

Nuclear Materials Committee

July 21, 2014

MEMBERS

Rose Hayes, Chair

Louie Chavis

Michael Havird

Virginia Jones

Nina Spinelli

Christopher Timmers



Nuclear Materials Committee Responsibility



- This committee was established to study issues which involve nuclear materials (generally uranium and plutonium) that have an impact on present or future SRS activities, including:
 - Used/Spent nuclear fuel program activities
 - Nuclear materials management
 - Nuclear materials integration
 - Disposition of Pu and other HLW from SRS



Recommendations and Agency Responses

Status	Meaning
Pending	The draft recommendation has been approved by the full board and submitted to DOE; however, the response has not been received.
Open	The recommendation status is changed to “open” once the response has been received. The board may follow up for further information on a response that they find inadequate.
Closed	The action(s) in the recommendation have been completed, rejected in full by DOE, or overcome by events.



2014 Annual Work Plan Topics

- Nuclear Materials System Plan
- Alternative Dispositions of Nuclear Materials
- Building 235-F Update (Deactivation/cleanup)
- H-Canyon Update (Today and future)
- L-Basin Update (Ins & Outs/Foreign Research Reactor receipts/disposition options
 - processing or dry storage)



Open Recommendations

- Open. Recommendation #307, Transferring Materials in L-Basin to Auxilliary Dry Cask Storage.
- Open. Recommendation #313. L-Basin Inventory as Trial Test for a Federal Repository.
- Open. Recommendation #314. Planning for Disposition of SRS Canisters.

Recommendation 307: Open



Transferring Materials in L-Basin to Auxiliary Dry- Cask Storage Background.

- Review of 3 recommendations
- Review of DOE response
- 9/03/13 response. Accepts #1/ SRNS study indicates costs at over a billion \$\$. OMB study indicated that processing is \$500 million cheaper than dry cask storage due to higher number of canisters requiring disposal in federal repository. **Will release report when finalized.**
- Does not accept #2. Need additional research on drying alum cladded fuel.
- Does not accept #3. Not beneficial to have NAS evaluation without #2.



Recommendation 313: Open

L-Basin Inventory as Trial Test for a Federal Repository. Background.

Review of Recommendations

- Review of DOE response
- 12/03/13 response. “The Department of Energy Savannah River Operations Office cannot accept your recommendation. **The Federal Repository is not within the purview of the Office of Environmental Management..**”

??? Need Clarification



Recommendation 314: OPEN

- **Planning for Disposition of SRS Canisters.**
- **Background.**
 - Review Recommendations
 - Review DOE response
 - 11/05/13 response. Focused on consent-based process.
 - Not currently anticipating repository demonstration program.
 - Cans demo of repository performance premature at this time.

DRAFT RECOMMENDATION - Planning for Disposition of SRS Canisters and L-Basin Materials



- See handout for full text.
- Recommendations:
 1. DOE develop a plan for preliminary/pilot testing of used nuclear fuel and high-level radioactive waste as a basis for establishing the variable handling, shipping, and storage requirements for permanently disposing of such materials in a deep geologic repository.
 2. DOE include in the plan's preliminary/pilot tests the utilization of SRS DWPF canisters and L-Basin materials (both foreign and domestic).
 3. If DOE rejects recommendation #2, above, DOE provide a presentation to the SRS CAB explaining the scientific foundation for the rejection.

Rewrite of #306

DRAFT RECOMMENDATION - Chemical Separation or Partitioning and Transmutation (P/T) of Used Nuclear Fuel And Defense High-Level Radioactive Waste



- See handout for full text.
- Recommendations:
 1. Develop a systemic plan which outlines and prioritizes the development of advanced separation technologies.
 2. Develop a strategy which integrates such advanced technologies with efforts to construct a geologic repository.
 3. Task the SRS SRNL with implementing an investigative program in support of the systemic plan and the integration plan.
 4. Develop a funding approach adequate to the task of supporting the systemic plan, the integrative plan, and the investigative program assigned to the SRS SRNL.
 5. Provide a draft plan and funding approach for public information and input by FY 2016.



Presentation, Tuesday July 22nd:

- **Building 235-F Update**
 - **Vickie Wheeler, DOE-SR**