Governor's Nuclear Advisory Council
Meeting Summary
Thursday, September 6, 2012

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

Council Members in Attendance:

Ms. Karen Patterson, Chairman
Mr. Ben Rusche
Mr. Steve Byrne
Dr. Vincent Van Brunt
Captain Claude Cross
Rep. Tom Young

Ms. Rebecca Griggs, Committee Staff

Call to Order – Adoption of Minutes
Ms. Karen Patterson called the meeting to order at 1:00 p.m. The Council delayed the approval of the meeting minutes as additional changes needed to be made. The Council will review and approve the meeting minutes via email prior to next quarter's meeting.* Ms. Patterson updated the Council and attendees on the past quarter's activities. A letter stressing the importance of having full funding for the liquid radioactive waste disposition project at the Savannah River Site was sent to the South Carolina delegation. Ms. Patterson personally delivered a copy of the letter to Congressman Wilson's office in Aiken, SC and a faxed copy was sent to Sen. Lindsey Graham's Columbia, SC office. Ms. Patterson also made public comment concerning the Draft Surplus Plutonium Disposition Supplemental EIS at a public meeting. A letter summarizing her comments will also be sent to DOE.

The Council then presented the Order of the Palmetto to Mr. Ben Rusche which honors him for his selfless sacrifice and commitment to the state of South Carolina and to the nuclear industry. This honor, the highest civilian honor in the state, was bestowed upon Mr. Rusche by Governor Nikki Haley. Several members of the Council and the audience provided congratulatory remarks to Mr. Rusche which stated their gratitude for his commitment to and achievements in the industry. Mr. Rusche thanked the Council and the Governor for this great honor.

*The meeting minutes were reviewed and approved on October 19, 2012.

Duke Energy, Annual Update
Steve Nesbit, Director, Nuclear Policy and Support
Mr. Nesbit's presentation outlined the Legacy Duke Energy nuclear generation performance in 2011, the merged nuclear fleet (Duke and Progress Energy), nuclear generation integration goals and activities, new nuclear developments and updates on the Nuclear Regulatory Commission's (NRC) findings at Oconee in 2010 and 2011. The key Legacy Duke Energy Accomplishments in 2011 included the best ever personnel safety performance in nuclear generation, a nuclear fleet capacity factor of 93% (which is

their 12th year in a row at more than 90%), the lowest operating cost among United States nuclear fleets and digital reactor protection system and engineered safeguards system installation at Oconee Nuclear Station. This is the first safety-related digital instrumentation and control system in the US. It won the Platts Global Energy Award for Engineering Project of the Year and the Nuclear Energy Institute's "Best of the Best" Top Industry Practice Award.

Mr. Nesbit highlighted the post-merger Duke Energy. They currently hold $100 billion in total assets, $49 billion of which are in market capitalization. They now have the largest US regulated customer base with 7.1 million electric customers and 500,000 gas customers. They also have more than 58,000 MW of diversified generating capacity and the largest US regulated nuclear fleet. Their commercial interest includes international and renewables. He also highlighted the three nuclear stations located in South Carolina: Oconee, Catawba and Robinson Nuclear Stations which are all pressurized water reactor units. As a result of the merger, Duke now has a boiling water reactor unit which is new to the organization.

Mr. Nesbit then previewed the new organization of Duke Energy since the merger. He highlighted Dhiaa Jamil who is the Chief Nuclear Officer, as well as other staff members from both Progress and Duke who have come together to create this new organization.

Duke Energy has noted several fleet integration challenges. One of these challenges includes implementing a common fleet operating model. This will establish a common vision, mission, core values and strategies which will define how day to day work should be accomplished in a consistent manner. This will be done through the implementation of the GOSP model – governance, oversight, support and performance. Another challenge includes integrating systems, processes and procedures by identifying and establishing best practices across the fleet as well as enabling synergies from operating a large nuclear fleet.

Focus areas for the merger include functional consolidation, which consists of the consolidation of duplicate functions and staff reduction where redundancies exist, systems consolidation of the information technology systems, operational best practices and supply chain management where large volumes of purchasing can be leveraged.

Examples of integration activities includes common scheduling software for all on-line and refueling outage work, common radiation protection software for dose projections, in-house nuclear core reload design, in-house fuel handling and new fleet procedures such as the Fleet Operating Model, Corrective Action Program and Integrated Performance Assessment.

