 11 open membership positions for the Board. The two-year membership period begins March 2010 and ends in March 2012. This year there is a unique situation—there are no members who have met their membership term limit and must leave the board, but the 11 members are up for reappointment. She cautioned all CAB members to take a good look at the applications that have been received, new and existing, and build a good slate of candidates to submit to DOE.

The Administrative Committee will meet on August 19, 2009, to review the applications and prepare the ballot. This process is usually done during the same timeframe as the retreat, but DOE is requesting the package earlier, so the process will be conducted separately. The Full Board will review the applicants at the Combined Committee Meeting on September 28th and will vote for the candidates the next day during the Full Board Meeting of September 29th. She encouraged any applicants present to introduce themselves—none were present.

Ms. Watson stated that the next newsletter is scheduled for November and encouraged the CAB members to submit articles and suggested topics. They should be prepared for the staff by the next CAB meeting.

Ms. Watson stated that each year the CAB has a Process and Education Retreat. This year, the retreat will be held on Thursday and Friday, October 22–23, at Wild Dunes in Isle of Palms. She asked that information be submitted to the Support Team about what we would like to hear. She asked everyone to note the dates and plan to attend.

Strategic & Legacy Management Committee, Madeleine Marshall – Co-Chair; Judith Greene-McLeod – Co-Chair

Ms. Greene-McLeod reported that the committee met on June 16. Presentations were given by Lance Schlag (Budget Update Regarding 2010 Funding) and Doug Hintze (SRS New Performance Measures) and SRS Drought Contingency Planning. She noted that the committee was trying to get Colonel Kertis, the Savannah District Head of the Corp of Engineers to make a presentation.

Ms. Greene-McLeod stated the Strategic & Legacy Management Committee is interested in strategic issues relative to the use of the SRS and the committee's specific areas of interest are:

- The development and deployment of technology.
- The SRS budget decision making process.
- Future land use at the site.
- Legacy management and long term stewardship.
- Historic preservation.
- Relevant national environmental policy and how it relates to the site.

Madeleine Marshall presented information from a monthly update from The Forest Service.

Ms. Marshall mentioned upcoming activities. One is a tour of the SRNL to be set up in September and will be open to the Full CAB. In September the Full CAB will hear a report on the EPA Superfund Training Program. A committee meeting will be scheduled in October between the September and November Full CAB and there will be an annual report from the Forest Service and we will be requesting an update on the development of the metrics that we discussed yesterday in our background that the site has undertaken in parallel with the Strategic Plan. These are the metrics that are going to be identified related to these 83 action areas in the Strategic Plan. So Doug will give us an update on that work in October.

She also commented on the recommendations. At the last full CAB there were two recommendations approved from our committee, one on the budget and one on the recovery act. This meeting we are getting two of the actions that were requested in those recommendations. One was the presentation that Helen gave us and I think we are going to be getting ongoing presentations on the Recovery Act work. The second is the budget presentation that Lance Schlag will be giving that will address a number of things, including the process that has evolved over the past couple of years with respect to the budget. Based on the response received from DOE and the activity occurring at this meeting, we would be able to change the status of those recommendations from pending to open.

Question/Comment from Kathe: *At some point I would like to hear an update on what is going on with the military use.*

Answer: We will check into the status. I suspect they are in a hold mode on that, but she will request an update.

Presentation – FY2009 and FY2010 Funded Integrated Priority List – Lance Schlag, DOE–SR

Lance Schlag presented an update. When I talked a couple of months ago we were trying to figure out how to display and report back on The Integrated Priority List and we talked about your recommendations on your prioritization on the work at the Site. We use that information when we submit the budget request. We go through the budget cycle and then we get funding and we move on for those of in that planning process, we continually move on because we are continually in the cycle. What we wanted to do was go back to where we are in a recap.

For FY2009, the EM portion added \$1.4B for the EM cleanup which encompasses the nuclear materials, waste management, soil and groundwater, safeguards and security on DOE support for the site. For FY2010 the President's budget request was \$1.402B, a little bit less, but basically level.

On the slides he pointed out the funding for each activity. For FY2009 one of the topics discussed at the Subcommittee Meeting was that the Site experienced an opportunity with increased pension payments. As most people know, the economy situation is not good and there was a downturn in the bond market. Based on the economic conditions, and based on the Pension Protection Action of 2006, the Site had to significantly increase the Plan Pension Fund contributions. The result of that would have been funding level changes. The Recovery Act funding came along and the PBS13, PBS30, and PBS40 were moved to Recovery Act funding. That plays in a little more clearly in FY2010. The President's budget request of \$1.4B is based on the Pension Funding and based on increased operational requirements for the line items like the Salt Waste Processing Facility. This is where the line would have been drawn. We would have not been able to fund the Salt Waste Processing Facility support projects, tank farm, and a lot of the liquid waste activities, spent nuclear fuel program would have been halted. You would have maintained MINSAFE in all facilities that is one of the key things. But you would not have been operationally active to accomplish work.

Thanks to the Recovery Act, PBS13, 30 and 40 D&D was wrapped into area completion. So the 40 scope went into the Recovery Act also. Based on that, we are able to fund everything similar to the same level that we funded in FY2009. So based on the President's budget request and thankfully Congress seems to be supporting us at close to that same level, we are able to fully fund all the activities down to the Tank 48 Return to Service. Plutonium Disposition Project is on hold for technical reasons. Heavy Water Relocation is still in questions. Basically, we were able to accomplish all of the planned operational making progress activities. The good news is that we were able to accomplish all of the tank waste bulk waste we were planning on.

Question: *What was the dollar amount of project pension underfunding—just the aggregate amount, relatively?*

Answer: For FY2010 it is still open because they will not lock the requirements down until December 2009. But for FY 2009, the certified baseline for the site had assumed a contribution of \$87M and what we actually contributed was in excess of \$200M.

Question: More than double?

Answer: Close to triple.

Question: *And then you started to mention FY2010. Do you know the assumptions that go into that? Are you going to have another shortfall? In other words, if the Pension actuarial predictions switch to the favorable, will you be overfunded? You mentioned when it is going to be locked in is an open issue?*

Answer: For FY2010 the baseline for the sites assumes that \$87M plus or minus through completion. That is historically about the level of funding. The Pension Protection Act, the prior regulations required the site to maintain a minimum of 60% funding contribution level. The site had maintained 64% to 70% which is fairly common across the complex. However, the Pension Protection Act required that to go up to 80%, but the site was actually at 64%. Going to 80% plus the downturn in the economic conditions had a severe negative impact for the site. For FY2010 actually the good answer is that the market conditions have continued to improve over the last few months, and if they continue to improve probably for the next year, basically our assumption right now is that it is too early to tell.

Question: *I thought I heard you say that in FY2010, the Plutonium Disposition Project is on hold? And it falls below that red line. Did that raise a red flag in anybody else's mind?*

Answer: It is on hold because of the consideration for the alternatives analysis. So the project is on hold this year and next year. There is an alternatives analysis being completed in June for the relationship between plutonium disposition and the NNSA pit disposition and conversion facility.

Question: *Does that mean there is no money to do what we want to do or are you just not spending any money now until you find out what we are going to spend it on? Sometime this fall the decision is supposed to be made so we ought to be able to start spending money in FY2010 to do whatever we decide to do.*

Answer: There is an assumption there was a plan there was a \$15M placeholder in the FY2010 budget for the PU Disposition. The PU Disposition had a place holder in the President's budget request based on the Pension requirements at that point in time, we would not be funding that.

