

Governor's Nuclear Advisory Council

Meeting Summary

Thursday, June 14, 2012

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

Council Members in Attendance:

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

Ms. Rebecca Griggs, Committee Staff

Call to Order – Adoption of Minutes

Ms. 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. She updated the members and the audience on the previous quarter's activities. A few members of the Council and staff toured the facilities at SRS in May. She thanked the staff at SRS for hosting the Council members. Ms. Patterson asked Pat McGuire, Assistant Manager for Nuclear Material Stabilization Projects, DOE-SR, to update the Council on the 'spider webs' in the spent fuel pool. Officials with Savannah River National Lab as well as another independent laboratory analyzed samples from the pool. It was determined the 'spider webs' are a bacterial growth comprised of multiple types of bacteria. The National Lab is evaluating what condition this bacteria has on the long term storage of the fuel. It is possible no action will be necessary. Other similar spent fuel pools had this same issue. They treated the pools with a chemical in the water which corrected the problem. SRS will consider this treatment as an option. This bacterium is currently not presenting any problems to the workers or the environment as long as it stays under water. It also does not appear to cause any degradation to the containers. SRS expects to collect more data over the next weeks and months which will help to inform their decision.

Ms. Patterson updated the Council on her participation as a private citizen in the Nuclear Infrastructure Council which hosted a workshop on waste management. The meeting discussed the NRC's and DOE's responsibilities as related to waste management. Ms. Patterson wanted to ensure the Council was aware of this as well as to bring to their attention three law suits currently pending in the DC Circuit Court. The first suit is NRC's licensing decision for spent fuel which was limited to 30 years in 1982 and in approximately 2010 was increased to 60 years. The second suit is related to DOE's fees. NEI and the utilities feel the fee needs to be lowered because the fee is to develop a federal repository but since there is no repository, they feel the fee should not be collected. The courts asked DOE within six

months to provide a better explanation for the collection of this fee. The third suit relates to the lack of a federal repository as promised by law. It is expected this case to be decided by September 2012.

The Council approved the meeting minutes from the March 8, 2012 on September 4, 2012.

Atlantic Compact Commission, Annual Update

Max Batavia, Executive Director

Mr. Batavia provided the Council with updated activities of the Atlantic Compact Commission since his last presentation to the Council in June 2007. He provided a brief overview of the history of the ACC. In 1980, the governor's of South Carolina, Nevada and Washington were concerned the low level waste landfills in their respective states were receiving too much waste in their three landfills. These states convinced Congress to pass the Low Level Radioactive Waste Policy Act of 1980. Subsequently, its amendments in 1985 created 10 compacts around the country. This included the Northeast Compact which is currently known as the Atlantic Compact. The idea behind these compacts would allow member states of each compact to work together and host a regional waste site. In theory, this would allow for at least 10 landfills so no one particular place would receive more than its fair share of waste.

During this time, South Carolina was a member of the Southeast Compact along with seven other southeastern states. The plan was for Barnwell to close its site in the early 1990s with North Carolina coming forward and hosting the new regional site. Ultimately, North Carolina was unable to host a regional site which resulted in South Carolina pulling out of the Southeastern Compact and becoming an unaffiliated state. The decision was made to allow South Carolina to receive low level waste from all over the country. As a result, South Carolina's landfill began filling up fast and, in 1999, then Governor Hodges formed the South Carolina Nuclear Waste Taskforce. This taskforce was tasked with determining the best way for South Carolina, as the host state, to protect its limited capacity for the benefit of its own generators. The taskforce recommended South Carolina apply for membership to the Northeast Compact. In April 2000, the Governor petitioned the compact for membership and in June 2000 the compact approved South Carolina's petition. At the same time, the General Assembly passed the Atlantic Implementation Act which resulted in the formation of the Atlantic Compact Commission which includes three states: South Carolina, Connecticut and New Jersey.