Mr. Nesbit also highlighted new developments in their fleet. They have applied for six new AP1000 reactors at three sites. These sites include Lee (in Cherokee County, SC), Levy (in Levy County, FL) and Harris (in New Hill, NC). Of these three sites, only one, Harris, is an existing plant site. The US Court of Appeals recently remanded the NRC Waste Confidence Rule back to the lower court. As a result, the NRC has stated they will not move forward with issuing renewed licenses or new reactor licenses until this issue is resolved. However, the review process will continue for all applications, including Duke's.

Mr. Nesbit then briefed the Council on current issues at their Oconee plant which resulted in NRC violations. He first provided a brief background on Oconee's standby shutdown facility (SSF). This system has a diesel generator that would provide power to auxiliary pumps in the event of a loss of power. It also has a pump which would provide clean water from the spent fuel pool into the reactor

coolant pump seals when plant systems are not available. This system also contains a line to maintain reactor coolant with letdown back to the spent fuel pool. A pressurizer attached to the primary coolant system has heaters that can be powered by the SSF which allows operators to maintain pressure control in the primary system.

As a result of a clogged letdown line, NRC issued Duke three violation citations. A Yellow finding (substantial safety significance) for failure to ensure the SSF operability of all three units. A White finding (low-to-moderate safety significance for failure to identify and correct the problem on Units 2 and 3 after it was identified on Unit 1. A traditional enforcement violation was issued because of erroneous information that was provided to NRC during the course of their investigations. In a follow-up inspection in December 2010 NRC was satisfied that Duke had appropriately addressed the issues and closed out the findings. This returned the Oconee site to "Licensee Response Column" of the Reactor Oversight Process assessment program which represents the least required NRC oversight.

In 2011, other issues with the SSF arose involving circuit breakers that were not properly qualified to function in an adverse containment environment. The SSF was restored to operability status in August when the breakers were replaced with qualified fuses.

The NRC's response to the breakers issue was to issue Duke two violations. A Yellow finding (substantial safety significance) for failure to maintain design control of the SSF pressurizer heater breakers and a Green finding (very low safety significance) because the breakers had inappropriately been declared operable following the initial discovery of the problem. Because this was an old design issue, Oconee remained in the Licensee Response Column of the NRC Action Matrix.
As a result of these two issues, Duke initiated an independent design and licensing review of the entire SSF, recognizing the risk significance of the system and the need to ensure no other problems exist. This review is currently ongoing.

In summary, six of Duke's seven plants are currently in the Licensee Response Column. One site, Brunswick Units 1 and 2, is in the Regulatory Response Column of the Reactor Oversight Process assessment program, which is one level up from baseline NRC oversight. This classification is based on a White finding in the fourth quarter 2011. This finding is expected to be closed by the end of third quarter 2012.

South Carolina Department of Health and Environmental Control Update
Shelly Wilson
Ms. Wilson provided updates to the Council concerning the Savannah River Site which included the Draft Surplus Plutonium Disposition Supplemental Environmental Impact Statement, the Saltstone Disposal Facility and high level waste tank closure.

The Draft Surplus Plutonium Disposition Supplemental Environmental Impact Statement was out for public review and comments. Ms. Wilson attended the NEPA public meeting on September 2, 2012 concerning this document. However, SCDHEC is not planning to submit any comments about the document.

Ms. Wilson highlighted current actions concerning the Saltstone Disposal Facility, which is regulated by SCDHEC via a solid waste permit. As a part of this permit, ongoing monitoring, in particular groundwater monitoring, is required. The permit includes the ability of the State to require corrective actions if the

State determines some are required. The permit also assumes a startup date of October 21, 2015 for the Salt Waste Processing Facility as a part of the program to have high level waste treated in a timely fashion.

Ms. Wilson also provided updates on the high level waste tank closure. Grouting Tanks 18 and 19 is complete, well ahead of their closure milestone date of December 31, 2012. The General Closure Plan for H Tank Farm was approved on August 2, 2012, after the public comment period closded. DHEC is currently reviewing closure plans for Tanks 5 and 6 which are scheduled for closure in the near future.

DOE-NNSA, Surplus Plutonium Disposition Supplemental Environmental Impact Statement and MOX Update
Jeff Allison

Mr. Allison provided the Council with an historic perspective of the surplus plutonium disposition program which began in the closing days of the Cold War. Stockpiles of U.S. and Russian nuclear weapons posed a potential threat due to theft by terrorists or rogue nations. The U.S. and Russia committed to eliminating the plutonium, known as surplus plutonium, in the warheads. Surplus plutonium was defined as any not needed for defense or programmatic purposes.

