

**SOUTH CAROLINA NUCLEAR ADVISORY COUNCIL
MINUTES**

December 1, 2005
Room 209 Gressette Building
Columbia, South Carolina

Approved March 2, 2006

Members present: Chairman – Mr. Ben Rusche, The Honorable Greg Ryberg, Dr. Carolyn Hudson, Dr. Vincent Van Brunt, Mr. Bill Mottel, Dr. David Peterson, and Mr. Steve Byrne

Absent: The Honorable Robert Perry

Staff present: Ms. D’Juana Wilson, Mr. Michael Hughes

I. Welcome and Opening Comments

The Governor’s Nuclear Advisory Council convened on December 1, 2005, at 1:30PM. Mr. Ben Rusche, Chairman of the Council, called the meeting to order and welcomed the speakers and guests.

II. Approval of Minutes, September 15, 2005 meeting

Mr. Bill Mottel moved to approve the minutes from the September 15, 2005 meeting. Dr. Vincent Van Brunt seconded the motion to approve the minutes. The motion carried unanimously. Chairman Rusche asked for any comments from the audience before beginning the agenda.

III. Westinghouse Nuclear Fuel Facility presentation

Chairman Rusche welcomed Sandy Rupprecht, Vice President of U.S. Fuel for Westinghouse and thanked him for keeping the council up to date on what’s going on at the facility. Mr. Rupprecht thanked Chairman Rusche and stated that he did not expect such a large crowd today but looked forward to comments from the audience. Mr. Rupprecht said he’s been with Westinghouse for 25 years and for the last ten of those

years spent his time strategically looking at the Nuclear Industry and twenty-five percent of the nuclear power plants shutting down because they weren't economical. Mr. Rupprecht then turned to today's circumstances. Mr. Rupprecht's presentation consisted of a brief overview of Westinghouse activities with emphasis on the Columbia site. During the presentation Mr. Rupprecht talked about Westinghouse being sold in January and speculations on who would purchase the company. Mr. Rupprecht stated GE, Shaw, Mitsubishi, and Toshiba were four possible groups with interest in Westinghouse. During Mr. Rupprecht's presentation he noted that about ten percent of the electricity generated in the United States comes from fuel that's produced in Columbia.

Mr. Rupprecht concluded his presentation by opening the floor for comments and/or questions. Mr. Steve Byrne asked if Westinghouse was still shipping raw material to GE. Mr. Rupprecht replied that they were not shipping any raw material from Columbia to GE. Mr. Byrne then asked if Westinghouse has evaluated an incident that took place at a Japanese fuel fabrication plant a few years ago against their practices. Mr. Rupprecht replied the short answer is yes, but it's not a one time event where they've evaluated their processes. He said usually the question he gets is could the same thing happen in Columbia where an uncontrolled mixing of uranium products could produce a criticality event. The Japanese event was a wake up call for the entire industry even though there were already safe guards in place. Mr. Rupprecht stated they re-evaluated all their operations processes. Mr. Rupprecht represents Westinghouse in an international group of fuel fabricators that get together once a year where best practices are shared. The evaluation is an on going process for Westinghouse.

Senator Ryberg asked what the potential growth for the Columbia facility is if GE buys Westinghouse. Mr. Rupprecht replied the growth potential is for this facility about another ten to fifteen percent of current load. Further growth would require a decision on the existing facility or building a new facility. Mr. Rupprecht said that there are projections now for expansion to come on line at about 2015 by the participants. Mr. Rupprecht said he sees growth with people now talking not just conceptually, but with money. He said the Columbia site is appealing to a new buyer because of the existing license and the capability to expand as well.

Dr. Vincent Van Brunt asked Mr. Rupprecht if he could indicate to the Council how many pellets Westinghouse made for GE and roughly what the dynamics were. Mr. Rupprecht replied that he could not because of a binding agreement he has with the parties. He stated that it was a substantial amount for a period of time while they were down.

Mr. Byrne asked about the status of the Missouri facility that was recently purchased by Westinghouse. Mr. Rupprecht replied the Missouri facility is being torn down completely and all operations are being moved to Columbia.

Chairman Rusche then asked Mr. Rupprecht if there was any connection between the sale of the fuel that Westinghouse is preparing and the subsequent waste treatment consideration that the purchaser has and if he has any connections with the tail end of the fuel cycle. Mr. Rupprecht replied no, they did not at this point. He also said they don't plan to because of the competition and the margins. He stated that all he does is receive uranium for VC Summer for example and supply it in the form of pressed pellets. Chairman Rusche replied, it's an important point and valuable to know that there's no

connection in what you do and the end of the cycle. Chairman Rusche then asked if there were any other questions from council or audience. There were none. Mr. Rupprecht invited council members to visit the site. Mr. Bill Mottel stated that he would like to know what happens to the spent fuel at another meeting or forum. Mr. Byrne said he would be glad to get on the agenda to talk about spent fuel.