The 10 compacts Congress created include:

- Appalachian Compact – Delaware, Maryland, Pennsylvania, West Virginia
- Atlantic Compact – Connecticut, New Jersey, South Carolina
- Central Compact – Arkansas, Kansas, Louisiana, Nebraska, Oklahoma
- Central Midwest Compact – Illinois, Kentucky
- Northwest Compact – Alaska, Hawaii, Idaho, Montana, Oregon, Utah, Washington, Wyoming
- Midwest Compact – Indiana, Iowa, Minnesota, Missouri, Ohio, Wisconsin
- Rocky Mountain Compact – Colorado, Nevada, New Mexico
- Southeast Compact – Alabama, Florida, Georgia, Mississippi, Tennessee, Virginia
- Southwestern Compact – Arizona, California, North Dakota, South Dakota
- Texas Compact – Maine, Texas, Vermont

The Atlantic Compact Implementation Act allowed for South Carolina to accept non-regional waste on a declining basis per year. After July 1, 2008, the importation of non-regional waste was prohibited.

The ACC currently has four commissioners, two appointed by the governor of South Carolina, one appointed by the governor of Connecticut and one appointed by the governor of New Jersey. Elizabeth Partlow was appointed the chair of the ACC by SC Governor Haley in July 2011 after former Chairman Ben Johnson submitted his resignation effective June 30, 2011 after serving 11 years as the chairman.

By mid-2012, the Barnwell site will be completing four years of receiving only in-region, low volume waste. The first year after accepting only in-region waste, Barnwell received approximately 11,000 cubic feet of waste. In the second year, approximately 34,000 cubic feet were received. This was due in large part to one of New Jersey's reactors shipping four steam generators which accounted for approximately 27,000 cubic feet of that year's waste. The third year accounted for approximately 10,000 cubic feet. The fourth (current) year has received 8,000 cubic feet.

There are currently seven operating reactors in South Carolina, four in New Jersey and two in Connecticut. The annual operating costs for Barnwell are paid for by the six utilities operating the 13 reactors in the region.

As a part of its acceptance into the Northeast Compact, the host state of South Carolina made a commitment of accepting up to 800,000 cubic feet of low-level waste from Connecticut and New Jersey. To date, Barnwell has received approximately 130,000 cubic feet of low-level waste from in-compact generators. The limited remaining capacity at Barnwell will be utilized mainly by the 13 nuclear plants in the region plus any new nuclear power plants that will be operational in the future.

After closing to all but in-region waste, Barnwell became a revenue neutral operation. As a result, no tax payer money is used to support this operation. The six utilities and the site operator negotiate an annual rate which is paid in four installments by the utilities. This is a part of the framework established by the 2009 Memorandum of Understanding between Chem-Nuclear (site operator) and the SC Budget and Control Board.

The partnership between the ACC members appears to be working well. Previous attempts to change the Atlantic Implementation Act to allow non-regional low-level waste have been unsuccessful.

Duke Energy and SCANA are currently proposing up to four new reactors which will have access to the Barnwell site.

Mr. Batavia then accepted questions from the Council.

Ms. Patterson inquired as to the limit of volume or curies of the site. Once the limit is reached, is there an agreement that New Jersey or Connecticut will open a site? Is there a date at which the site must close? Mr. Batavia stated that only an act of Congress can dissolve a compact. However, all compacts can be terminated with the unanimous consent of all member states. As long as Barnwell is operating for the benefit of the members, he believes Barnwell will remain open. South Carolina, as the host state, has made a commitment to keep the landfill open until all reactors are decommissioned. It was originally anticipated that Barnwell would close in 2050 or 2060. However, because reactors are receiving extensions, the site could possibly remain open until 2080.

Ms. Patterson also inquired as to the impact the four new reactors being built in South Carolina would have on the life of the Barnwell site. Mr. Batavia believes the site will remain open until these reactors are decommissioned. However, it has been made very clear that South Carolina will not provide tax payer funds to pay for the landfill.

Rep. Tom Young confirmed with Mr. Batavia that the site is to remain revenue neutral and the state would make no money from the site's operation. Mr. Batavia stated this was correct. Rep. Young inquired as to the state's responsibility to the site. Mr. Batavia stated the state provided the land for waste disposal purposes. In 1971, the SC Budget and Control Board entered into a 99 year lease with Chem-Nuclear to operate the facility. Rep. Young then inquired as to the function of the MOU between the SC Budget and Control Board and Chem-Nuclear. Mr. Batavia stated after the site closed to out of compact waste, the MOU provided the framework for operating the site moving forward.

