

Governor's Nuclear Advisory Council

Meeting Summary

Thursday, September 8, 2011

Gressette Building, Room 209, 1105 Pendleton Street
Columbia, South Carolina

Council Members in Attendance:

Mr. Ben Rusche, Chairman
Mr. Steve Byrne
Captain Claude Cross
Dr. Carolyn Hudson
Ms. Karen Patterson
Dr. David Peterson
Representative Tom Young

Ms. Rebecca Griggs, Committee Staff

Call to Order – Adoption of the Minutes

Mr. Rusche called the meeting to order at 1:00 p.m. Ms. Patterson made a motion that the minutes of the June 2011 meeting be adopted. The motion was seconded. The minutes from the June 2011 meeting were adopted. Ms. Patterson requested approval to send a letter concerning the F Tank Farm Reasonable Assurance Decision to the US Nuclear Regulatory Commission and the US Department of Energy. The Council granted approval. Ms. Patterson also updated the council about the meeting she and Chairman Rusche attended which was held by the Defense Nuclear Facilities Safety Board in June 2011 concerning H Canyon.

Duke Energy Programs Update

Mr. Steve Nesbit, Director, Nuclear Policy and Support

Mr. Nesbit gave an overview of their nuclear operations as it relates to Oconee, McGuire and Catawba nuclear stations. He reported a very good year for their nuclear fleet with capacity for 2010 at 95.88 percent. They are continuing the development of the W.S. Lee Nuclear Station in Cherokee County, SC, based on Westinghouse AP1000 reactor design. Duke expects DHEC to issue the NPDES permit in summer 2012 and the NRC to issue the construction and operating license in late 2012/early 2013. In July 2011, Duke signed a letter of intent with Santee Cooper for Duke to assume five to ten percent of Santee Cooper's ownership interest in V.C. Summer Units 2 & 3. Mr. Nesbit also updated the Council on the standings of the Duke Energy – Progress Energy merger. They anticipate completing this merger by year end 2011. This completion is subject to regulatory approvals. This merger would give Duke Energy 11,631 MWe rated electrical capacity, the second or third largest in the country.

SCANA Update

Steve Byrne, Vice President Generation

Mr. Byrne updated the Council on SCANA's two new reactors being built in Jenkinsville, SC. These reactors are roughly 1000MW each and construction is on target. However, two supply vendors for the Jenkinsville project were impacted by the Fukushima incident. The impact was minimal and no potential

issues are expected. He also briefed the Council on the industry issued “The Way Forward”, a document detailing lessons learned from the Fukushima incident. This document was released prior to the NRC’s 90 day report which further details lessons learned from Fukushima. The NRC Commissioners will conduct a mandatory hearing regarding the acceptability of licensing the two proposed reactors on October 12, 2011 and Mr. Byrne indicated that SCE&G expects the combined operating licenses for the new units are expected to be issued by the NRC in late 2011/early 2012. In June 2011, Mr. Byrne visited the Sanmen site in China (where nuclear plant using an AP1000 reactor is already under construction) and reports construction is active and has remained steady, despite the Fukushima incident. Santee Cooper expressed to SCANA their desire to reduce ownership interest in their project. Current potential partners include: Orlando Utility Commission, Duke Energy and Florida Municipal Power Authority.

NRC’s Discussion of Preliminary Lessons Learned from Fukushima Accident

Robert (Bob) Trojanowski, Director of State and Governmental Affairs, Region II Atlanta

Mr. Trojanowski gave an overview of preliminary lessons learned from the Fukushima incident as the NRC has not yet released their official report. He reports significant core damage to Units 1, 2 and 3; however, electrical power has been restored to these units and freshwater used for cooling is being supplied at all units. There is suspected fuel damage in Units 3 and 4. There is a considerable radiological footprint in the environment surrounding Fukushima and a significant number of people surrounding this site have been displaced but there is a recovery effort underway.