[\(Click here for a copy of Sandy Rupprecht's presentation\)](#)

IV. MOX Fuel Program at NNSA /WSRS

Chairman Rusche introduced Mr. Ken Bromberg of Washington, D.C. and Mr. Sterling Franks both of the National Nuclear Security Administration (NNSA). Mr. Bromberg's and Mr. Franks' presentation was a brief overview of the NNSA's plutonium disposition program to include the following: the program objectives; U.S. plutonium disposition process; a definition of Mixed Oxide (MOX) fuel; the use of MOX fuel internationally and the U.S.; MOX fuel fabrication process; U.S. plutonium disposition facilities; recent accomplishments of the program; site preparation activities at SRS; and U.S. /Russian next steps.

Chairman Rusche asked if the protocol has been worked out as to how MOX fuel is produced as pellets and incorporated into fuel to be used in U.S. reactors; and has it been determined that a plant at Savannah River Site (SRS) will be handling MOX fuel pellets for American fuel. Mr. Bromberg replied now there is a contract that provides options for the design, construction, and operation of the fuel fabrication facility with the consortia of Duke Engineering Services, Kojima, and Shaw and Duke Power. This facility would supply fuel to four reactors in North and South Carolina. Chairman Rusche then asked if there is a connection between the Westinghouse fuel processing

plant and the fuel manufacturing plant. Mr. Bromberg replied that he did not see any connection at this time. Mr. Franks added that its clear there will be a need for zirconium cladding. Whether it will be done in Columbia or by some other competitor has not been decided. Chairman Rusche stated that its interesting and asked Mr. Byrne for comments in regards to VC Summer's reactor. Mr. Byrne replied that they have no current plan to use MOX fuel.

Senator Ryberg asked Mr. Bromberg what was the probability of beginning construction of the MOX fuel facility in 2006. Mr. Bromberg replied that the probability was very good that the department is committed to it and has requested funding in the 2006 budget. Mr. Bromberg also stated that the funding wasn't as high as they would have liked but it's sufficient to start the construction. Senator Ryberg asked when this project would become operational. Mr. Bromberg replied that is was largely dependent on the funding that is available. With all the needs of the U.S. Government, it looks like it will be around 2010-2014 time frame. Senator Ryberg asked Mr. Bromberg whether he thought the commitment was really there to move forward. Mr. Bromberg replied that they have the funding to start construction and Congress is committed to proceeding but the schedule depends on budget funds becoming available.

Mr. Mottel asked Mr. Bromberg if there was going to be a manufacturing group. Mr. Bromberg replied that he could not answer that question because of a problem in the U.K. about which they have not been actively involved.

Mr. Byrne asked who fabricated the fuel that was currently being burned. Mr. Bromberg replied that it was the French company, Cogema. Mr. Byrne then asked whether MOX produced at SRS, would be made into assemblies at SRS. Mr. Bromberg

said yes they would. After there were no more questions, Chairman Rusche thanked Mr. Bromberg and Mr. Franks for their presentations.

[\(Click here for a copy of Ken Bromberg's and Sterling Franks' presentation\)](#)

V. SR Salt Waste Treatment Process

Chairman Rusche introduced Mr. Terry Spears of DOE SRS to update the Council on development of the SR salt waste treatment process. Mr. Spears and Mr. Hansen reported to the Council. Mr. Spears stated that the objective is to safely and effectively dispose of 33 million gallons of salt waste currently in tanks at the site. Mr. Spears noted that progress has been made with salt processing over the last several weeks including resolution of an issue raised by the Defense Nuclear Facilities Safety Board. Mr. Spears stated that the issue involved SR's salt waste processing facilities confinement approach. Mr. Spears first provided background information for the general audience noting that the Council was familiar with the Salt Waste Processing Facility (SWPF). Mr. Spears regretted the delays in the project, but remains positive because the new confinement process is protective of the workers as required. Mr. Spears also said it satisfies the Board's expectations for positive confinement of radioactive materials and resolving issues raised by the Board.

Mr. Spears stated the issues as:

In accordance with DOE orders and standards, the preliminary design hazards analysis for the SWPF called for the confinement features of the facility to meet Natural Phenomena hazard (NPH) Performance Category (PC) – 2 Standards.

In August 2004, the DFNSB raised these issues. The Board indicated that the standards relied upon were inconsistent and not adequate to make a valid determination as to what the performance category should be.

The Safety Board concluded that a designation of PC-3 for the SWPF was necessary for worker safety.