Question: *So you are betting on the fact that the Plutonium Disposition route will be one that doesn't require much money?*

Answer: Yes, there is a possibility that it would not require much money.

Question: *So it is buried into the individual projects? And in FY2009 we just got a briefing from Helen about all the work she is doing, but you have area completion project 30 below the funding line?*

Answer: Right. In FY2009, the bulk of area completions would have been unfunded in where we would have gone. In other words, the Minsafe and some making progress was funded the Post Road compliance, CERCLA IOUs in groundwater. This is the Minsafe which they do make some progress in there, but the area completion initiative as defined, which is the significant making progress that would have been unfunded in FY2009 on a comparable basis.

Question: *What money is she spending now?*

Answer: She is spending Recovery Act money. All of PBS13, 30, the 40 D&D which is only \$2M per year and the Area Completion—all of that work was moved into Recovery Act funding on April 8. What that allowed us to do was realign the balance of funding from those projects into the other projects and keep them funding. We do not have \$120M discretionary at the site, so when you get a \$120M cost increase and some other operational increases that has to come from the money you have. Congress does not give us extra.

Question from Rose: *When Madeleine first asked about the spent nuclear fuel project listed below the red line, the plutonium disposition project, you first said that it was suspended for technical reasons. Then later you said that your understanding was there was no bookmark for it for the FY2010 budget. Which is it?*

Answer: It is both. It is on hold for technical reasons since last Fall. The FY2010 President's budget request had identified that we could spend up to \$15M on the project in FY2010. The President's budget request was developed in Fall 2008, went to Congress in 2009, and where we are on the ground today is not where we were then. When we developed the FY2010 budget request, we didn't think we were going to contributing over \$200M for a pension contribution in FY2010. We only planned on contributing \$87M. The \$120M for that is going to have to come from the funding of what is in the base from the scope that was not transferred to Recovery Act. So if we drew that line on FY2010 today, the Recovery Act funding bought us some space but it did not buy back everything. If the plutonium disposition project, depending on what the alternatives analysis is, there may be no cost. There may be no funding on the Environmental Management Program's part in FY2010. If there is a requirement for some funding, then the site will have to look at how we prioritize the activities to put some funding on this project, which is another activity that happens to us frequently.

Question: *And is there any thought as to whether or not the technical issues will be solved by then so that if there is adequate funding, the project can go forward?*

Answer: It is not a technical issue, but it is an alternatives analysis as whether there is a more cost effective and efficient way of accomplishing the project. It was not put on hold because we didn't technically know how to do it,

it was put on hold because there may be some economies of scale in combining it with the NNSA disposition project.

Question from Edward: *My question is about use of Recovery Act funds to fund projects that were in the current fiscal year budget. Is that being done, and if it is, is there a mechanism to account for what Recovery Act funds are substituting for previously budgeted funds?*

Answer: Actually, I addressed that but you may not have caught it. The answer was that for FY2009 when we came into the year back in the Spring and determined that we actually had to come up with the funding for that increased pension payment, there were two choices. When you increase the pension payment, then you are taking nominally \$127M worth of work. So you can take \$127M off of this list and go back up and frankly the soil and groundwater program there could have been an adverse impact on site employment.

Question: *I was referring to items that might have had funding issues for other reasons—overruns or that type of thing.*

Answer: No, when you are talking \$127M again, the solid waste management program—soil and groundwater program was \$60M. So you go down program by program and you cut off your operational making progress and then you go back down to Minsafe on those programs. The people working on that are making progress on operations and actually have no other place to go. So the Recovery Act funding came in and the total soil and groundwater solid waste D&D programs were placed under the Recovery Act, because that is where the acceleration was under Recovery Act in the TRU program. That gave some very large risk reduction and there are some savings in getting that work done earlier—the acceleration in the area completion, the footprint reduction. So that program was looking under the area of completion to advance and accelerate work and it all came together divinely.

Question: *Did it solve the Pension?*

Answer: Actually it came together to solve the pension. We have had a number of just in time events this year.

Public Comments

Dr. Chris Noah stated that he is still interested in being a CAB member. As you may recall, you have elected me as a candidate to the CAB, but HQ said there were too many contractors on the CAB. He just wanted to let the CAB know that he is still a contractor and let his boss know that he is here on leave on his own time. He stated he has a Doctorate in Environmental Policy, is still working on the SRNS Strategic Plan, and the DOE Strategic Plan, and still interested in working with the CAB.

Walt Joseph addressed the CAB in his role as Executive Director of the SRS Heritage Foundation, a small citizens group devoted to preserving and interpreting the heritage of the Savannah River Site. He stated that several years ago when the D&D program was beginning to gear up, it came to the Foundation's attention that a lot of heritage was being lost via the dumpster. We decided that if we were ever going to have a visitor's center, museum, or whatever, we must take action. The CAB was very helpful at that time in supporting our activities, and we are making progress. Today we had some discussion earlier about reactors and the Revision 1 of the Early Action Proposed Plan for four reactors. He pointed out that under the National Historic Preservation Act, the Foundation, the CAB, and the cities of Augusta, Aiken, and New Ellenton all became consulting parties under that act and sat down at the table with DOE representatives and negotiated a Cultural Resources Management Plan (CRMP) which had certain stipulations, particularly regarding C Reactor. The stipulations were (1) that C Reactor would remain in pristine condition as it currently existed until an evaluation was performed of the potential for eventually opening it for public access, and (2) that the parts, pieces, accoutrements that were not present in C Reactor be removed from other reactor areas as they were in the D&D process. The first revision that came out on this plan pretty much neglected those. Fortunately, last Friday a letter was received from Mr. Allison reiterating DOE support for the CRMP and for historic preservation in general. He noted that the Foundation is meeting at 6:00 p.m. today and will have other signers of the CRMP present to speak. He invited everyone to participate and help shape the future historic planning at the Savannah River Site.

~ End of Public Comments ~

Recommendation– Site Performance Metrics

Madeleine Marshall reviewed the specifics of the Recommendation for the members and invited comments. She stated the motivation for this motion is to acknowledge the question that has always occurred from the CAB to the presenter when the Gold Metrics have been presented. We are asking DOE to collect a shorter set of metrics like we see in the project presentations and put them in one place and use that to communicate in an aggregated sense the progress of cleanup at the site. That is the intention of this recommendation. She related information from the presentation, questions, and answers that had been covered in the Combined Committee Meeting. She stated that the recommendation is not a request for DOE to generate a whole new set of metrics. She also stated that there are some good aggregated metrics in the Gold Metrics, but the intent of the recommendation is not to get rid of the ones that are useful.

Recommendation

Jerry Wadley presided over the review and presentation of the recommendation to DOE.