Mr. Steve Byrne inquired as to the status of the two funds which supports the closure and maintenance of the Barnwell site; the Decommissioning Trust Fund and the Extended Care Fund. Mr. Batavia stated the SC Budget and Control Board State Energy Office oversees these funds and would have more up-to-date information; however, he believes the Decommissioning Trust Fund has approximately \$5M remaining. The Extended Care Fund has over \$130M. A little over \$2M is taken out of the Decommissioning Trust Fund to pay for institutional costs associated with the closed portion of the site. Mr. Byrne inquired as to whether or not the Extended Care Fund is a true trust fund. Mr. Batavia confirmed it is not. Mr. Byrne also inquired as to how Commissioners are appointed to the ACC. Mr. Batavia stated each state's governor appoints these members.

Westinghouse Fuels, Annual Update **Marc Rosser, Environment, Health and Safety Manager**

Mr. Rosser provided an annual update of Westinghouse Fuels. They are a part of the Westinghouse Electric Company; a full service provider to the nuclear electric power industry. Nearly half of the plants worldwide and nearly 60 percent of plants in the US are based on Westinghouse technology. Westinghouse's core businesses fall into four categories: Nuclear Fuel (provide fuel for PWR, BWR, VVER and AGR reactors worldwide), Nuclear Power Plants (specializing in building and developing new power plants), Nuclear Services (providing maintenance repair and engineering type services to the business) and Nuclear Automation (focusing on controls and safety systems in plants).

Within the US customer base, Westinghouse has over 50 units for which they provide fuel. Those are made up of Westinghouse PWR type fuel, combustion engineering PWR type sites and BWR sites. They also have presence in Europe; mainly plants in Sweden, Spain and the United Kingdom. They anticipate their next area of growth to occur in Asia. They are currently working on AP1000 in China and have some business in Japan as well.

Within the US manufacturing operation, the Columbia plant is one of four different facilities that Westinghouse has in the US. The Western Zirconium plant in Utah provides zirconium products for their processes; the Blairsville, PA plant provides fuel tubing; the Windsor, CT plant provides mechanical components for their fuel; and the Columbia, SC plant fabricates the fuel assemblies and components that are used elsewhere in their processes.

The Columbia, SC plant was established in 1969. Their 550,000 square foot facility sits on 1,156 acres. Their process is UF₆ conversion through fuel assembly fabrication plus the generation of components that are used in the manufacture fuel in other plants. They employ 1,250 on site with 915 employees physically located at the facility. The majority owner of Westinghouse is the Toshiba Company. They have approximately \$95M in annual compensation at the Columbia site. They are an ISO 9001 certified quality management system facility and an ISO 14001 certified environmental management system plant. Low-enriched uranium is handled at their facility and they are involved in processing some of the high-enriched uranium that has been blended down.

The Columbia plant provides fuel that generates more than 10 percent of the electricity in the US.

Since the opening of the Columbia plant in 1969, the annual production has grown steadily. They are currently producing approximately 1,400 MTU. Their process takes either UF₆ or UNH, which is generally a recycled product, and converts it to UO₂ powder which is then pressed into pellets. These pellets are loaded into fuel rods and the fuel rods are placed into a fuel assembly. There are different kinds of components that contribute to these assemblies.

The Columbia plant has one main priority: continuous improvement in all of their activities. They realize they have to focus on safety, quality and production and delivery activities as a whole.

Mr. Rosser highlighted a few of the plant's successes. For years, they utilized anhydrous ammonia as a part of the process. They have determined a way to run the facility without the use of anhydrous ammonia and have eliminated this chemical entirely from their plant. They have also invested a lot of energy into their recycling processes. Over the past year, they have been able to reduce their waste going to the landfill by 32 percent through activities of recycling wood, cardboard, plastic and aluminum. They are also involved with the SC Wildlife Federations W.A.I.T program (Wildlife and Industry Together). They work with Mill Creek Elementary to address these environmental related activities. Their last Toshiba environmental audit recognized the Columbia plant as one of the top biodiversity programs in the company.

They continue to strengthen their emergency preparedness partnership with local agencies to include: Columbia Fire Department, Richland County Sheriff's Office, Richland County EMS, SC DHEC and Richland Memorial Hospital through on-site drills, exercises and other joint training activities. They have continued their year-over-year reduction in radiation reduction doses to their employees and the environment. They are currently providing fuel assemblies for the new AP1000 plants currently under construction in South Carolina, Georgia and China.

