

GOVERNOR'S NUCLEAR ADVISORY COUNCIL

MINUTES

March 13, 2008

Room 209 Gressette Building

Columbia, South Carolina

Members present: Chairman, Mr. Ben Rusche, Dr. Vincent Van Brunt, Dr. David Peterson, Mr. Bill Mottel, and Dr. Carolyn Hudson.

Absent: The Honorable Greg Ryberg, the Honorable Robert Perry, and Mr. Steve Byrne

Staff present: Mr. Michael D. Hughes, and Mrs. Catherine Vanden Houten

Transcribed by: Mr. Michael D. Hughes

I. Welcome, Opening Comments, and Approval of Minutes

The Governor's Nuclear Advisory Council convened on March 13, 2008, at 1:00PM. Mr. Ben Rusche, Chairman of the Council, called the meeting to order and welcomed the speakers and guests.

Chairman Rusche asked for a motion that the minutes from the December 06, 2007 meeting be approved. Dr. Carolyn Hudson moved to approve the minutes. Dr. Van Brunt seconded the motion. The minutes were unanimously approved.

Chairman Rusche introduced the first two speakers, Mr. Larry Ling speaking for Jeff Allison, DOE Site Manager, and Mr. Dave Olson speaking for Leo Sain of Washington Group International.

II. SRS Update

Mr. Ling gave a status report on contract issues at the site that consisted of the Management Operating Contract and the Liquid Waste Contract. Mr. Ling reported Savannah River Nuclear Services was selected on January 10, 2008. Savannah River Alliance filed a protest on the selection on January 22, 2008 which is going through its due process. RFP's were submitted on the Liquid Waste Contract. That award is

expected to be made late summer or early fall but prior to end of the Deputy Secretary of Environmental Management's administration. Mr. Ling then presented Mr. Dave Olsen.

Dave Olsen reported 2007 was the best safety year on record with thirty percent improvement over 2006. Work going on around the site included the completion of the burial ground as far as physical work. The P Area Reactor and Raw Materials Area are in progress. Solid waste has shipped 27,000 drums to the Waste Isolation Pilot Plant, and has less than 5,000 drums to go. Mr. Olsen projected shipments would be completed in 12 – 18 months. In H Area the facilities continue to process materials from L Basin spent fuel as well as KAMS (K Area Material Storage) for plutonium. He said that work continues to determine the best pathway for final disposition. DWPF poured its 2400th canister at the end of the calendar year. DOE finished their operational review of the interim salt processing projects. Authorization for startup should be as early as next week.

In terms of contracts, there is a lot of anxiousness and anxiety over what's coming and when it's coming and dealing with the change. DOE and WSRC have implemented a human performance improvement program as a way to avoid making mistakes and reduce error rate that would prevent significant events from happening. Chairman Rusche asked if that was a protocol that is widely used. Mr. Olsen replied that it came from Nuclear Navy.

Chairman Rusche then welcomed Mr. Larry Ling back to address DOE status of liquid waste disposition.

III. SRS Liquid Waste Disposition Status /Salt Waste Processing Facility Status

Mr. Ling reported on the interim salt processing. Significant progress has been made. Completion of the operational readiness review should allow start-up in a couple of weeks. Close to a million gallons of low activity salt has been processed and disposed of in the salt stone facility. Cleanup and treatment of tanks 18 and 19 is proceeding with provisions for closure. Chemical cleaning on tanks 5 and 6 is taking place as well. Chairman Rusche asked whether there is adequate financing in the budget to continue at the current pace. Mr. Ling responded that their budget for 08' and 09' is good and it's important that progress is shown and made.

Chairman Rusche then introduced and welcomed Mr. Tony Polk and Mr. Mark Breor. Mr. Polk introduced Mark Breor with Parsons to the council and audience. Mr. Polk stated that SWPF continues to perform safely and from a budget perspective continues to be supported very well from Congress and headquarters. Mr. Polk also reported that senior executive, Zach Smith from the DOE, will take over as the project director and that he (Smith) will move to the deputy position.

Mr. Mark Breor then spoke on Parson Technology Center. Mr. Breor said they are an operating facility now but still have a long way to go. The laboratory equipment is installed, classrooms are being built and test equipment is being brought to the facility. Mr. Breor covered the mission of the salt waste processing facility which is to remove high activity from bulk salt solution. He reported they will be able to process 23,000 gallons in 21.6 hours which equates to 7 million gallons per year and a concentration factor greater than twelve. Mr. Breor also reported on the design requirements for the radioactive waste that they will be handling in regards to confinement to include

processing vessel cells, and ventilation systems. Mr. Breor then introduced lead design and technical assistant, Jack Casper.

Mr. Casper reported on the technical details of the facility that included the schedule, design and current status of the project. He's been with the project for 5-1/2 years and projects that the SWPF will process 30 million gallons. The process operations covered were the Alpha Strike Process, Solvent Extraction Process, and Bulk Salt Solution Process /Alpha Finishing Process. He reported the SWPF is the heart of the processing operation. Mr. Mottel asked when they were going to get to the specifics of making it work. Mr. Casper replied that he will be covering the schedule.