The SRS CAB advises DOE to:

1. Develop an interim set of performance metrics for SRS to more fully communicate site quantitative progress in ER, D&D, Waste Management Operations, Nuclear Materials Disposition and ARRA to the CAB and the public. These metrics are designed to demonstrate progress in the areas of most concern to the CAB. Specifically:
 - a. Provide relevant metrics for PBS 11 (Pu and U packaged for disposition) and 12 (SNF packaged for disposition) that show progress for FY09 and each year beyond.
 - b. For PBS 13:
 - i. Modify the PBS 13 metrics to show the acceleration of legacy solid waste disposition by category (LLW, LLMW, and TRU).
 - ii. Add a new metric to PBS 13 that specifically addresses the minimization and disposition of newly generated solid wastes.
 - c. Devise a new metric for ER and D&D to measure the acceleration in onsite remediation as a result of ARRA, and provide metrics for all projects with funding directly impacted by ARRA by displaying the old milestone and the impact of ARRA on each project along with the number of jobs created by project and overall.
 - d. Devise a metric that disaggregates the data for TRU waste drums, large boxed TRU wastes, and drummed and boxed TRU wastes on TRU Pad #1.
 - e. Reaffirm, revise as necessary, and republish the total number V-HLW canisters expected to be produced by DWPF and the number of GWSBs expected to be built to temporarily store the canisters.
 - f. Devise a metric that disaggregates "liquid waste eliminated" and publish as separate items the sludge, salt waste and curies processed and by the facilities where the liquid wastes were processed.
 - g. Devise a metric that disaggregates the number of tanks cleaned, partially cleaned, and annuli cleaned compared to the number of tanks with and without annuli to be cleaned.
 - h. Publish the number of HLW curies and volumes stored and treated and to be treated each year (in canisters; in liquid waste eliminated; etc.). The total number of curies of HLW that have been disposed should also be expressed as a percentage of the total curies of HLW remaining on site.
 - i. For PBS 30 (ER) and PBS 40 (D&D), publish the percentage of sites completed in addition to the number of sites cleaned, and publish the amount of work in progress (e.g., "20% of site ____ (site identity listed) is finished" etc.).
2. Review a draft of the new metrics with the SRS CAB by the November 2009 SRS CAB meeting.

The Recommendation's voting results were: 24 approved, 0 disapproved, 0 abstentions.

The full recommendation can be viewed at the SRS CAB website.

Waste Management Committee, Joe Ortaldo – Chair

Art Dombey – Vice Chair (Liquid Waste); Alex Williams – Vice Chair (Solid Waste)

Mr. Ortaldo updated the group on the committee activities. He said there are two pending recommendations: 263 (disposition of spent fuel, surplus plutonium, and vitrified HLW) and 264 (SRS Recovery Act footprint reduction). DOE responses have been received and he asked the CAB members to review those. There are eight open recommendations.

The next committee meeting will be August 4 at the Aiken Conference Center. Agenda items are Tank 48 and contract transition.

Presentation – Overview of Savannah River Remediation – Jim French, SRR

Joe Ortaldo introduced Jim French, President of Savannah River Remediation, and the new contractor handling all the liquid waste work at the SRS.

Mr. French introduced himself. He stated the SRR would continue their emphasis on safety and security. He reported that the SRR Corporate Team is also comprised of URS Washington Division, Bechtel, CH2M Hill, B&W, Areva, Energy Solutions, and Washington Safety Management Solutions. He described how each team member would be participating. He pointed out the new faces on site and gave information on their experience.

Mr. French restated their scope of work as the liquid waste process at WSRC. They took over the liquid waste contract on July 1, 2009. A letter to proceed was issued on March 30 and it took 90 days for transition.

He stated that SRR has 1762 employees on site and subcontractor employees bring the total up to approximately 2000. It is a six year contract with a two year extension at the end. He stated they do operations that include the 49 remaining waste tanks, two tank farms, and five major facilities. To explain why there is still 36M gallons of waste, he presented a curie reduction curve and explained that the sludge is being vitrified and the byproduct from that process is called washwater/rinsewater that goes back to the tank farm. So if you look at the balance, the sludge fraction is being decreased but water is being created in its place with the rinsewater. The amount of rinsewater will be reduced over the next six years.

To further describe the operations, he reported about their operations in general: actinide removal process, ARP and MCU. The process we use to get after the salt fraction. There are about 140,000 tons of salt which is the byproduct of adding caustic to the system when the waste comes into the carbon steel tanks, to get the pH level as possible greater than 10, a lot of caustic is added to get the pH up. Then when the water is processed is out of there, there is a remaining salt cake. ARP at MCU removes the cesium from that salt so that it is low level waste and it can go down from Tank 50 to the Saltstone Facility and it gets poured into the large concrete monolith grout facilities at Saltstone. The cesium fraction gets removed during that process and goes over to the glass stream that goes to DWPF that goes into a vitrified canister. This has been run for approximately a year and a half. This last month of July has been the best throughput on that facility—it is up over 100,000 gallons through that facility in the month of July. It is the only salt waste process that happens in the entire complex.

Regarding sludge—it is well known DWPF 10M pounds of glass over 2700 canisters. 15M curies removed from the tanks and these are the canisters that are about 26 inches across and about 10 feet tall. The tops are welded on and they are hung in hollow silos in the Glass Waste Storage Building. We are on Glass Waste Storage #2. The first building will be filled and will be ready to start putting bottles in Glass Waste Storage #2. And there is another footprint for another building if Yucca Mountain does not open. We are able to continue to maintain our inventory of glass bottles. We will not be slowing down because of Yucca Mountain indecision.

Tank Closure—Four tanks are on schedule to meet or exceed the Federal Facilities closure requirement. He showed slides of equipment used to clean tanks and described how it is operated.

Question from Art: *Does the equipment do it at the same rate?:*

Answer: We generally do it only one way. The machine can do it at the same time (suck and spray), but we find it more efficient to get the material corralled and suck it up all at one time. But the rate going in and going out are the same.

He explained that they have several metrics in their contract that are related to each other. Many of the elements have to be paced at the same rate. The analogy he shares with the workforce is that it is just like the tires and transmission in your car. If you want the tires to go faster, then the gears in your transmission have to go faster. When we measure our metric from a distance that will update per this recommendation, we are acknowledging that we will be seen for the number of tanks we get closed. We want to figure out how to tweak these gears so that we can get the maximum number of tanks closed. This tweaking was done within our workshop with three different experts to tweak each one of these gears to see how we can run it more efficiently and then what does that yield for us. Their set of experts agreed with this process and agreed that if you balance these gears right you can get 22 tanks in eight years. Then when we went to award the contract there was a protest and the GAO had to get involved to see if our technical approach to see if it was reasonable. So the GAO has also checked these gear ratios.

He stated he would like to explain the material just one piece at a time. This is how we are going to be measured—high level waste tank closure—22 and 8. In order for that to work, tank cleaning must be run faster. In order for tank cleaning to run faster, we have to do bulk waste removal a little faster. If I am going to do bulk waste removal a little faster, then I have to do batch feed prep a little faster. If I want to do batch feed prep faster, that means the prepared feed has to get out the other end, so I have to have more canisters faster. So when you think about the balance of this gear train, it actually represents the pieces of the flow sheet that all have to work just a little bit faster because over here we are going to do 22 tanks in eight years. So this gear train represents the pieces and parts that have to run at the right speed to make that happen. So it is the integration of these elements in this presentation that we have worked at to make our flow sheet possible to get 22 tanks in eight years. The next page talks about the part of the contract elements that we represent. We are going to have to take bulk waste removal and move it three times faster. We are going to do sludge prep two times faster. We are going to take DWPF canisters by the end of this contract period somewhere in the range of 400 canisters per year. Right now we are doing 197. When I was here in 2004, we were doing 258–265. So we are going to have to turn the DWPF canister rate up. Salt prep and salt processing is going to have to go two times faster. So in this process, in order to get 22 closures in eight years, all elements of the workforce have to work together as a team to make it happen. So there is not just one group that gets a high incentive or one group that pulls this off. Because, as you can imagine with 1,700 employees, everyone has to pull their portion on this. So there is not a technology breakthrough—we are not sending the sludge to the moon. What we are doing is tweaking the systems that we have in a way that gets this done. The AREVA people are going to help us do the cleaning faster with the ECC. How we spray the inside of the tanks with acid and then recover the acid back out of the system drops the sludge to the floor in a much quicker fashion. We deploy ECC, we get that tank cleaning done just enough faster so it fits the rest of the cogs of that wheel.