Over the last five years, the Columbia plant has invested more than \$10M in facility improvements to enhance nuclear and chemical safety. They have initiated a project to evaluate the facility's response to seismic and severe weather events and will execute upgrades as appropriate. They are in the process of evaluating all facility job tasks using the Job Safety Analysis (JSA) process, with the goal of improving safety in all aspects of facility operation.

The Council inquired as to the occurrence of fuel failure problems. Mr. Rosser stated that currently, within the US, they have 100 percent fuel reliability of Westinghouse fuel. He believes with all of the fuel types they have, they have 95 percent fuel reliability point and are slowly eliminating the fuel failure

problems they have had in the past. The Council inquired as to the number of fuel failure problems in the past year. Mr. Rosser believes they have had no fuel failure problems in the past year.

The Council also inquired about a couple of incidences at the plant which included a spill in January 2010 at the Columbia plant of 200 gallons of wastewater which contained ammonia and low-level uranium. The Council wants to know the root causes of these incidences. Mr. Rosser stated they have conducted causal analyses for all of these events and, as a result, have identified opportunities for improvement. These findings have been implemented.

SC DHEC Update

Shelly Wilson, Federal Facilities Liaison Environmental Quality Control

Ms. Wilson provided updates from SC DHEC as it relates to the Savannah River Site. These updates included the high level waste tank closure, Saltstone Disposal Facility and transuranic waste disposal.

As it relates to high level waste, the F Tank Farm General Closure Plan was approved on January 24, 2011. Tanks 18 & 19 closure models were approved on March 7, 2012. Grouting for these tanks began on April 2, 2012. The closure milestone for these tanks is December 31, 2012. The H Tank Farm General Closure Plan will go out for public review and comment from June 18, 2012 to July 19, 2012. Those wishing to provide comments can do so via SC DHEC's website.

As it relates to the Saltstone Disposal Facility, which is regulated by SC DHEC, the Nuclear Regulatory Commission (NRC) raised questions about the facility in their April 30, 2012 Technical Evaluation Report. SC DHEC plans to cooperate with DOE and NRC as concerns are resolved. The NRC relies heavily on modeling which is their primary tool used for evaluating performance. SC DHEC uses this tool as well along with oversight of the facility. This includes monitoring the groundwater around the facility. The permit also requires the SWPF startup date to occur by October 31, 2015.

As it relates to transuranic waste disposal, mixed transuranic waste is regulated by SC DHEC through their Hazardous Waste Program. SC DHEC and DOE entered into an agreement in 2000 which bolstered the TRU shipping infrastructure from the site to the WIPP facility. This led to accelerated shipping to TRU waste out of the state. As a result, SC DHEC changed their focus from a storage facility to disposal. Along with this, SRS looked at multiple packaging areas in appropriate onsite facilities.

Transuranic Waste Update

Bert Crapse, TRU Waste Program Lead, DOE-SR

Mr. Crapse provided the Council an update of the completion of SRS Legacy Waste Disposition. They have been shipping TRU waste to the WIPP facility since 2001. This program has been a lead priority for SRS and has not experienced budget cuts such as other programs at SRS. The success of this program is due in large part to the agreements made between SRS and the state of SC. They were the first site to have a Central Characterization Project which is an organization that characterizes the waste at each site within DOE. SRS demonstrated early on that this was a successful project and it has been taken department-wide.

Most of the waste shipped to WIPP was in 55 gallon drums with the remaining as large box waste. Over the years, a lot of progress has been made with the large drum waste but they deferred the large box waste and higher-activity waste until the end.

In 2009, the Legacy Waste Disposition program received stimulus funding. At that time, DOE felt the site was on the verge of completing the Legacy Waste program. The program put a strategy in place which they felt would create jobs and move work more quickly. The stimulus money would be used to complete the remediation and certification of almost 5000 cubic meters of waste.

In order to be successful with this accelerated strategy, SRS is capitalizing on its existing facilities and skilled workforce. A phase strategy has also been developed with the safety documentation. Another key step in the process was the implementation of the TRUPACT-III for shipments to WIPP. A contract was awarded in 2010 for the development of these TRUPACT-III containers. To date, only one of the six expected have been delivered.