The U.S. and Russia signed a Plutonium Management and Disposition Agreement (PMDA) in 2000 in which both countries committed to dispose of at least 34 metric tons each of surplus weapons-grade plutonium – enough for more than 17,000 nuclear weapons. This disposition would be subject to a monitoring and inspection regime. The plutonium must meet the 'spent fuel standard' and be unusable for nuclear weapons.

In April 2010, the U.S. and Russia signed a Protocol to amend the PMDA. The Protocol capped the U.S contribution to the Russian program at $400 million, subject to future appropriations and Russia is to provide funding for $2+ billion. The U.S. and Russia are working with the IAEA to develop a monitoring and inspection regime.

In 1999, the department issued a Surplus Plutonium Disposition Environmental Impact Statement (SPD EIS). This EIS called for the reduction of the threat of nuclear weapons by disposing of surplus plutonium in the U.S. in an environmentally safe and timely manner and in a way that ensured that the surplus plutonium is converted into a form that cannot be used in a nuclear weapon. More than two-thirds of surplus plutonium is in nuclear weapon pits stored at Pantex in Texas.

In July 2012, the department issued the second SPD Supplemental EIS which evaluates:

- Options to disassemble pits and convert plutonium metal to an oxide for disposition,
- Options to disposition 13.1 metric tons of surplus plutonium (7.1 metric tons of pit plutonium and 6 metric tons of non-pit plutonium), and
- Irradiating MOX fuel in commercial nuclear reactors.

This Supplemental EIS also updated the 1999 analysis for disposing 34 metric tons via the Pit Disassembly and Conversion Facility (PDCF), MOX Fuel Fabrication Facility (MFFF) and commercial reactors. The SPD Supplemental EIS is not reconsidering previous decisions to disposition 34 metric tons of surplus plutonium other than the decision to construct a stand-alone PDCF at SRS and options for reactor irradiation of MOX fuel.

Mr. Allison also discussed the alternatives available for the disposition of the surplus plutonium which includes no action, and immobilization/disposition via some combination of DWPF, MOX Fuel, H-

Canyon/HB-Line to DWPF, or at the Waste Isolation Pilot Plant (WIPP). Converting plutonium to MOX fuel is DOE's preferred alternative for appropriate surplus plutonium. DOE's preferred alternative for disposition of surplus plutonium that is not suitable for MFFF is disposal WIPP in New Mexico.

DOE's preferred option for pit disassembly and conversion of surplus plutonium metal, regardless of its origins, to supply feed for MFFF, is to use some combination of facilities including the PF-4 facility at Los Alamos National Laboratory, K-Area at SRS, H-Canyon/HB-Line at SRS, and MFFF at SRS, rather than to construct a new stand-alone facility. This would likely require the installation of additional equipment and other modifications to some of these facilities.

TVA does not have a preferred alternative at this time regarding whether to pursue irradiation of MOX fuel in TVA reactors and which reactors might be used for this purpose.

Key facilities being constructed at SRS included:

- MOX Fuel Fabrication Facility which fabricates plutonium oxide and depleted uranium oxide into mixed oxide (MOX) fuel for subsequent irradiation in existing commercial nuclear power plants.
- Waste Solidification Building which processes radioactive and mixed liquid waste streams from the MOX facility and pit disassembly and conversion operations. It must be available to support cold start-up operations for the MOX facility.

MOX fuel is used in approximately 30 reactors worldwide. MOX fuel assemblies look identical to uranium fuel assemblies used in commercial nuclear power reactors. Once irradiated, spent MOX fuel will be treated the same as conventional spent low-enriched uranium fuel. The U.S. MOX facility is based on the design of two French facilities: the Aqueous polishing process from the La Hague reprocessing plant and the fuel fabrication process from the MELOX facility.

In summary, the plutonium disposition program is the final step to permanently dispose of excess weapons plutonium. The U.S. is fulfilling its nonproliferation commitments through this program by drawing down its nuclear arsenal in a transparent and irreversible manner. The program will also reduce security and storage costs.

Chair Patterson stated for the record that the Council supports the preferred alternative which is to take the surplus plutonium and convert it to MOX fuel.

DOE-EM and Nuclear Regulatory Commission, Saltstone Monitoring and Technical Evaluation Report
Andrew Persinko, NRC
Sherri Ross, DOE

Andrew Persinko
Mr. Persinko updated the Council on recent NRC monitoring activities at the SRS Saltstone Disposal Facility. The NRC monitors the Saltstone facility per the National Defense Authorization Act of 2005 (NDAA), which requires DOE to consult with NRC regarding high-level waste disposal decisions and NRC to monitor to monitoring DOE disposal activities. In NRC's monitoring role they assess disposal actions to ensure they meet the performance objectives in NRC regulation 10 CFR Part 61. The NRC does not regulate DOE as they do with their licensees.