He pointed out that this is such a simple diagram, but these guys are going to take great pride in salt waste processing and prep, these guys will do great in sludge feed, but when it actually comes together, this is how it will be measured from a distance. So our metrics we talked about earlier today will be prepared and looked at with respect to that high mark. You cannot allow yourself to think about these one at a time because you cannot get 22 things through this hole, one at a time. We are working a batch of four tanks here and a batch of five tanks there, and a batch of three tanks here. We are working a lot of them in parallel and that is what allows us to get the most out of the taxpayer's money.

Now when we get that done, the result is this yield curve on curie reduction. As we get out here in the 2010 timeframe, from 2010 to 2020, we do a remarkable removal of the curies.

In summary, we run an integrated and very complicated high hazardous series of operations. Those gears represent the essence of what they do. The workforce we have is the best in the world. Does this mission with this particular waste stream on this particular footprint, and they are the best world. They are the most experienced professionals and they are motivated. I have had workshops with about 672 so far in the 19 days since I've been here and we have the rest of them next week to finish up and by the time we finish talking about this, their only question to me is help

me keep track of where we are going and what are going to do because they are getting excited about it. They are all engaged. We do the right things. Safety is prerequisite. We perform with integrity.

Question: *According to the chart, you reduced the number of curies from 400M in 1996 down to 0, practically, but how many curies are then stored on site in the vitrified state.*

Answer: We put 19.1M curies vitrified in glass. So the inventory for the low level waste will be those concrete monoliths that are poured at Saltstone. And the high level waste will be in those vitrified cylinders that are hanging in those silos. And they are hanging in facilities that are covered, ventilated, and monitored for both radiation and access so that they are away from the public and the workforce. And they will be in those cylinders hanging in those silos until there is a repository determined as to be able to take them.

Question: *I understand that, but the number of curies does not change.*

Answer: Not until we start shipping those bottles offsite. When those bottles start leaving the site as they were intended to go to Yucca Mountain, then the bottles travel out individually. We have about 2,700 in storage now and if the Yucca decision is not made, then we will build another building and we will continue to put them in that hard, leach-proof stainless lined canister that is hanging in the silo.

Question: *Rumor is that SRR is out of money, is about to furlough or transfer people to SRNS so they can be paid by stimulus fund. Is any of that true? If it is true, how did it happen.*

Answer: We are required by law with the employee pension funds to keep periodic contributions to those pensions' funds to keep those solvents. Part of our financial plan is that the contribution comes from a yield of investments from the stock market. That way we do not have to take it out of operating funds. We invest, we get the yield, it goes into the pension fund, the pension fund stays 100% vested and funded. With the economic climate that has happened in the last 11-12 months, the stock market yield has not been what we anticipated. So we would have had to, in order to keep the pension fund fully funded, we would have had to take operation dollars and put it in the pension fund to keep it funded. In April of this year, we started a reprogramming effort within the DOE to provide funds to that pension contribution knowing that if we did not get those funds, we would have to take operations dollars and put them in the bucket. I am proud to say the Department has provided those reprogramming funds, that happened recently, and the pension fund will be fully funded and I don't have to take operations dollars to fund it. Now, as a contingency plan, you would want me to anticipate that if there was an error if somebody could not get something signed—what would you do? What we would have done in the contingency actions we would have written an agreement that would have moved the attention of our work force over to D&D funds, which there is enough money in the stimulus accounts to handle that. The D&D worker goes through a training program that is generally 8–13 weeks before they can go to work. What we would have done, had that not happened, is we would have maintained them as SRR employees and they would have been assigned to D&D work and they would have commenced on that training program. That 8–13 weeks training is what those worker would have been assigned to do had I not got the reprogramming that has been successfully delivered. If I would have had to take that money out of operations and put it into pensions, then those workers would have been reassigned. They would still have their benefits, they would still be on the payroll, and they just would have been doing different work. The leadership for the government from DOE, there are four subcommittees (two in Senate, two in House) that have to approve a reprogramming of that nature. And the Department worked tirelessly for the past several weeks to get that money from the OMB Office, through all the subcommittees, and get it signed and that signature in place. There is substance to the rumor, but the outcome has been pretty successful. I will be sending out a draft e-mail today to the workforce for clarification.

Question: *You have some very aggressive goals and we are glad to see that. I was just wondering if you had stimulus money, would you be able to do a few things, one is spend it quickly, and two get tanks cleaner faster and three actually enhance treatment?*

Answer: We would. Right now our situation is that we are not in the stimulus flow path. The good news is that Savannah River is \$1.3B and doing well with it and we are proud for all of our workers, but on the liquid waste side, we are not in the stimulus pathway. We have prepared work packages should that money come and there has been some discussion about a future wave of money if everybody can't spend it, then it would be reassigned. So , we

want to be ready in two areas. First, it has to be shovel ready work that was the intention program and we have several projects that we will have shovel ready work. Some of them may specifically be interesting relative to environmental compliance. The vault constructions at Saltstone—we can move some of that forward. From a treatment perspective, I mentioned the cleaning process we get from AREVA—we can accelerate that work. Those will help us with lifecycle and cleaning and the curie reduction curve because we would be able to clean the tanks and get delivery of the equipment faster. There are four projects that are shovel ready and ready to go. That money comes sticky—there will be extra requirements put on that money to make sure you are spending in accordance with the expectation. In order to be ready for that money, the process for getting all the Washington Group programs from around the country to be able to do the administration of the money if it should show up, will bring people in from other stimulus sites so we can use their programs to make sure it is channeled with no delay directly into the field to get the work done as fast as we can.

Question: *You are going to help me prove to Terri that the 200 canisters per year probably not as robust as it should have been. It just strikes me strange that in all these areas you can up by a factor of two or three and not really either break the budget or do something completely off-scale that we haven't thought of before.*

Answer: Let me comment about that. It is actually very subtle. When the RFP was issued in 2007, that assumption was that to do all these tasks we would have around 2,500 people on the payroll. When you have 2,500 people on the payroll and you have a funding level, you are spending a lot of money on labor. You are not able to buy the ECC equipment or you are not able to fund the project construction stuff because you are almost to the brim just on labor charges alone. So from during the timeframe from when it was put in the box until it was actually awarded in May 2009, we have allowed the natural attrition of the work force to retire and go their way so we will have no workforce restriction processes to go from about 2,500 down to about 1,750. So that number of people who have gotten off the payroll allows us to spend the budget number on things that need to be done like real capital investments for either projects or equipment. Otherwise we would have been chockablock full with people and money being spent on salaries. So by decreasing our crew size and by changing the profile of the people, we have actually natural attrition within the community to allow the number of the workforce to come down to 1,750. So the difference there in about 700 salaries allows for us to get the equipment necessary to pull these things forward.

