

**Summary Notes- August 27, 2013**  
**SRS Citizens Advisory Board**  
**Nuclear Materials Committee Meeting**

The Savannah River Site (SRS) Citizens Advisory Board (CAB) Nuclear Materials (NM) Committee held a meeting on Tuesday, August 27, 2013, from 4:00-5:50 p.m., at the DOE Meeting Center in Aiken, SC. It was also streamed online via Google Hangouts.

The purpose of this meeting was to receive an update on H-Area operations and the use of plutonium equivalent curies for measuring risk. There was also time set aside for committee discussion and public comments.

**Attendees:**

**CAB Members:**

Dr. Rose Hayes- NM Chair  
Dr. Donald Bridges- CAB Chair  
Harold Simon- CAB Vice Chair  
Ed Sturcken  
Ed Burke  
Virginia Jones  
Nina Spinelli- *Online*

**DOE/ Contractors/ Others:**

Maxcine Maxted, DOE-SR  
Michael Mikolanis, DOE-SR  
Patrick McGuire, DOE-SR  
Tony Polk, DOE-SR  
Bill Taylor, DOE-SR  
Gerri Flemming, DOE-SR  
Bill Bates, SRNL

**Stakeholders:**

Lee Poe  
Jim Tisaranni  
Ed Hallinan

**Agency Liaisons:**

Tom Rolka, SCDHEC  
Rob Pope, EPA-*Online*  
Martha Berry, EPA- Online  
Jon Richards, EPA

**Welcome and Introduction:**

CAB member Rose Hayes welcomed everyone to the meeting and stated the meeting was being streamed online. She then asked everyone to introduce themselves before she listed the NM Committee members. She reviewed the committee's focus and provided a recommendation status update, stating recommendations 306, 307, 308, and 309 were open. She introduced Mr. Michael Mikolanis, Department of Energy Savannah River (DOE-SR), to begin his presentation.

**Presentation: Use of Plutonium Equivalent Curies for Measuring Risk- Michael Mikolanis, DOE-SR**

Mr. Mikolanis said the purpose of his presentation was to discuss the concept of using Plutonium Equivalent Curies (PEC) as a method of measuring relative risk between nuclear facilities at SRS; however, he said he planned to share DOE's perspective of how PEC did not adequately measure risk. He said risk was "the possibility of suffering harm or loss," which implied that risk was the "probability of a bad thing happening multiplied by the consequences of a bad thing." He discussed Risk Management and the Safety Based Design Process, which was the process DOE used to manage risk. He provided a chart of the Safety Based Design Process and briefly explained each step of the process, which included: 1.) Conceptual design, 2.) Hazard Analysis, 3.) Accident Analysis, and 4.) Control Selection. Mr. Mikolanis provided an overview of the accident analysis stage. He then explained that multiplying Material at Risk (MAR), Damage Ratio (DR), Airborne Release Fraction (ARF), Leak Path Factor (LPF), Dispersion, and Dose Conversion Factor (DCF) was how to calculate radiological consequences. He explained that PEC was an expression of MAR, which was one of six terms used to calculate radiological consequences. He said, "PEC was one component of a component of risk." Mr. Mikolanis explained that using PEC as a risk surrogate neglected several important factors in determining risk such as equipment malfunction, if the material was dispersible, available energy for dispersion, leakage from the facility, and likelihood of event occurrence. Mr. Mikolanis said using PEC as a common denominator for facilities at SRS was not the best method available to measure risk adequately. This presentation can be found on the CAB website at: [cab.srs.gov](http://cab.srs.gov).

## **Presentation: Update on H-Area Operations- Allen Gunter, DOE-SR**

Mr. Gunter stated the purpose of his presentation was to satisfy a 2013 NM Committee Work Plan topic by providing an update on H-Area operations. He displayed the “SRS Waste and Material Flow Path” to illustrate the location of H-Area at SRS. He stated that operational conduct in facilities at SRS had slightly declined, which resulted in DOE-SR issuing its concerns in a letter to Savannah River Nuclear Solutions (SRNS) on April 18, 2013. He stated that SRNS submitted a Corrective Action Plan to DOE-SR on May 20, 2013, and a revision on June 14, 2013. Mr. Gunter mentioned that in order to improve disciplined operational conduct, numerous corrective actions were implemented for the facilities. He said DOE-SR noticed conduct improvements, but planned to continue evaluating SRNS’s progress. He explained legacy transuranic (TRU) waste had been remediated in H-Canyon for the past seven years in order to achieve Waste Isolation Pilot Plant (WIPP) certification; however, the legacy waste remediation efforts were expected to be completed by the end of 2013.

Mr. Gunter stated the National Nuclear Security Administration (NNSA) assigned H-Area a mission to produce plutonium oxide feed for the Mixed Oxide Fuel Fabrication Facility (MFFF) from “non-pit” material stored in K-Area in November 2011. He said H-Canyon, HB-Line, and support facilities were being reconfigured in order to allow for a production rate of one metric tons of plutonium oxide. He provided a “Plutonium Oxide Production Flowsheet” before he discussed the current plutonium processing efforts. Mr. Gunter discussed “vulnerable” SNF disposition, which he said involved the continued disposition of Sodium Reactor Experiment (SRE) spent nuclear fuel (SNF). He said SRE was being processed with high aluminum fuel to ensure the material was easily transferred; however, the SRE would be sent directly to the sludge batch tank to feed the Defense Waste Processing Facility (DWPF). He said upon completion of the SRE campaign in spring 2014, SRS will proceed directly with processing aluminum clad (Al-clad) enriched uranium SNF. He mentioned DOE approved a Supplement Analysis (SA) and Amended Record of Decision (AROD) to allow the processing of a limited amount of enriched uranium aluminum clad SNF. He said the H-Area complex remained a unique national asset for large scaled nuclear materials processing. This presentation can be found on the CAB website at: [cab.srs.gov](http://cab.srs.gov).

## **Committee Discussion:**

CAB member Hayes discussed the DOE Response to recommendation 306. CAB member Burke said he felt the CAB should be conscience of the budget constraints DOE-SR was facing with projects such as the Liquid Waste (LW) program. CAB member Hayes said she would like the CAB to have the opportunity to hear from a transmutation expert in order to learn about the process.

CAB member Hayes introduced a draft recommendation titled, “L-Basin Inventory as Beta Test for Yucca Mountain.” She read and explained each recommendation before other committee members joined the discussion. She said she wanted to discuss the draft recommendation at the upcoming September 2013 Full Board meeting. She then asked if anyone wanted to make a public comment. This discussion can be found on the CAB website at: [cab.srs.gov](http://cab.srs.gov)

## **Public Comment:**

There were no public comments.

CAB member Hayes adjourned the NM Committee meeting.

**The next NM Committee Meeting will be held on Tuesday, October 22, 2013, from 4:00-5:50 p.m., at the DOE Meeting Center in Aiken, SC.**

**The online recording of this meeting can be found on the CAB website at: [cab.srs.gov](http://cab.srs.gov)**