10 CFR Part 61 has four performance objectives:

- (61.41) Protection of general population from releases of radioactivity – ALARA (as low as reasonably achievable) and annual dose limit of 25 mrem/year,
- (61.42) Protection of individuals from inadvertent intrusion – Protection of individual inadvertently intruding and occupying site after removal of active institutional controls,
- (61.43) Protection of individuals during operations – ALARA and, except for effluent release limit of 25 mrem/year, operations in compliance with Part 20, and
- (61.44) Stability of disposal site after closure – Long-term site stability and no need for active maintenance after site closure.

He also provided the Council background on the Saltstone Disposal Facility. In 2005, DOE provided both a performance assessment and a draft waste determination for the F-Area Tank Farm to NRC for review. The NRC's Technical Evaluation Report (TER) concluded reasonable assurance that DOE's planned activities would meet performance objectives if assumptions were verified during monitoring. In 2006, DOE published the final waste determination and NRC entered into the monitoring role. In 2007, NRC issued a monitoring plan. In 2009, DOE provided NRC with a revised performance assessment due to design changes to the Saltstone facility. Between 2009 and 2012, the NRC reviewed the revised performance assessment, including responses to two requests for additional information.

With respect to the Saltstone facility, on April 30, 2012, NRC issued it Technical Evaluation Report that concluded that it did not have reasonable assurance that DOE's disposal actions would meet 10 CFR 61 performance objective 61.41, which limits the exposure of the general population to radioactive releases (61.41). As a result of the TER conclusions, NRC issued a Letter of Concern to DOE and the State of South Carolina. Based on DOE's results and NRC's own independent analyses, NRC could not conclude that the projected dose would meet the 25 mrem/year limit after 10,000 years. NRC projected the dose to a member of the public from DOE's disposal actions to be between 25 mrem/year and 100 mrem/year. NRC also concluded there was large uncertainty in the timing of DOE's projected peak dose and that the models DOE used in the analyses were not adequately supported.

The NRC staff is concerned that monitoring information collected to date does not support DOE's compliance demonstration and sufficient information has not been provided to support many key modeling assumptions relied on for performance. The NRC is **not** stating that releases have occurred from SDF that could lead to annual doses that exceed the performance objective 61.41.

Recent NDAA monitoring activities included three public meetings, an NRC observation visit to SDF on August 7 – 8, 2012, DOE's submission of information in June 2012 and submission of their response to the TER and Letter of Concern in July 2012 and the NRC's assessment (Aug 31, 2012) of June and July 2012 information and letter responding to DOE regarding the July 12 submittal.

Moving forward, the NRC continues its assessment of the June and July 2012 information. They continue to collaborate with the State and have ongoing interactions with DOE. They will respond to DOE when, and as appropriate. The NRC will also revise the Saltstone Monitoring Plan.

Chair Patterson expressed concern as to the lack of funding for the continued model development and whether this is truly a necessity. NRC believes that it is.

Sherri Ross

Ms. Ross discussed the SRS Saltstone Disposal Facility's performance assessment. The Saltstone Disposal Facility (SDF) is located in Z-Area within the "General Separations Area." It sits approximately six miles from the closest SRS site boundary and approximately ten miles from the Savannah River. The reported peak annual doses are at 100 meters from SDF. Ms. Ross highlighted the new disposal unit features for the Council.

She also provided a summary of the 2009 SDF performance assessment development. The development of the 'new' performance assessment began in earnest in 2007. It built upon Scoping Meetings held on the F-Tank Farm performance assessment with SCDHEC, NRC and EPA. They used extensive new material testing data and enhanced computer modeling, both of which were deterministic and probabilistic. The performance assessment was provided to the DOE Low-Level Waste Disposal Facility Federal Review Group (LFRG) in June 2009. LFRG recommended release for public review in October 2009 following the implementation of their key recommendations. The performance assessment was formally issued to SCDHEC and NRC on November 23, 3009.

Ms. Ross used a graph to demonstrate the projected peak doses and the timeframe in which they will occur. However, she did note they are in agreement with NRC that there is uncertainty as to when these peak doses will occur. This uncertainty of peak doses falls between 8,000 and 15,000 years following SDF's closure.