Question: *In the beginning you mentioned “Savannah River Redemption”—quite an interesting thing. I would like to ask your opinion. It looks now that as listed here it is not really remediating the Savannah River, but is just protecting the Savannah River in a way that is more like Savannah River Site Remediation. You are not exactly trying to remediate the Savannah River as such. So maybe there is a better way of putting it?*

Answer: That is true. I have had that question from around the country because they want to know what you are doing to the Savannah River. Having lived here for 20 years, I hope to do nothing to the Savannah River. I happened to be in a reactor program back in December 1991 or 1992 where we had a steam generator tritium leak to the river. And I lived through that in reactor restart days and it was terrible for what we did to the Savannah River and the lowcountry. So now when they say are you remediating the River, I always back up and say I hope not to impact the river at all—plus or minus.

Question: *Jim's chart had the gears on there—I find that very interesting—and that illustrates a lot of good points and it is a follow-up to the question that Don raised. Would it be possible to set up a series of presentations with the Waste Management Committee that would address each of these “gears” as to answering Don's question about exactly what is being done in order to do what we are saying on here?*

Answer: Joe, we have never turned down an opportunity to brief the Waste Management Committee, and we will not start now. So the answer is yes.

Presentation – Congratulatory Letter to DOE – Joe Ortaldo, Chair, Waste Management Committee

Mr. Ortaldo reviewed the purpose of the letter was to formally pass on commendations and congratulations to DOE and all their M&O contractors about the fine accomplishments that have been made in the Solid Waste Program.

Jenny Freeman, Facilitator, asked for a motion to approve the letter. A motion was made and seconded to approve the letter. Manuel Bettencourt, CAB Chairperson, called for a vote on approval of the letter. The voting results were: 24 approved, 0 disapproved, 0 abstentions.

Nuclear Materials Committee— *Don Bridges, Chair*
Stan Howard – Vice Chair; Ed Burke – Vice Chair

Mr. Bridges presented a slide stating the charter for the Nuclear Materials Committee.

Question: *There are some things for classification reasons the DOE cannot talk about, they can tell us in general, but they cannot give us a lot of specifics on some of these things. Correct?*

Answer from Terry Spears, DOE: As a general statement, I think that is probably true. However, at a program level we try and hopefully we are successful at giving you all the information associated with where we are going and how we are going to get there in such a way that we don't have to rely on any type of classified information. Patrick McGuire, DOE, agreed with Mr. Spears' statement.

Mr. Bridges stated there are three pending recommendations: 250, 259, and 263. He stated the committee met in Aiken on July 14 and had presentations on the Enriched Uranium Disposition Program and the Spent Nuclear Fuel Program. He noted the completions and accomplishments.

He reported that TVA has expressed interest in irradiating MOX fuel in four of their reactors. They are now entering into contract negotiations with the MOX Services. He stated this is key to moving the MOX program forward and is a positive sign that deals with some of the concerns about the viability of the MOX program.

He discussed the delay and cancellation of Yucca Mountain, there is an implied impact on Savannah River. That was the basis for CAB Recommendation 263. SR is addressing plutonium disposition with the study in late 2009. A number of members have expressed a concern over the impact of potential delays. We sought others that may have a concern about that and, as a result, we are interested in getting views of others, such as the State of South Carolina. Our concerns would be if they see it as a violation of commitments or violation of good faith. We have asked Ben Rusche to come and address the group. Karen Patterson, longtime CAB member and former CAB Chairman, will be accompanying him. They would like to present some views.

Presentation – Ben Rusche, Chair, South Carolina Governor's Nuclear Advisory Council

Karen Patterson introduced Ben Rusche, Chair of the South Carolina Governor's Nuclear Advisory Council. She presented a South Carolina Savannah River Site historical background introduction for Mr. Rusche's presentation.

Mr. Rusche reported that the State of South Carolina is in an unusual position. In 2001, the State became fully aware of the 40-50 year period beforehand in which the State was not deeply involved in what was going on at Savannah River. He stated that the Governor's Nuclear Advisory Council was established in 2002 to monitor nuclear issues in the state and to provide the governor with advice when the Council deemed it appropriate. The council has a broad scope involving all nuclear issues within the state. He stated that the depth of the CAB's knowledge of SRS issues probably exceeds that of the Council. He reported that South Carolina has seven commercial reactors at four sites. SE&G and Santee Cooper jointly own the BC Summer site and reactor just north of Columbia. Progress Energy has a single unit on Lake Robinson in Hartsville. Duke has three reactors at Oconee near Seneca and two at Catawba. SE&G and Duke are both planning new units that are under construction. Mr. Rusche said that the Atlantic Compact is an agreement between the states of South Carolina, Connecticut, and New Jersey to accept their low level waste at the Barnwell Facility run by Energy Solutions. He gave brief history of low level waste facilities in the state. The authorizing statute resides in the Governor's Nuclear Advisory Council in the Energy Office of the South Carolina Budget and Control Board, which falls under the auspices of the Secretary of State, who are a part of the State Government of which Mark Sanford is the Governor. He pointed out the interaction between the Council, with the CAB, and with others and its involvement with the state is very much dependent on the Governor's office and the Governor's staff. Mr. Rusche presented a slide listing the issues for which the Council is responsible for providing advice and recommendations to the Governor. The members of the

Council were shown on another slide. He related how those individuals were appointed to the Council. He reported that the Council meets quarterly, usually the second Thursday of the month. Contact information was presented. He expressed appreciation to the CAB for all their good work.

Comments by Karen Patterson: Ms. Patterson reiterated the value of cooperation between the CAB and the Council.

Question: *In your experience, have you known of a few issues that would fit into the category of cooperation between the CAB and the Council?*

Answer by Karen Patterson: Yucca Mountain is one—the disposal of high level waste.

Answer by Ben Rusche: I happen to be the Assistant Secretary to develop Yucca Mountain and spent about eight years working on it before I retired.

Comment by Karen Patterson: For things like Yucca Mountain, where everybody is looking at it, I think it would really be good both the Council and the CAB and DOE and DHEC and the Governor understood each other's positions. There is value in moving forward as a unit.

Question: *One of the areas of mutual interest is Yucca Mountain or the Federal Repository. The CAB passed a recommendation that asked that a representative of the South Carolina be on any of the several potential panels that are being talked about. I understand the Secretary of Energy is trying to set one up. Congress is talking about having one, so there is going to be two or three. But has the State taken any official position in requesting that the State of South Carolina have a representative on whatever panels are formed?*

Answer: Mr. Rusche stated he was not aware of any official position that has been taken in the matter.

Answer: Karen Patterson reported they had sent a letter of recommendation to the Governor basically saying the same thing that the State should be represented or have access to that panel.

Question: *Question 1—This may be an unfair question to ask on the spot. I was very curious about if we could get a history of what representations or promises that have been made by the Federal Government, i.e., Department of Energy, Department of Defense, Nuclear Regulatory Commission, or whatever, about the prospects for long term storage of high level nuclear waste in South Carolina? Question 2—What are the current expectations of the State of South Carolina for long term storage? I realize that is not the kind of question you answer on the spot particularly since the Governor's Council has only been around for less than 10 years. But I am sure there is history on that, and the CAB would like to understand what that history is.*

Answer by Karen Patterson: I think DOE can give you a better response because DOE is committed to the states.

Comment from Jenny Freeman, Facilitator: She reminded everyone that your CAB is part of a national, complex-wide board. The Environmental Management Site Specific Advisory Board, of which this CAB is a part, is celebrating 15 years of existence. A cake was presented to celebrate that event and noted there was a map on the cake showing where other site specific advisory boards are located.

