

WESTINGHOUSE SAVANNAH RIVER COMPANY

**DATE: July 16, 1998**

**FROM: Steve Piccolo, HLW Salt Disposition Systems Engineering Team Leader**

**SHORT LIST OF ALTERNATIVES FOR THE DISPOSITION OF HIGH LEVEL WASTE SALT**

On March 12<sup>th</sup> a Briefing Package was distributed to SRS personnel Site wide to solicit input and establish the best technical path for the disposition of High Level Waste Salt. The completed work on the chemistry of precipitation provided a baseline for the Systems Engineering approach to evaluating the current ITP process and alternatives. In response to this request and parallel brainstorming efforts that involved representatives of all SRS operating and technical organizations, almost 130 different alternatives were established for consideration. While not all of the submitted proposals were systems solutions, all addressed at least some portion of the process resolution.

The Salt Disposition Systems Engineering Team considered and evaluated all of the proposals. Ultimately, through combination, evaluation and use of suggested ideas to trigger creation of additional concepts, an "Initial List" of the eighteen alternatives was compiled by the Team. The Team evaluated the eighteen alternatives with regard to safety, technical maturity, current and future mission impact, cost, schedule, and ability to transfer science to field deployment engineering and developed a "Short List" of four alternatives. The Team drew upon the expertise of many of you, the people most knowledgeable in the HLWMD processes and requirements. In our continuing effort, if new concepts come to mind, please furnish them to Bob Jones at 704-3N. The Team will continue to consider additional ideas throughout the evaluation process. We are confident that your support will assure success in determining the most effective technology for disposition of HLW salt. Our recommendation is due in October 1998. The four alternatives being considered in Phase III of the System Evaluation are:

- Small Tank TPB Precipitate – DWPF Vitrification
- Crystalline Silicotitanate Ion Exchange – DWPF Vitrification (variations)
- Caustic Side Solvent Extraction – DWPF Vitrification
- Sludge/Actinide Removal Followed by Cesium Disposal in Grout

SFP/as  
Attachment