DOE believes the NRC's review confirmed that DOE will meet its DOE Manual 435.1-1 performance objective for the members of the public during the DOE 1,000 year compliance period. DOE is aiming to reduce uncertainty in projections in the long term. They also acknowledge that the distant future risk is low with the peak annual doses are less than 100 mrem.

Due to the large uncertainties in projecting doses 100's to 1000's of years into the future, DOE considers a myriad of cases and scenarios in reaching a determination of 'reasonable expectation' that a performance objective will be met. DOE further considers the risks to current workers and members of the public from delaying activities. DOE also recognizes that, if new information is discovered, design changes or remedial actions can be taken to ensure performance objectives are met.

All DOE performance assessments are required to have maintenance plans, reviewed annually, to address uncertainties or gaps in existing data. The 2012 SDF performance assessment consists, in part, of the following activities:

- Technetium K_d sorption testing and column testing,
- Property testing of saltstone produced under varying conditions,
- Verification of Disposal Cell hydraulic and physical properties,
- Degradation of saltstone and similar cementitious materials,
- Oxidation rate analytical method development, and
- Long-term radiological lysimeter program.

The 2013 SDF performance assessment plan will consider NRC's TER monitoring factors and prioritization, availability of funds, risk mitigation and program impacts.

Ms. Ross discussed DOE's responses to the NRC's TER/concerns. In a letter dated June 13, 2012, DOE transmitted six documents to NRC including the updated stochastic model (all pre-dated the NRC TER). In a letter dated July 12, 2012, DOE addressed the risk associated with near term disposal at SDF (Vaults 1, 4 and SDU 2, 3 and 5). In a letter dated July 26, 2012, DOE identified the path forward to address the identified risk for all planned SDF operations.

In their July 12, 2012 transmittal, DOE projected Tc-99 inventory in SDUs 2, 3 and 5 to be about 20% of the current modeled inventory of 540 curies. They performed a Sensitivity Analysis using the updated stochastic model to evaluate dose results for Cases K and K1 using the current Vault 1 and 4 inventories and the updated projected SDU 2, 3 and 5 TC-99 inventories (all other radionuclides remained unchanged from RAI PA-8 response).

In their July 26, 2012 transmittal, DOE provided attachments which identified DOE's approach to address each NRC TER item. They folded the items into their performance assessment maintenance program. DOE also proposed to perform new modeling to address the identified Tc-99 risk for all planned SDF operations. DOE will consider NRC's TER when performing the new modeling, incorporate new information as available and engage in technical discussions with the NRC prior to performing the new modeling.

DOE looks forward to continuing to work with the NRC to support NRC and SCDHEC's monitoring role, answer questions related to responses submitted to date and schedule technical discussions related to planned additional modeling efforts.

235-F and DNFSB Recommendations
Patrick McGuire, DOE

Mr. McGuire provided information regarding ongoing risk reduction activities in the 235-F Facility as well as an overview of the Defense Nuclear Facility Safety Board (DNFSB) recommendation.

Builiding 235-F was constructed in the 1950's as a part of the original Savannah River Plant. The Plutonium Fuel Form (PuFF) mission was performed in 1979 through 1984. Its historical missions included special products for SRS Reactors, special mission heat source fabrication for NASA's missions and plutonium material storage. The three primary Pu-238 process areas include the old metallurgical lab, the plutonium experimental facility and the plutonium fuel form cells. The facility was placed in standby mode in 1984.

Challenges presented in this facility include large amounts of residual material. Though generally a safe facility, under the design basis accident condition (seismically initiated full facility fire) an onsite/collocated worker can receive greater than 500 rem exposure. However, the basis for this dose is very conservative. In additional, this facility is in close proximity to the new NNSA facility, posing a potential safety hazard. The end state of this facility will be determined through a Core Team Agreement.

Mr. McGuire also highlighted the 2012 – 2013 planned activities. They will continue surveillance and maintenance activities necessary to maintain safety which will include removal and management of flammable and combustible materials as well as roof replacement. They also have developed deactivation planning activities which includes:

- Formation of Integrated Project Team,
- Develop and Implement Safety Basis to support deactivation activities,
- Restore required services to facilitate activities,
- Enhanced characterization of residual material in process cells,
- Perform Pu-238 migration studies to support conceptual model of the closed facility,

- Prepare deactivation alternative analysis,
- Initiate deactivation of cells with less residual material, and
- End-State discussions with regulators.