Facilities Disposition and Site Remediation Committee. *Kuppuswamy Jayaraman - Chair*
Mercredi Giles – Vice Chair

Dr. Kuppuswamy Jayaraman stated the purpose of the committee. He said the committee met on June 23 and they had presentations by Emile Bernard on Active Processes, by Rita Stubblefield on M Area Inactive Processes, by Ray Hannah on C, K, L and R Reactors Complex Early Action Proposed Plan, and Chris Bergren on Area Closure Projects—New Technologies on the Horizon. He reminded everyone about the Workshop to be held today on the C, K, L and R Reactors. He told everyone that the next meeting will be held on August 18 at the Aiken Municipal Center and covered the topics for the agenda.

Presentation – Area Closure Projects–New Technologies on the Horizon – Chris Bergren, DOE-SR

Mr. Bergren stated the purpose of his presentation is to provide an overview of SRS technology selection criteria with new examples. The groundwater program on site is very mature and has been in full scale remediation on a number of waste units for over 15 years. We have had a very successful track record in terms of remediating soils and groundwater on site. In terms of technology selection, technology selection is very critical to ensure that (a) we pick the right technology and it is applied to the right problem and (b) that we work with the regulators and the stakeholders up front to ensure that we are picking the right technologies and doing the right thing. We want to ensure that we are picking technologies that are cost effective and focus on the problem. He went through some examples to show why it is important to ensure that the right technologies are chosen to solve the problems. He pointed out 14 groundwater contamination areas on site. He stated they have a variety of cleanup systems in place. Some we refer to as active systems where we have mechanical systems in place during the cleanup. We have some that are enhanced systems where there is no mechanical system in place but we are doing something to the subsurface to promote remediation. Passive systems which are basically monitored natural attenuation where we go in and monitor systems to make sure the contaminations are doing what they are predicted to do. Over the period of 15 years, we have shut down multiple systems after achieving our cleanup criteria. Of the 14 areas, we have four areas that are pending final decisions in terms of what our final remedial actions are going to be. When you look at the constituents of concern in our groundwater contamination, we are dealing primarily with organic solvents. And we use the term interchangeably solvents and organics and volatile organics (VOCs). When we are talking about solvents, we are talking basically what you see the dry cleaning establishments have used. That is a product or solution with which you want a degreaser to remove oil from a product. We have used a lot of degreasing solvents over the years, so we have seen a lot of solvents present in the groundwater and in the soils. In addition, we have some tritium contamination in various areas especially around the seepage basins and in some of the reactor areas. So when it comes to focusing on remedial actions, you will hear us talking a lot about tritium and VOCs. Those seem to be the two main contaminants that we see in our groundwater systems.

Mr. Bergren showed a slide depicting the 14 groundwater plume areas on site. He stated they may have more than one remedial technology or remedial system in place taking care of a plume.

Technology Deployment is something that we are very grateful to have a national laboratory working with us on a project site on a daily basis. They provide expertise and help us look at problems and find solutions. We have been very successful because the State and EPA have been cooperative in working with us looking at leading-edge technologies. You may say that is risky, but let's see if it works. If it were not for the regulatory involvement up front on these things, we would not be as successful as we are in getting into the field and getting these technologies deployed.

He stated they do not have a preference for technology selection. They go into the industries and bring that technology back and tweak them to suit them to on site conditions. The State has developed as a proving ground for innovative technologies. It has been very interesting to see these technologies developed and implemented in the field.

He stated they have been successful in sharing these technologies. In lessons learned, some technologies do not work so we get those messages out in the field about why it did not work, how it can be enhanced or to work under different situations. Or if it does work, we like to get our information published through conferences, etc., to make sure that as the technologies are developed and implemented that we are sharing that information not only here, but internationally as well.

He talked about the anatomy of a contamination release. When choosing a technology, it is based on the problem being dealt with. Their goal on the remediation process on site is to find the source areas to make sure the source of the contamination is cut off.

He reported on two Source Technology Systems. One is a thermal system done at D area. The other is using chemical oxidation.

The Thermal System was a treatability study set up in D area. After decommissioning a large number of facilities in D Area we found that some of the slabs and the soil beneath were still contaminated with tritium. We wanted to find a process without having to take this material as a waste and send it to a trench or an offsite disposal facility. We wanted to see if there is a treatment technology that we could employ at the site to try to drive off the tritium from the concrete and the soil. So we did a treatability study and this is a 24x18x4 foot structure with concrete blocks around it and heating elements underneath. We took 77 cubic yards of tritium contaminated concrete and soil and placed it on top of these electrodes. We heated that up to 815°C for 30 days. The goal was to drive the tritium—basically dewater everything. We finished the testing about three weeks ago. We removed the roof so we could go in and take samples of the material that had been remediated. Last week the data came back that said we had met our cleanup criteria for removing the tritium from the concrete and the soils in a short-term (30-day) test. Today we are in the process of removing the clean material to outside the area and bringing in more contaminated material under the treatability study for additional treatment. We are going to work this through the regulatory cycle such that we can step this up and build more treatment facilities like this so that we can disposition the balance of the contaminated slabs and soil in D Area.

Question: *Would something like that work for volatile organics?*

Answer: It could if you wanted to take the volatiles out. The volatiles would evaporate quickly. We have a number of volatile things to remediate. A lot of our volatile contamination is below ground surface. Typically what we have seen with VOCs is that they will move through the subsurface quickly and you don't see those in the slabs where you see as much as you see the tritium in the concrete because it is a water molecule that tends to sit in the concrete slab. So we really do not see many problems with VOCs at the surface—a lot of those have simply evaporated from the surface. But it could be used for VOC remediation.

Chemical Oxidation is what we call an in situ technology. This means we do something inside the ground to go after the contamination. In situ means basically in-place treatment. It is a technique to remediate the beta zone in the water system. We put a chemical solution down and our goal is to attack the chemicals in the subsurface. It creates what is called a hydroxyl radical, and it goes after the organics. In this case the chemical oxidation is focused on solvent remediation. We have two projects in place—one in A Area and one in P Area—where we are gearing up to do this chemical oxidation process. A couple of years ago, we used this same technology using hydrogen peroxide, but you have to be very careful in dealing with hydrogen peroxide. In this demonstration we were using about 50% pure hydrogen peroxide. In comparison, the hydrogen peroxide we use at home is about 3%. So it has a safety factor that you have to be really careful when you are dealing with hydrogen peroxide. Plus, when you introduce hydrogen peroxide into the subsurface, it quickly reacts, so you use a lot more chemical than you would like. We looked at alternate oxidation products and did a bench scale study. The industry is starting to move toward sodium persulfate. It is safer to the worker, it has less toxic byproducts that are produced underground as the reaction takes place and it is longer lasting. We demonstrated it in multiple bench tests through the SRNL. We are partnering with an experienced commercial vendor to do the injections. We are in the field in A Area installing some of the wells. We will inject about 9,200 pounds of sodium persulfate mixed with water—a solution of about 5,000 gallons. And that will be injected into the subsurface in a zone we are specifically targeting. That will be done in small batches over a one-week period. Then we will stop the process and monitor the concentrations over time. He showed a slide of the work in A Area showing the plume to be remediated. They will inject the persulfate which is heavier than the water so it will come out and sink. The goal is to burn out this portion of aquifer to remove solvents. This is monitored through monitoring wells in the area. So this test will probably take over a year to gather a data on it. We are doing this in both A Area and P Area. The P Area job has not started yet, but the A Area is under way.