Mr. Casper stated that the Plant itself is simple in terms of process technology, but not simple in application. All technologies have been tested in full-scale applications. They know the process will work once all the hardware is installed in the plant. Dr. Van Brunt asked if there has been any work done with the rotary filters. Mr. Casper noted in the past tests that they have determined that the cross-flow filter had many more benefits as it has no moving parts. Mr. Casper presented slides of the full-scale test of the different filters, filtration loop with pumps, and solvent extraction system. Mr. Casper reported that they are in enhanced final design with limited construction. The plan is to complete construction in 2011 and concurrently will be able to start some system testing and then go through a commissioning process. The plant is scheduled to begin operations in September of 2012. They are 90% complete on final design of the facility and concluded that they are on schedule. Chairman Rusche asked where the cesium goes when it's separated. Mr. Casper said the cesium goes out as part of the strike affluent stream. The strike affluent is what carries away the cesium that goes to the defense waste

processing facility. Chairman Rusche then asked if DWPF will have the capacity in the next twenty years to do all that's needed. Mr. Casper said they are doing a time analysis and are confident that they will be able to meet the demand. Mr. Mottel then commented on Mr. Casper's presentation and asked if he could predict when it will happen and if the project was funded properly. Mr. Breor responded that they are funded in the current budget cycle that will cover through the next year. The dollars in 2008 are confirmed and the dollars in 2009 are committed and both Congress and headquarters support fully funding the facility. Chairman Rusche then commented that from a technical standpoint the project is very promising but is not absolutely certain in terms of the funding. Mr. Peterson then asked how long it will take to complete processing of all the available salt. Mr. Breor said that schedule is currently 2028. Dr. Van Brunt committed that 2028 is later than what they had previously heard and is interested in the water balance recycle. Mr. Breor said the process capacity for the SWPF is 9.4 million gallons per year and they could finish process operations in about ten years. Dr. Van Brunt then asked what the ratio in terms of the ability to operate verse the ability to have available space to do it. Mr. Breor said in terms of timing they could finish in 2022. Dr. Van Brunt then asked if we need more tank space. Mr. Olsen responded that the answer is they could use more tank space because it's been an issue with the tank farms through the years and continues to be something that has to be closely monitored. Dr. Van Brunt then asked if it is possible to add an additional tank. Mr. Olsen said that they are looking at the possibility of a lag storage facility to assist. Dr. Van Brunt stated that he wants to make sure that we can meet the demands here. Mr. Mottel also stated that we have got to do better than what we are doing.

Chairman Rusche then called on Mr. Breor to brief the council and audience on the Parsons Technology Center.

IV. Parsons Technology Center

Mr. Breor reported on the renovation of the 48,000 square foot facility in Aiken South Carolina for the Center. The location helps to maximize the collaborative effort between the engineers and the activities that will be taking place in the technology center. The mission of the center is to provide a test platform for salt waste as well as testing other projects within Parsons. Mr. Breor added that the facility will have training classrooms with simulators that will be actual simulator for the operations center. The facility, because of its size, will allow full-scale testing. Additionally, it will be hands-on for the people that they will train as far as the test equipment. Mr. Breor said a good training curriculum will have to be established for the next generation. The design of the facility will be able to accommodate that. The current status is that they are currently in the process of relocating some equipment from Barnwell for the center. They are also in the process of installing lab equipment that will support lab work and analysis preparations for the salt waste. Secondary containment is being installed to support the chemical storage area. They also just completed the layout of the simulator with respect to location and space that it will use. Mr. Breor reported that in the next 6-9 months they will finish the office space that will support the training and relocate two projects that are underway in Parsons to the new facility.

Chairman Rusche then introduced Clay Ramsey with NNSA.

V. MOX Update

Mr. Ramsey updated the council and audience on MOX. Mr. Ramsey's reported on the milestone and highlights of the MOX Project. The first four milestones have been met since the start of construction in August of 2007. They are on schedule and on budget. The construction on the process building is continuing and is on schedule with the foundation 50% complete. Construction has begun on the intermediate walls and floors of the building. The glove box assembly complex construction has started. The site preparation has begun on an electrical substation to support MOX and its sister facilities and construction should begin this summer. Mr. Ramsey reported that the project as a whole is 27% complete. The project had its first lost work-time accident in January 2008 since the project began. The license application to process plutonium and uranium that will be processed in the facility continues to be reviewed by the NRC. Review is a five year process and there have been no significant issues raised by the NRC to date. Chairman Rusche asked how the size of the MOX Facility compares to some of the French Facilities. Mr. Ramsey said it is comparable. Mr. Ramsey said funding has been reduced for the project this year for 2008. The project is requesting \$490,000,000 of new funding for next fiscal year. Due to the reduction in funding some of the non-critical path procurements have been slowed down. Some of the major upcoming milestones are the security barriers, processing tanks that are built into the facility, the main administration building, and the glove box assembly building. Chairman Rusche asked if have been any unexpected safety issues on the site. Mr. Ramsey said that there have not been any safety issues thus far. Chairman Rusche asked in addition to OSHA

safety programs, are there any internal programs in place. Mr. Ramsey said yes that both MOX services and DOE-NNSA are overseeing safety on the job site and they bring external groups in to review safety as well.