The 2012 – 2013 planned activities also include the development of the Defense Nuclear Facility Safety Board 2012-1 Response and Implementation Plan. The summary of recommendations includes:

- Immobilize and/or remove the residual Pu-238,
- Remove all transient and fixed combustibles that are not directly necessary for activities,
- Ensure all necessary electrical equipment are in a safe configuration,
- Evaluate operability of early detection and alarm systems,
- Ensure that an integrated emergency response plan is in place, and
- Ensure that periodic coordinated drills in response to a simulated event at 235-F are conducted.

In summary, they plan to continue to perform surveillance and maintenance to maintain the facility's safety. They will also continue deactivation activities and re-evaluate the options in consultation with EPA and SCDHEC. They will also address the deactivation prerequisites (waste end state determination, safety basis revision) while planning work methodology.

F Tank Farm Tank Closure and H Tank Farm Closure Plan Updated
Terry Spears, DOE-SR

Mr. Spears updated the Council on the closure status of F-Tank Farms Tanks 18 and 19. The closure of these tanks were completed by August 24, 2012, ahead of the December 31, 2012 Federal Facility Agreement commitment. F-Tank Farms Tanks 5 and 6 are cleaned and they are currently being prepared for grouting. They are leveraging the work done on Tanks 18 and 19 to optimize Tanks 5 and 6's closure. The target date for Tanks 5 and 6's closure is December 31, 2013. This is an accelerated timeline as compared to Tanks 18 and 19 as the lessons learned will be applied which will help expedite the process.

In addition to proceeding with Tanks 5 and 6, they are currently looking towards the subsequent tank closure of H-Tanks Farm Tanks 12 and 16 and expect to complete the cleaning activities for these tanks during Fiscal Year 2013. Their anticipated closure date is September 30, 2015. They will leverage lessons learned from the F-Tank Farms experience to reduce review and approval cycles for area-specific documents. The General Closure Plan was approved by SCDHEC on August 2, 2012. They are currently revising the H-Tank Farms Performance Assessment and compiling the Draft HTF 3116 Basis Document. They anticipate NRC consultation and public review to start by January 2013.

In summary, DOE and their regulators have worked diligently to establish a regulatory framework and build consensus for proceeding with tank closures. This investment has established a clear path for improving the process and optimizing the review and approval cycles. DOE remains committed to reducing the risk associated with storing mobile waste in aging tanks, complying with regulatory commitments and maintaining public involvement opportunities throughout the process.

Public Comment

Tom Clements, Alliance for Nuclear Accountability

Alliance for Nuclear Accountability

A national network of organizations working to address issues of nuclear weapons production and waste cleanup

September 6, 2012

Before South Carolina Governor's Nuclear Advisory Council

Opposition to Spent Fuel "Consolidated" Storage and Reprocessing at the Savannah River Site

Is Public "Consent" and Public Trust Being Destroyed by Secretive Discussions about Spent Fuel Storage at SRS?

The Alliance for Nuclear Accountability (ANA) is a coalition of over thirty-five groups across the US that work on issues related to Department of Energy (DOE) sites or the DOE budget. We have offices in Washington, DC, Santa Fe, NM and here in Columbia, SC.

ANA formally testified on several occasion before the "Blue Ribbon Commission on America's Nuclear Future," when we stated our support for hardened on-site storage of highly radioactive spent fuel and reaffirmed our opposition to both consolidated storage of spent fuel and reprocessing of spent fuel. We also testified that it is essential that the public in states and localities be fully involved from the start in any decisions related to spent fuel management and that the public be given a key role in giving "consent" or not to any spent fuel facilities.

Even though the strategy document on spent fuel management has not yet been delivered to Congress by the Nuclear Materials Working Group – the DOE entity charged with following up on the BRC report issued in January 2012 – it appears that DOE, the nuclear industry and some in state government are already secretly at work to come to "consensus" (a term used by AREVA) in order find sites "willing" to take spent fuel. This behind-the-scenes effort totally undermines any appearance of an open process to involve the public in "consent."

We are likewise concerned that discussions or "negotiations" have been taking place in secret concerning bringing spent fuel to the Savannah River Site (SRS) for "consolidated" storage. It is time for those in on these discussions to reveal what they are up to, inform the public as to what they have indicated to DOE about spent fuel storage at SRS and halt such discussions.

Elected or appointed officials who are to be guardians of the public interest must fulfill their obligations as public servants and not participate in secret discussions which may well put the public at risk and which very well could permanently destroy public confidence. It is a delusion that the public will allow the nuclear industry, the governor's office, or elected officials located near SRS to make decisions on their behalf in secret.