The NRC headquarters has kept their operations center staffed 24/7 to gather facts and understandings for the lessons learned summary. Commission experts were dispatched to Tokyo following the incident to support, assist and advise the US Ambassador, John Roos, and to support and assist the Japanese Government. Very low levels of radiation from the incident have been detected in the US.

Additional inspections of all US plants were conducted relative to their vulnerability to earthquakes and tsunamis or flooding, and NRC concluded there were no significant safety issues. The NRC has scheduled near-term and long-term reviews of the Japanese incident. The near-term review, entitled “Recommendations for Enhancing Reactor Safety in the 21st Century”, was completed on July 12, 2011 and contains 12 recommendations for consideration to enhance safety. On September 9, 2011, NRC will review the 12 recommendations to determine which should be implemented, in whole or in part, without undue delay. On October 9, 2011, recommendations 2 through 12 on lessons learned from the Fukushima event will be prioritized. A schedule will also be developed to determine public and stakeholder input. The NRC is considering revising the regulatory scheme by March 2013. NRC’s long-term review will be based on the near-term review and will include additional insights from the Fukushima event. The review will identify potential technical and policy issues to include: research activities, generic issues, reactor oversight process, regulatory framework and interagency emergency preparedness.

Mr. Trojanowski concluded that the NRC has continued confidence in the safety of the US fleet and will continue with the licensing renewal and new reactor licensing activities. The commission will not hesitate to initiate changes to the agency’s regulatory and oversight activities, as appropriate.

SCDHEC Update

Shelly Wilson

Ms. Wilson updated the Council on the Savannah River Site acceleration of their cleanup and disposal schedule. Their goal was for the cleanup on sites located on over 200 square miles to be completed

with the ARRA funding. She reports SRS is well on their way to meeting this goal. DHEC provides oversight of the plans and reports and conducts independent samplings of the area.

SRS is celebrating the closure of P and R Reactors in September. SRS has a TRU waste disposal completion goal of 2012. DHEC is pleased to facilitate acceleration of shipment of this waste to New Mexico for disposal. They have done this by approval of using multiple areas of SRS for repackaging and preparation of this waste for shipment.

The F Tank Farm general closure plan was approved by DHEC in January 2011. DHEC is currently reviewing the closure module for tanks 18 and 19. The most recent comments about this closure module were sent by DHEC on August 25, 2011. The milestone for closure of tanks 18 and 19 is December 2012. DHEC also concurred with initiating bulk waste removal from tank 7 on August 17, 2011.

The goal for completion of all HLW salt treatment is 2028. SRS intends to accomplish this by processing HLW salts through the Salt Waste Processing Facility which is currently under construction. This facility has experienced some delays and DHEC has conditionally extended the required startup date to August 31, 2015. These conditions include: completion of next generation solvent testing by 2012, treatment of six million gallons per year by 2017 and treatment of a minimum of eight million gallons per year by 2018. All three of these measures require accelerated treatment of the waste in order to make up for the delay in startup. Recent changes also reduced the curie limit disposed to 0.8 - 1.6 million curies.

DOE-Savannah River Update

Zack Smith, Acting Deputy Manager, DOE-SR

Mr. Smith updated the Council on a few organizational changes. Dr. Inez Triay and Dae Chung have stepped down. Dave Huizenga is acting Assistant Secretary for Environmental Management. Tracey Mustin will replace Dae Chung and serve as Principal Deputy Assistant Secretary for Environmental Management.

Mr. Smith also reiterated Ms. Wilson's comments on the closure of the P and R Reactors, which were completed ahead of schedule and below budget.

1,800 cubic meters of the 5,000 cubic meters of legacy TRU waste have been dispositioned by disposal in WIPP. More than 3,400 cubic meters have been processed and prepared for final dispositioning. The first TRU PAC III shipment has been sent from SRS to WIPP. The TRU Pad 1 closure plan has been completed and submitted to DHEC. The workforce has diligently worked to determine work-process improvements. One improvement has already been implemented which is believed to increase production rates no less than 10 percent over the remaining year of the TRU program.