Edible Oil was demonstrated in T Area. These are natural occurring oils unlike petroleum products. We are trying to take the oxygen out of the system and make it anaerobic. What we find is when we remove the oxygen from the system the natural occurring microorganisms will actually go and destroy the solvents that are present in the subsurface. We recently deployed this at T Area, injected this material into the subsurface. The goal was to treat a small TCE plume. What we looked for was a number of indicator parameters that the process was working. Here is how that project worked. He demonstrated the process involved. This was done over the last two months and the data coming back is very good. There is only one small hot spot of solvent and one more deployment will be tried there. This is a very good, cost-effective, green product.

This one builds on the first one using nutrients. In this case, we are going after solvents in P Area. The lab has cultured some microorganisms called dehalogenates (Dehalococcoides) that like to feed off solvent. We are going to introduce not only the emulsions, but also the microbiological components into the subsurface as well. This will be the first time for in situ bioremediation. He showed a plume in P Area and described the process.

Polishing Steps deal with Iodine 129, which was released in the F Area Seepage basins. With this in the ground water we want to sequester that material so it does not go into the site streams. Working with national laboratory, we found that using a product called silver chloride, when it comes in contact with Iodine 129 actually sequesters the iodine such that it does not move once it comes into contact with each other. We did a number of bench scale tests where it shows that the proof of the concept will work. The lab is in the process of patenting this technology. He showed a slide describing the process.

Microblower is another green technology. This is a well that is installed in the unsaturated zone. The goal here is to remove solvents from the subsurface. In an area where we have a low concentrations of solvents, but we want to get them out of the ground, we have a device called a microblower. It is literally nothing more than a hair dryer motor that is powered by a solar panel hooked up to a battery. It slowly pulls out the solvent contamination from the soil. It is a green technology that does not require electricity. He described the use of the technique.

We continue to explore application of new technologies, aggressively pursue remedial optimization such that when we get in and get a system in place we want to get it, get it done, and move it to the nature process as quickly as we can, and then always ensuring that we are protective of human health in the environment.

Question: *Do you have agents identified for all your plumes or are there still some plumes hanging out there that you are not sure how you are going to remediate them?*

Answer: For the most part, we have available technologies out there for everything.

Question: *I am not trying to be critical of any of your technologies that have been done on the site because there has been a lot of progress made. Groundwater contamination by organic solvents is a very common problem at industrial sites all over the country and all over the world probably and it has taken a long time to clean up the groundwater and obviously you are not done yet. I am wondering if you can give us an idea of why this true, and not only here but at other sites as well? I have a list of things that have occurred to me and maybe it is all of these or none: (1) The sources of groundwater contamination continue, (2) There is complex mixture of contaminants, (3) The extent of the groundwater contamination is quite large (4) there has been a lack of dedicated money to solve the problem (5) there has been a lack of regulatory pressure, (6) there is a lack of treatment technologies to solve the problem. All of those or are there other reasons why it has taken so long and will continue to take a rather long time to get it cleaned up?*

Answer: I think just because of the complexity of getting the contaminants out of the groundwater system. You can throw all the money and all the technology you want at some of these and you still are not going to be able to get to cleanup standards. The contaminants slowly diffuse out of the soils. First of all, they are hard to find, but once you do find them, you will find that it is easy to get the source contamination out, but when you get into the distal end of the plumes, then you are limited in the technologies you are using. You can use pump and treat, which means you are going to be out there for hundreds of years trying to pump water out of the subsurface and it is still going to be there for a long period of time. We are moving toward monitored natural attenuation, which is letting Mother Nature take care of itself. Our approaches here are that pretty much that as long as we take care of the source areas and within a reasonable period of time if our plume will collapse on itself because you have taken the source out or you are doing some enhancements, then it may take 20–30 years for that aquifer system to clean itself up. It is not going to be an overnight success.

Question: *On the microblowers, if I understand what you are doing, you are removing VOCs from the aquifer and putting them into atmosphere, correct?*

Answer: It is from the beta zone, the unsaturated zone above the water table.

Question: *But basically you are putting VOCs into the atmosphere?*

Answer: Yes, it is in a very low concentration.

Question: *Is this a more acceptable thing to do than having it in the ground?*

Answer: The VOCs break down under sunlight. They undergo photo degradation within about 24 hours and the solvents are broken down. So, it is a tradeoff—do you want it such that it is leaching into the groundwater or do you want to try to remove it and then let sunlight photo degrade it? It is a common practice to use vacuum extraction to remove solvents.

Question: *I would like a clarification on your nice map. You have some concentrations on remediation systems that are in operation and you have some remediation systems that are in a state of shutdown. Then you also have other areas of groundwater contamination of the 14 that are not designated as either one of those. What is going on with those? For instance, in K Area there is no symbol for remediation systems and shutdown or remediation systems operating. So are they simply not being treated?*

Answer: In K Area we have two monitored natural attenuation remedies there. Which means we have very, very low concentrations of solvents there so it doesn't require us to do any remediation there in K Area. We have cake rubble burning pits where we have groundwater monitoring wells there where we are monitoring solvents there. L Area is another area where we have solvents there that are being monitored through natural attention.

Question: *So are the ones without the designation remediation system operating or in shut down considered passive?*

Answer: Yes, or they have met their cleanup criteria.

Question: *So there are four plumes that have not been addressed?*

Answer: Yes, there are four plumes that have not been addressed. We do not have final actions in place. Area P groundwater is one of them.

Question: *On your chemical oxidation chart, I think overall the reason you switched to persulfate was good and valid, I have a question for my own education. Usually, hydrogen peroxide is used in those situations because you only end up with water and CO₂ at the end. Do you recall one of the toxic byproducts you got with hydrogen peroxide?*

Answer: I don't know that they are a whole lot different. The primary risk from dealing with peroxide was the worker, because you can really get burned with that. Depending on what you are dealing with, you might get some vinyl chloride out of it. For the most part, I don't think there is anything terribly toxic.

Question: *So that wasn't a big driver?*

Answer: Not so much as it was a safety factor. It is the fact that the peroxide gets spent so much quicker than the persulfate. It is a little slower to react so it has an opportunity to get into the aquifer and get spread further.

Comment: The peroxide has not been a problem to SRS, but at other sites when it has been used to go after trichloroethylene for perchloroethylene it doesn't get complete breakdown and it does produce a lot of vinyl chloride. And we have had other situations at other sites where we have gotten breakdown of the solvent we were going after but then we wound up with vinyl chloride which is actually much worse. It is much more volatile, much more mobile and much more toxic. That is one reason we have seen the move toward persulfate. We have also seen permanganate used in some places, but it has just as much if not more worker risk than peroxide. So that is one issue with peroxide—you don't get complete breakdown.

Comment from Chris Bergren: And sometimes you get co-contaminants like with fuel. You have to be very careful when you are doing chemical oxidation where you have a comingled more than just the solvent plume

present. In North Carolina, they tried chemical oxidation and they were after cleaning up solvents but they wound next to an underground storage tank that had fuel in it and that was a bad situation.