Chairman Rusche introduced Mrs. Cheryl Cabil, Deputy Director of SRNL, to give an update on SRNL.

VI. Savannah River National Laboratory Update

Mrs. Cabil reported that SRNL is the newest national laboratory in the DOE complex. They have expanded into supporting other initiatives across the DOE complex and other government agencies. The mission is to provide a broad range of capabilities to advance the use of safeguards to safeguard national defense, advance the use of hydrogen as an energy source, and to remediate the affects of hazardous and nuclear waste. The SRNL has a staff of over 940 people that equates to a research staff of 740. The average age of the workforce is 52. Mrs. Cabil reviewed the budget for 2007 of \$154,000,000 and actually executed \$162,000,000. Forty-five percent of the funding for SRNL comes from off-site sources such as other governmental agencies. Today SRNL not only supports the DOE complex, but other Federal agencies. Their customer base is diverse. The laboratory has a range of capabilities to include the Cat-2 Nuclear Facility, the maintenance of high-level cells, and to provide a support to the FBI and Homeland Security. Some of the focus has been to help design the process for the defense waste processing facility, and help develop the technology for nuclear detection capability. Their role in tritium processing continues with staff located in the facilities developing characterizations and remediation technologies. SRNL is involved in energy security with hydrogen production and hydrogen storage technologies, and expanding with

renewable energy technology research. Mrs. Cabil provided copies of the SRNL magazine, "Science at Work", to the Council. Mrs. Cabil say's SRNL has a strategic plan in place to increase the funding to support growth and double in 3 to 5 years. Mrs. Cabil concluded by offering the Council the opportunity to visit SRNL for a tour. Chairman Rusche asked if SRNL entertains challenges to deal with on-site activity. Mrs. Cabil responded that they do and it is very important. Dr. Hudson asked whether there will be a high-scale hydrogen facility at SRNL. Mrs. Cabil responded that there is growth in that direction and that it's not out of the realm of possibilities, but it's not the focus. Dr. Van Brunt asked if there was any possibility of expanding the meteorology support of the Fayetteville chlorine release. Mrs. Cabil responded that SRNL does provide support as requested and are able to provide predictions as well.

Chairman Rusche introduced Richard Haynes with DHEC to give an update on Barnwell.

VII. DHEC – Barnwell Status /Westinghouse Incident

Mr. Haynes gave a regulatory update on Barnwell and reported on a recent Westinghouse incident. On July 1, 2008, Barnwell will accept only compact waste disposal. Decommissioning will begin at that time as well to include the demolition of 10 non-essential buildings. The building residue will be placed in the landfill as well. This work will be funded by the decommissioning trust fund. Mr. Haynes reported that DHEC has an amendment to the R6130 regulation for fees to reflect inflation and revenue changes. Mr. Haynes said the early test reactor in Jenkinsville will be going through decommissioning and moving forward with building demolition in April that is projected to be completed in 18 months.

Mr. Haynes reported that on February 12, 2008, Westinghouse reported to NRC that they had lost control of two containers of simple tubes of uranium (UF₆). NRC issued a press release on the incident on February 15th. The tubes contained a total of 128 grams of uranium; six grams of which was U-235 that was enriched to 4.95%. Amount was not considered dangerous. The containers were inadvertently sent to either a landfill or a scrap-metal dealer. Neither was located. Chairman Rusche asked what the composition of the material was. Mr. Haynes said it was 6 grams of the 128 grams that were U-235. The department is working with the NRC to ensure that this type of incident doesn't occur again. Dr. Van Brunt asked if there is anything ongoing with the methodology of how they lost the containers. Mr. Haynes said that DHEC is working with NRC to address their procedures and any changes necessary.

VIII. Public Comments /Closing Remarks /Adjournment

Mr. Tom Clements representing the organization, Friends of the Earth, expressed concerns of his organization of the work around the DOE sites and the cleanup. Mr. Clements also congratulated the SWPF project. He feels that the funding should go to that program on an ongoing basis.

Mr. Ernie Chaput, with Economic Development Partnership of Aiken SC, offered comments about the high-level waste system and the SWPF. Mr. Chaput stated that the high-level underground storage tanks at the Savannah River Site are the single largest potential impact on public health and safety and the environment. Mr. Chaplet said he shares the concerns of Mr. Mottel of the status of the high-level waste program in what we know and what we don't know. He advised against complacency in moving forward.

Mr. Joe Talert, Chairman of the Waste Management Committee Citizen's Advisory Board, offered comments of concern for the budget situation for the programs on the site. Mr. Talert spoke of concerns of plutonium coming to the site and leaving the site; whether it leaves in MOX or some other form of vitrified waste. Chairman Rusche thanked the three individuals for their comments and asked them to provide written comments for the record. Chairman Rusche asked if there were any further comments. There were no further comments. The meeting adjourned at 3:50 PM.