Mr. Spears reported the current status as:

The Department has considered several options for assuring adequate confinement;

With cooperation of the DNFSB and their technical staff, the Department has resolved the issues identified by the Board;

DOE determined that the most prudent course of action for the SWPF is to design a PC-3 confinement barrier housed within a PC-3 building;

This approach meets DNFSB expectations and is consistent with other facilities being designed in the DOE complex.

The path forward is:

November 21, 2005, the Deputy Secretary of Energy approved the path forward for the resolution of DNFSB confinement issues as:

<u>Activity</u>	<u>Target Date</u>
Inform the DNFSB of DOE's decision	11/23/05 – Complete
Direct Parsons to proceed with Enhanced Preliminary Design	11/23/05 – Complete
Parsons submit a proposal for completion of remaining project work	Fall 2006

In Summary:

The decision to proceed with a PC-3 confinement concept allows the SWPF project to move forward and will require significant additional design rework. The SWPF project team is committed.

Following the presentation, there was a brief discussion and Mr. Mottel asked if DWPF would pass the PC-3 test today and the answer was “yes.” Dr. Van Brunt wanted to know if the delay would require a new infrastructure. Mr. Spears stated that he would like to follow up on this in a month or two because there is no change in the timeframe at this time. It was reported that funding is always a challenge, but, they have been able to secure funding from Congress. Dr. Van Brunt asked if there were additional life cycle costs associated with the delay and Mr. Spears reported that for everyday of the delay, the costs go up.

Mr. Mottel and Dr. Van Brunt expressed the sense of urgency to this matter, and it was discussed that scheduled meetings will be held with Mr. Spears and his colleagues to receive updates.

Mr. David Wilson, SC DHEC, stated that from the Department of Health and Environmental Control’s standpoint, it is of great interest for him to know that all parties recognize the need to move forward quickly. Mr. Wilson did express disappointment in the current status and suggested that a process be put together that allows all parties to move ahead expeditiously.

Chairman Rusche suggested that the Council invite the Defense Board to the meeting to give an update and hear and discuss concerns and let them know that the Council has an interest in working together.

VI. Barnwell Re-Licensing Update

Mr. Henry Porter, SC DHEC, reported that in October 2005, the Administrative Law Clerk (ALC) issued the Order based on the final hearing. The conclusion of the order reads:

“IT IS HEREBY ORDERED that DHEC’s decision to renew Radioactive Material License No. 097 issued to Respondent Chem-Nuclear Systems, LLC, for the operation of the low-level radioactive waste disposal facility in Barnwell, South Carolina, is SUSTAINED. However, IT IS FURTHER ORDERED that, in light of certain known problems related to the potential for groundwater contamination on and near the site raised during these proceedings, Chem-Nuclear must conduct a study, as outlined above, concerning methods to reduce contact between radioactive waste and rainfall and other water at its facility, and must submit the results of that study to DHEC within 180 days of the date of this Order”.

He discussed the items discussed regarding rainwater issues. He also reported that the Sierra Club has appealed the ALC decision to the DHEC Board. A hearing date for the appeal has not been set. The DHEC Board decision will be the final decision of DHEC but can be appealed to the State Circuit Court. Discussion followed regarding Post 2008 activities at the Barnwell site. Mr. Porter reported that DHEC used an external group to conduct a performance assessment of the site. The Council briefly discussed the report and its thoroughness. The Council asked if this was public information and wanted to know the determination of the assessment. Chairman Rusche requested that the Council review the report and begin thinking about the waste disposal beginning FY2008. Mr. Porter stated that he would be happy to provide copies of the report to the Council members.

A question was raised regarding the ruling by the Administrative Law Judge (ALJ) and the interpretation of “other” in the ruling. Mr. Byrne asked for clarification regarding information that Chem-Nuclear will have to provide to DHEC in response to

the issues regarding groundwater/rainwater storage and its impact. Mr. Porter stated that they are working with Chem-Nuclear to prepare this report and DHEC will determine the adequacy of the report. Mr. Wilson commented that the ALJ's decision has been appealed and any decision will go before the DHEC Board. Mr. Porter will inform the Council on when the matter will go before the DHEC Board.

VII. Comments /Questions from Attendees

Ms. Ruth Thomas addressed the Council. She said that she is pleased to hear of an idea of a cooperative effort. She said that issues and concerns will determine the future of many. After additional comments, Ms. Thomas requested a copy of the report on the National Academy of Science (NAS) Study.

Chairman Rusche stated that the NAS report is available in draft form as far as he knows. He assured her that the Council would be glad to assist her in obtaining a copy. She thanked him for his assistance. Mr. Terry Spears addressed a few concerns Ms. Thomas had about the report. She was asked to send her questions to the Council for a more direct response.

There being no further business, Dr. Hudson made a motion to adjourn. The motion was seconded by Dr. Peterson, and the meeting was adjourned at 4:15 PM.