Approximately \$400M in stimulus funding provide support for this project which currently employs 400 people. This includes 40 percent staff augmentation and contracts. The addition of these funds has accelerated the legacy waste disposition by 10 to 12 years.

To date, the program has dispositioned 3200 cubic meters, 1274 cubic meters are in the certification process while 480 cubic meters is awaiting remediation. They expect this to be completed in September 2012.

The remediation activities are tracking slightly ahead of schedule. Safety performance has remained strong the past two years and process improvements have been implemented. Site expertise is addressing the remaining challenges including higher PEC waste, miscellaneous robust containers and higher dose rates.

The E-Area legacy waste mining activities are nearing completion. Pad 1 is cleared and they are 95 percent complete with emptying culverts. Prescreening activities are nearing completion.

H-Canyon had a particular scope of work that it was slated to do in the original plan which is almost complete. The scope includes very large boxes and higher PEC containers. Approximately 90 percent has been completed with the final phase to include the highest PEC (Plutonium Equivalent Concentration) in large steel boxes.

E-Area Cell 11's scope includes very low PEC with medium and small boxes as well as miscellaneous containers. This scope has been completed.

F-Canyon Box's scope includes higher PEC with medium and small boxes as well as miscellaneous containers. This scope is 90 percent complete.

F-Canyon Drumline's scope includes all drums with prohibited items or liquid. This scope is 95 percent completed.

The remaining 200 cubic meters consists of the highest activity waste with unique radiological challenges and packaging. Examples include: high level cave SRNL waste, Canyon equipment and sources. They are currently using existing remediation facilities and experienced radiological control programs to manage contamination and dose challenges.

In conclusion, SRS expects to remediate almost 5000 cubic meters of legacy waste by September 30, 2012. They are actively developing plans for the remaining 200 cubic meters to be remediated in FY 13. Steady shipments continue to reduce waste volume and PEC from the site.

Salt Waste Processing Facility Update **Tony Polk, SWPF Federal Project Director**

Mr. Polk provided the Council an update on the Salt Waste Processing Facility. Significant progress has been made since Mr. Polk's last update to the Council one year ago. The roof levels for the second and third levels of the facility have been completed. The support structures for the facility have been constructed. A lot of work for the support structures is well on its way to completion. There has also been a lot of work on the interior of the facility as well. Tank delivery and installation has occurred.

The mechanical work associated with installing electrical piping and other systems has occurred on the lower level of the facility. Progress continues to date relative to all of the installations and in their attempts to bring the facility online to be able to support the mission in the tank farms as this is a key step in the process of removing waste.

They continue to focus attention on the remaining procurements which includes receipt and installation of the Large ASME Vessels as well as significant focus on vendor quality assurance and quality controls to ensure 100 percent receipt of materials and equipment to be ready for installation. They are maintaining strong construction execution progress. They are in the process of reviewing the construction execution strategy after the receipt of the Large ASME Vessels. They are also addressing cost and schedule impacts associated with the delay in receiving these vessels.

Mr. Polk estimates the completion date for the facility to be October 2015.

Liquid Waste System Plan Rev. 17 **Soni Blanco, Liquid Waste Planning and Coordination Lead, DOE-SR**

Ms. Blanco updated the Council on the Life-Cycle Liquid Waste Disposition System Plan Revision 17. She reminded the Council how the liquid waste disposition works. They separate nuclear materials, plutonium and enriched uranium from the target. This generates a large amount of waste which is stored in the two tank farms (H and F). They have approximately 38M gallons of waste they are currently storing which they are in the process of treating and dispositioning. They have three different types of waste: sludge, salt solution and salt cake. They are currently processing sludge. They remove the aluminum and wash the salt out of the sludge to help with the glass quality and reduce the weight of the canister. They are processing the sludge at DWPF. They have processed more than 3400 canisters to date. They processing the salt solution through APR/MCU and eventually SWPF, once construction is complete. The process removes cesium out of the salt solution and that portion of the waste goes to DWPF. The remaining waste is sent to the saltstone facility and is dispositioned as grout. They are

focused on removing the waste as soon as possible and processing it for disposition so they close the site.