The Council expressed concern with the turnover and continuity of personnel but Mr. Smith reassured them the core staff has remained in place for the past two years.

DOE-NNSA Update

Scott Cannon, Acting Deputy Manager, NNSA-SRSO

Mr. Cannon gave an update on the NNSA programs at SRS. An administrator visited SRS and spent time in the tritium facilities and toured the MOX construction site. He also conducted an all staff meeting with NNSA and contractors which was very positive. Mr. Cannon also updated the Council on the Tritium Response Infrastructure Modification which modernizes the infrastructure. Two new facilities

will be breaking ground in October 2011; a number of smaller projects also are planned. Bob Osborne is heading the "One NNSA" initiative to integrate business processes through reorganization. There have been no safety or security reportable incidents at the tritium facilities and they have met all of their milestones. The program office challenged them to bring the first quarter 2012 shipments up into the last quarter of 2011. This would bring a 300% increase to their plan. This is on schedule to be completed.

SRNS Update

Fred Dohse, Executive Vice President and Chief Operating Officer, SRNS

Mr. Dohse gave an update on workforce restructuring and Enterprise SRS. In September 2011, SRNS had a reduction in force of 184 people. That brings the total number of released employees to over 1000 in the last nine months. These reductions were the result of budget cuts. However, SRNS provided transition assistance and has helped 100 of those released employees find new employment. In October/November 2011, approximately 75 more employees will be released.

Enterprise SRS is a new initiative which takes the national lab and uses it as an engine for new missions for the site. The programmatic aspects of new missions will focus in the lab. They will reorganize their functional areas to provide a more transparent business model for customers.

The Council expressed extreme concern over the number of released employees and is worried about the safety and security impacts these downsizings may have on the Site. Mr. Dohse reassured the Council that no safety or security measures have been compromised through these downsizings.

SRR Update

Dave Olson, President and Project Manager, SRR

Mr. Olson announced they will be bringing an operations manager, Stuart MacVean, on board in October 2011. SRR has set records in safety and construction this year and had their best operations and environmental compliance year yet. He also reiterated what Ms. Wilson presented to the Council about tanks 18 and 19's closure. Tanks 5 and 6 are the next ones scheduled for closures and are in final waste characterization. The projects conducted with the \$200 million received from the ARRA are wrapping up. They had 98 people take a voluntary separation this year due to the ARRA funds ending.

H Canyon Update

Patrick McGuire, Assistant Manager for Nuclear Material Stabilization Projects, DOE-SR

Mr. McGuire updated the Council on H Canyon and HB Line as it relates to the disposition of the surplus uranium and plutonium. HB Line is the primary plutonium disposition facility. In February 2011, SR discontinued the liquid dispositioning of the plutonium in H Canyon and is no longer dissolving it and sending it to DWPF. They began a program which takes the surplus plutonium and repackages it in a dry mechanical process in HB Line into certified containers and ships it to WIPP for disposal. The first 35 containers are expected to be ready to ship by October 2011. 85kg have been approved to dispose in WIPP using this process by summer 2012. This is a very small amount of plutonium compared to what is on Site; however, this will demonstrate the capability of this alternative disposal program.

H Canyon is continuing to blend down highly enriched uranium which is then shipped to Irwin, TN to be fabricated into commercial fuel for TVA reactors. This will continue through the remainder of 2011. After the end of 2011, H Canyon will not begin the next campaign, at the direction of Sec. Chu, until the Blue Ribbon Commission issues its final report and the report is evaluated by the Department. Because

used fuel is not currently allowed to be processed, the spent used fuel will continue to be stored in L Basin. There are challenges with some of the fuel types and SR is working to address these challenges.

Used Fuel Storage Program

Bill Bates, Director, Nuclear Material Storage Project, SRNS

Mr. Bates provided the Council with an overview of the used fuel storage program and discussed the L Area facility operations. The basic mission of the L Area facility is to receive and store used nuclear fuel which includes foreign research reactor fuel and domestic research reactor fuel. Mr. Bates then provided a map demonstrating how fuel is moved to storage (see his presentation). There are approximately 15,000 assemblies or elements in the basin. SR expects to receive approximately 8,400 additional assemblies by 2019.