Given the sensitivity of the South Carolina public to the dumping of radioactive waste, extreme caution is advised concerning efforts to subvert "consent" and engage in "negotiations" to locate a spent fuel dump in our state. Any "bargains" being discussed – such as locating spent fuel at SRS in exchange for associated facilities - have no formal status and are not only premature but appear to be serving only special interests and not the public interest. Loss of public trust in this matter will be difficult to restore.

Tom Clements, Nonproliferation Policy Director, Alliance for Nuclear Accountability, 1112 Florence Street, Columbia, SC 29201, tel. 803-834-3084, tclements@ananuclear.org

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Ernest Chaput, Economic Development Partnership of Aiken, SC

Mr. Chaput states that he has been a long time supporter of the surplus plutonium disposition program. The objective is to permanently change weapon-grade plutonium to a form that cannot be used in nuclear weapons. He feels this is an admirable objective. He feels converting this surplus plutonium into MOX fuel is the surest means to achieve this objective. He supports DOE's Draft EIS as a preferred alternative as achieving the program's goal in the timeliest and mostly cost efficient manner. His organization believes the liquid waste program should be refocused to emphasize waste removal and stabilization and away from the emphasis of tank closure. He believes this is the surest way to achieve risk reduction at SRS.

Suzanne Rhodes, League of Women Voters of SC

League of Women Voters of South Carolina

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I am Suzanne Rhodes, representing the League of Women Voters of South Carolina. The League is very concerned that "temporary" storage of high-level nuclear waste in Consolidated Interim Storage Facilities will decrease the political will and financial commitment required to establish a permanent repository.

South Carolina has been urged to store commercial spent fuel at the Savannah River Site; if you support such a plan, you may divert our nation's focus from a permanent solution, as has already happened so frequently in South Carolina and elsewhere. We understand that our Governor and other elected officials are currently negotiating with the Department of Energy for a secret "deal" to ship commercial spent fuel to SRS without public involvement from the entire state.

Recall our history – neglected wastes sat at SRS and elsewhere until Governors Riley, Lamar Alexander of Tennessee, and Dixie Lee Ray of Washington and their delegations initiated leadership. That prompted the development of the Nuclear Waste Policy Act and other federal programs to finally begin to address this country's abandoned and leaking wastes. The job is not finished.

Despite considerable progress, SRS continues to host 37 million gallons of difficult high-level waste in 49 leaking tanks, and, although two of these tanks are scheduled to close this year, it could take another 20 years to manage these wastes. Other wastes at SRS are also being treated and managed on site. Most of the country's defense wastes are already at SRS and Hanford Washington. South Carolina is certainly doing more than our share of managing the country's wastes.

The ***only*** permanent geologic repository in the world is our Waste Isolation Pilot Project in New Mexico. Other nuclear nations have not had the success we've had.

As those of you on the NAC know, SRS has successfully managed and packaged wastes suitable for WIPP, shipped much of it, and is poised to ship the remaining wastes. In addition, SRS has paved the way for other suitable defense wastes to be shipped to WIPP from other defense facilities by designing and certifying shipping containers.

The League is among the groups that will oppose storage of commercial spent fuel at SRS. We all need to be part of the permanent solution to this difficult problem. Thank you.

Suzanne Rhodes, LWVSC Nuclear Waste Specialist

September 6, 2012 presentation to Governor's Nuclear Advisory Council

Susan Corbett, Sierra Club

Ms. Corbett gave a brief overview of the Sierra Club. They are the largest environmental group in SC and are democratically elected by their members. They are a very diverse group that does not agree on everything but the one thing they are very much in agreement on is the issue of nuclear waste. They do not want anymore waste coming into SC. In that regard, they feel the public is in agreement with them and they feel this is reflected in the number of petitions and surveys they have received. Ms. Corbett feels nuclear waste is a broad concern across our state and feels it needs to be a very inclusive process if it is ever discussed and not just specific to a community. She feels the idea that the federal government can force SC to accept the waste or that SC's governor can accept it is unacceptable and the Sierra Club will fight it. She urges the Council to think very carefully about nuclear waste. She reiterated that they are not in support of bringing consolidated storage to SC and she feels nuclear waste needs to stay in dry cask storage at the reactors. She feels moving nuclear waste twice does not make sense economically, environmentally or in any, way, shape or form.

Debbie Parker, Conservation Voters of SC

C V S C
Conservation Voters of South Carolina

September 6, 2012

Thank you for giving me this opportunity to speak. My name is Debbie Parker and I serve as Legislative Director for Conservation Voters of South Carolina. We are the non-partisan political voice of South Carolina's conservation community and coordinate with over 40 organizations to promote a healthy, clean future for our state. Our coalition represents over 50,000 citizens.