Ms. Blanco provided an overview of the regulatory framework. For system planning, they are focusing on the main drivers which includes Federal Facility Agreement (FFA) which requires the remaining 22 old-style tanks to be operationally closed by the of FY2022. The Site Treatment Plan (STP) requires removal of the backlogged and currently generated waste inventory by 2028. Tank closure and waste disposition must meet Section 3116(a) of the Ronald W. Regan National Defense Authorization Act for FY 2005. The facilities currently operate under state-issued permits.

System Plan Revision 17 assumptions are aligned to meet the Federal Facility Agreement for waste removal and tank closure commitments and the Site Treatment Plan commitment for completion of waste processing. They will focus on processing the salt waste by operating interim salt processing (Actinide Removal Process/Modular Caustic Side Solvent Extraction Unit – ARP/MCU) to provide the needed tank space and support to SWPF operations. This will provide feed to SWPF and Small Column Ion Exchange (SCIX). They are also focusing on reducing the lifecycle cost and schedule for sludge processing. This will optimize the Defense Waste Processing Facility (DWPF) processing efficiency (waste loading, process improvement, etc.). They will deploy technologies for reducing sludge mass – aluminum removal. Another priority includes tank closure. They will deploy technologies for tank an annulus cleaning – chemical and mechanical and they hope to gain regulatory approval through Section 3116 and the state. They will also support the H-Canyon nuclear materials disposition operations.

There are inputs and assumptions associated with System Plan Revision 17. These include advances in technology, change in sequencing, acceleration opportunities, cost savings opportunities and funding adjustments. They also assume ARP/MCU facilities will shut down six months prior to the startup of SWPF to allow for SWPF tie-ins. They will reschedule the deployment of SCIX based on funding to September 2018. SWPF's planned start-up is October 2014. They are assuming SWPF will be able to operate at a higher throughput.

They are also assuming the saltstone processing facility will be able to support ARP/MCU operations and will increase with SWPF startup. DWPF will continue to implement productivity enhancements during the SWPF tie-in outage. These modifications will be able to support increased influents from the SWPF acceleration. The existing DWPF melter replacement will occur during the SWPF tie-in outage and then every 6 years.

Ms. Blanco highlighted the date differences between Revision 16 and 17. All dates increased from one to four years.

In summary, System Plan Revision 17 documents the current operating strategy of the SRS Liquid Waste System. Its assumptions are aligned to meet the FFA commitments for waste removal and tank closure and the STP commitment for completion of waste processing (a just-in-time approach). It also forecasts compliance with FFA and STP commitments.

Public Comments

Mr. Tom Clements with the Alliance for Nuclear Accountability provided public comments. He expressed his concerns over cost and schedule pressures with SWPF construction. He appreciates the Council's attention to this issue and supports the Council in their efforts to ensure funding is not reduced. He feels we can contrast this with the situation with the MOX program. In the February budget, DOE presented a \$499M per year operating cost for the MOX plant and that the program would be requesting approximately \$900M in fiscal years 2014 – 2017. No new costs estimates were presented for the construction though, from what he has heard from the House and the Senate, the construction costs could have increase by \$900M. He states that NNSA refuses to release any information related to this issue and they refuse to provide any information whatsoever about the lifecycle cost for plutonium disposition, including the operating costs of what the main construction is going to cost as well as decontamination and decommissioning costs. He also states NNSA is not releasing any information pertaining to what the payments to the utility, should one be found, would be as well as the proposed production schedule.

He believes the House has taken a step to hold NNSA accountable by cutting \$169M from the requested \$888M but says the Senate has not taken any action. The House did allow the full funding for the construction of the facility to move forward. He also believes the pressures on high level waste contrast starkly to the free reign given to the MOX program and how much money it is spending. In addition to encouraging the Council to make a statement about the adequate funding of SWPF, he requests they support with the Senate what the House has passed which supports a GAO report on the MOX plant construction costs. He also encourages the Council to invite NNSA to present to the Council the overall plutonium disposition program, the MOX construction and the overall lifecycle costs as he feels their previous presentations have been cursory and superficial. He feels the House is finally stepping up and asking questions about these programs but the Senate has not taken any steps.

In summary, his three recommendations to the Council include: get a 'real' presentation on MOX costs, make a statement for support of adequate funding for the high level waste program – all aspects of it - and support a GAO report on the MOX plant costs.

Closing Remarks

Mr. Patterson thanked all of the presenters and out of town audience members. She announced the next quarterly meeting will be September 6, 2012.