Mr. Bates discussed some of the fuel-handling challenges. A subset of stored fuels is vulnerable to oxidation because it has been de-clad, damaged or intentionally cut. There are approximately 500 sealed and vented cans which provide the primary containment for the exposed fuels. These cans are in secondary containment. The challenge comes in handling and packaging these exposed cans for disposition. There is a risk of basin containment and cleanup.

There are programs in place to minimize corrosion and oxidation. They include a water chemistry control program, basin structural integrity reviews, and augmented surveillance and maintenance. SRS's used nuclear fuel receipt mission will continue through 2019 and storage will likely extend beyond 2019. However, augmented security and maintenance is recommended for extended storage.

Mr. Young and other members of the Council expressed concerns as to DOE's plans to continue to accept used nuclear fuel by 2019 and efforts to process that fuel on site. There were also concerns expressed regarding DOE's commitment to move the fuel out of the state.

SRS Strategic Plan

Doug Hintze, Assistant Manager for Integration and Planning, DOE-SR

Mr. Hintze provided the Council with insights and rationale for the new SRS vision – Enterprise SRS. The heart of the future vision for SRS is the idea that unique nuclear materials expertise and assets reside at the Site which can be used to the benefit of the nation. Three global business segments are the natural outgrowth of the resident skills at SRS: clean energy, environmental stewardship and national security. National security and environmental stewardship already fall within the established framework for SRS. SRS expects a lot of growth in the clean energy and national security segments. The new Enterprise SRS vision takes a combination of things SRS already does well and new missions. SRS has determined 12 strategic initiatives that will help achieve the mission of Enterprise SRS. These initiatives include:

1. Establish Center for Applied Nuclear Materials Process and Engineer Research
2. Develop solutions to close and better secure the nuclear fuel cycle
3. Accelerate liquid high level waste dispositioning
4. Accelerate deployment of small modular reactors
5. Deliver disposition paths for nuclear materials
6. Leverage and revitalize site assets (facilities, people) to solve national and regional issues
7. Increase helium-3 supply to aid nuclear nonproliferation
8. Reduce greenhouse gas emission via clean alternative energy projects
9. Develop and deploy next generation cleanup technologies
10. Establish Advanced Center for Nuclear Forensics and Attribution
11. Implement modifications to tritium infrastructure

12. Expand reach and impact of National Center of Radioecology

The official rollout of Enterprise SRS will occur during the P and R completion ceremony on September 29, 2011.

In summary, Mr. Hintze stated that SRS is not a closure site. DOE is committed to excelling at the current missions. A high priority is being placed on developing broader missions for SRS to serve national needs. The new strategic plan provides the framework for both current and developing missions.

Public Comments

Mr. Rusche asked if there were any public comments.

Mr. Tom Clements, a member of Friends of the Earth provided comments on Enterprise SRS. He stated that he submitted his comments on August 30, 2011 and expressed concerned that because the plan was already seeking approval, his comments were not being considered. He feels the plan is highly speculative and is concerned about funding sources.

Mr. Clements was pleased to hear Rep. Young mention his concern about high level nuclear waste being housed at SRS. Mr. Clements then made reference to the Op-Ed he authored on August 29, 2011, the day the Blue Ribbon Commission's draft report was released. He expressed great concern for reprocessing at SRS. He assured the Council that forces are already aligning to oppose SC becoming a short-term Yucca Mountain and that more waste should not be brought into SC without any pathway out. He does not regard reprocessing as a disposition pathway because he feels there would be so many waste streams that would be left on site.

Mr. Clements also expressed concern about the MOX program. He briefed the Council on the language from the House Energy and Water Committee markup from the Senate on September 7, 2011 which he feels parallels what the House said.

Closing Remarks

Mr. Rusche thanked the speakers and adjourned the meeting.