Question: *When you go to select the oxidizing agent in doing your bench tests, do you look at some the proprietary products out there, permanganate, and the whole laundry list or do you sort of know? Do you start with a focus?*

Answer: We do. For example, there are some technologies that are out there that if you inject into an aquifer system that has a lot of organics, a lot of peat and things like that, then they are not going to work and you can quickly discount those. There are some that the industry will sell you that are great, but when you do a bench scale test they are not as good as they are sold to be.

Public Comments

Dr. Jacob Paz stated that he is relatively new to the area. He stated that it appears the groundwater contamination is quite complex and one issue is the risk assessment of complex mixtures, either nuclide or chemical. I would encourage that the regulatory agency send some seed money to conduct additional assessments or to state the real risk because the present risk may be misleading. He also expressed thanks for the comment about the State of South Carolina to open the dialogue with professionals on the other side of Yucca Mountains to hear their concerns, and maybe they can better understand the issue about waste not coming and be blunt about it. He stated he had worked from both sides. While working at Yucca Mountain he raised scientific and legal issues and received recognition from NRC. He stated he is open if the CAB would be interested to raise some of the questions about why there is so much opposition from the state of Nevada and also statewide, and to just be informative because he would not to take any side. Here are the issues, here are both sides.

Ms. Lee Harley-Fitts, member of the CAB, stated that she had listened to the report he gave in regards to the SRS Recovery Act project. She thinks it is just real exciting that we are getting some jobs for folks. She also want to remind everybody that it was also a turnout at Allendale County of 2,000 or more people and there is a great concern in our community that we don't know whether Allendale is being looked at when it comes to the job. We have gotten some jobs, but when you say 800 plus and you are still hearing people with college and people who have very good skills be unemployed, it is a deep concern. So she asked everyone for consideration and please look at Allendale County. It may be a small community, but it is part of the hub and there are people who really truly, truly want to work. The unemployment rate is at 20% or above. She said she may have those numbers wrong, but she knew it is pretty high for the state. She asked for as much consideration as possible and look at these qualified applicants as possible. Thank you.

Response from Chuck Munns: I would just say that we surely are and we surely will. Good comments, thank you.

Charles Utley: As we corral up the contamination in the containers from various parts of the country and bring them to SRS, I am very interested in seeing that we keep our focus. What I am saying is do not bring more than we are able to take care of. Don't want to have stockpiles and nowhere to put them. I have heard that you are hoping to get some help from TVA if perhaps your start with MOX. But if that doesn't come through, what are you going to do with it? I want us to also stay focused. Stay focused on alternatives for energy. That is, if we have resources and I was glad to hear that you are working on wind and air and using the solar from our coastal non-beaching areas. I am also interested in making sure that when we don't stockpile that we remember those who live in the perimeters of Savannah River Sites. Let's not forget that there are Allendales and there are other communities around the site. And we don't want anything to happen to those residents that are living in those areas. And I want to beg you, plead with you, that we look diligently to what we are going to do as stewards. We don't have but one Savannah River. If plant Vogtle is going to pull on it and I understand there is leaching going in from the other's contaminants. We have too much pulling on one source and yet we have a cry in Atlanta. Atlanta is saying that they have a drought—no water and they want to pull from Lake Lanier, they want to pull from Clarks Hill. They want to pull from Savannah River. But if we have problems with Savannah River Site putting in contamination, plant Vogtle putting it out, what about the residents? Let us be stewards and let us not put economics where we can't be good stewards for what we have been given in charge of taking of our land, our water, and our resources. So I am saying don't forget that there is life after SRS. I will submit this comment in writing.

Tom Clements, Friends of the Earth. I wanted to thank Helen. I am going to be in a call with Headquarters on Monday about Recovery Act funding. Helen took a good bit of time to answer some questions, much more detailed than her presentation today, that I asked of her and I just wanted to thank her for having taken the time to do that. I think that I can send this e-mail to anybody if you want to get down into some of the knitty-gritty on the Recovery Act funding. I would add that I went to the Allendale job fair. In some ways it is encouraging, but it is also a daunting thing when you look at how many people are unemployed in South Carolina, particularly in some counties like Allendale. So I hope the Recovery Act has some affect. There is concern if the money can be spent effectively in two years, which I know a lot of you are concerned about. I wanted to thank Joe for a presentation about the gears and the question that Don asked. I was rather struck by the 400 canisters per year goal. I had never heard anything quite like that, and I hope that this is examined in more detail. It would be great if this can be reached safely. I have some doubts about it and I was joking with somebody saying that Harry Potter must have shown up at one of the job fairs because it may well take some magic to get to the 400 canister level. There was a brief mention of the MOX issue, and I want to add that Duke's reactor Catawba Unit 1 was supposed to irradiate some test assemblies for three fuel cycles, but they only did it for two. There was some consideration to put that fuel back in for a third cycle. Three cycles are necessary, particularly if the fuel does not go back into Unit 1, TVA is going to have to do a full three cycle lead test assembly irradiation. This is going to take about eight years. There is currently no place in France that is licensed to handle weapons grade plutonium. The facility at Catawba that fabricated the Catawba Unit 1 lead test assemblies is closed down. MOX would have to get a license amendment, so there could be eight more years tacked onto that program. Just because TVA is interested, does not mean they can pull it off. Finally, I wanted to thank the CAB for raising various issues with the DOE because I think what you do does make a difference. I am aware that quite a number of citizens recently wrote to Secretary of Energy Steven Chu concerning one particular presentation made by the Deputy Assistant Secretary to Ines Triay. Some of you may have been at the Site Specific Advisory Board National Meeting in March when Mr. Gilbertson said that Recovery Act funds were going to be leveraged into an Energy Park at Savannah River Site. I was at that meeting and I heard what he said and DOE has now backed away from this because it was pointed out by quite a number of citizens to Secretary Chu. He read the letter, "You express concern that officials said that stimulus funds being provided by the Office of Environmental Management could be leveraged into creation of an Energy Park at SRS. I want to clear up any misconceptions. Let me assure you this is not the case." So because of citizen interest DOE is now has changed their position and I appreciate them having the courage to do that publicly in letters to a lot of people. I was glad to hear there was going to be this August 18th meeting on the Energy Parks. DOE got the cart way before the horse on pushing for this at Savannah River Site and at Piketon as I mentioned earlier. In a letter July 7 to me the Office of General Counsel said that "my office and DOE Savannah River Operations Office are in active discussion and the Operations Office is currently working to establish a process that will provide transparency and meaningful public participation in relation to plans to utilize land at the site as an Energy Park and with regard to relative NEPA procedures." So I am going to take it that at the August 18th meeting DOE has listened to the public and to the CAB and they are pulling back and they are actually going to take some public input as we push forward with future use of the site. I think what you are doing can have a great influence on DOE as the public, and I just thank you for continuing to dog as you need and congratulate when you should. Thank you.

~End of Public Comments ~

Meeting adjourned at 4:00 p.m.

Documents listed herein are available at the SRS Citizens Advisory Website

Solid Waste Update

Presentations by Bert Crapse and Mike Simmons, DOE-SR

Plutonium Consolidation Program Update

Presentation by Allen Gunter, DOE-SR

Recovery Act Project Update

Presented by Helen Belencan, DOE-SR

FY2009 and FY2010 Funded Integrated Priority List
Presented by Lance Schlag, DOE-SR

Site Performance Metrics Recommendation #265

Overview of Savannah River Remediation
Presentation by Jim French, SRR

Congratulations to DOE (*letter*)

Area Closure Projects – New Technologies on the Horizon
Presentation by Chris Bergren, SRNS