I testified last year before the Blue Ribbon Commission about the conservation community's grave concerns about bringing more nuclear waste to our state. Conservation Voters of South Carolina, along with Audubon South Carolina, Coastal Conservation League, Upstate Forever, South Carolina Sierra Club, South Carolina Wildlife Federation, Environmental Education Association of South Carolina, Solar Business Alliance, Morning Sun Foundation, League of Women Voters of South Carolina, Waccamaw Riverkeeper and Wildlife Action went on the record opposing importing waste under any conditions, including under the pretexts of "interim" or "consolidated" spent fuel storage or reprocessing.

Our state's experience with nuclear waste at the Barnwell low-level storage facility nearby provides an instructive lesson in the pitfalls of importing nuclear waste to South Carolina.
After nearly two decades of negotiations, our General Assembly finally upheld the terms of the Atlantic Compact and ceased being the nation's dumping ground for low level commercial waste.

For too long South Carolina has shouldered a disproportionate share of our country's nuclear waste. As the Department of Energy itself has stated, the 36 million gallons of high-level nuclear waste at the Savannah River Site constitutes South Carolina's gravest environmental threat.

With no repository designated, with no plan for permanent disposal, we cannot endorse any negotiations that imply "consent" under any circumstances for SRS to serve as an "interim" site for consolidation of commercial nuclear waste storage or for reprocessing. Such talk substitutes a long-term national solution with a short-term South Carolina problem. Given our history with all waste-hazardous, infectious and garbage- even now the possibility of 300 train cars of nuclear contaminated dirt, we ask the Nuclear Advisory Council and the Governor to flatly oppose more nuclear waste coming to South Carolina.

Ann Timberlake
Executive Director

Debbie Parker
Legislative Director

Conservation Voters of South Carolina is the nonpartisan political arm of South Carolina's conservation community. We work to support pro-conservation policies and we also facilitate the Common Agenda process, which brings together 41 organizations representing over 50,000 citizens dedicated to a clean, healthy and economically vibrant South Carolina.

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Ryan Black, Coastal Conservation League
Mr. Black stated that he feels if the events of the past years provide any indication, such consent does not exist in SC, certainly not among the citizens. The Atlantic Compact in 2000 recognized that all states have a responsibility to deal with the dangerous wastes they have generated from nuclear energy. Since 2000, South Carolinians have only solidified their opposition to importing nuclear waste into SC, as shown in 2007 when the legislature permanently rejected efforts to break the Atlantic Compact. Furthermore, any use of SRS as an interim storage facility would generate undesirable inertia for the Department of Energy and its private contractors to seek approval for a reprocessing facility in SC. Despite being labeled as recycling of nuclear waste, reprocessing actually generates numerous radioactive waste streams while increasing the total volume of waste that must be dealt with. Making matters worse, reprocessing is uneconomical and raises proliferation risks. In recognition of these significant obstacles, the Nuclear Regulatory Commission recently decided not to proceed with the development of regulations that would apply to reprocessing plants. This unanticipated decision indicates that reprocessing is far from viable in the United States and that development of regulations for reprocessing would be an unnecessary drain on NRC's resources. Our country stands a nuclear waste crossroads. The political failure to develop Yuka Mountain has only complicated this issue further but Yuka's demise should not dictate that SC should bear the burden yet again of our nation's radioactive waste.

Mr. Black, on behalf of the Coastal Conservation League and its membership, stated for the record that they oppose importing waste under any conditions including under the pretext of centralized interim storage and/or reprocessing proposals. Rather, they support storage of waste at the reactor's sites in more robust dry cask storage where it can remain safely until a permanent geological repository is ready.

Clint Wolfe, Citizens for Nuclear Technology Awareness
Mr. Wolfe stated for the Council that his group is very supportive of the preferred alternative that DOE presented for plutonium disposition or elimination. He feels dispositioning and burying it in the ground is not elimination. He feels the MOX program does something that other alternatives cannot do and this is very important to his group. He added that getting MOX fuel into reactors will generate tens of billions of dollars of electricity so he feels there is a cost recovery to the MOX approach. He feels this does not exist for any other approach as other approaches bring with them a lifetime mortgage that must be maintained. He feels DOE is sometimes reluctant to cheerlead their own programs but he feels, for this program, his group agrees very strongly with the preferred alternative and they would like to see it succeed.

Closing Remarks
Ms. Patterson thanked all of the presenters and public commenters for their insightful information and adjourned the meeting.