

Memorandum

National Nuclear Security Administration (NNSA)

DATE: **AUG 21 2008**

REPLY TO

ATTN OF: NA-262.3 (T. Cantey [REDACTED])

SUBJECT: Documentation of the Alternatives Analysis to Define WSB Scope

TO: Memo to File

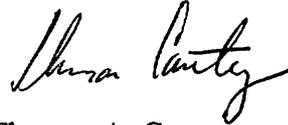
The purpose of the memorandum is to document the results of alternatives analyses conducted during 2005 and 2006 to assess changes in the closure schedules of DOE facilities at the Savannah River Site (SRS) and the resulting impacts on the functional requirements for the WSB.

The WSB project was suspended in 2004 due to uncertainties with the Plutonium Disposition Program. Specifically, delays in settling negotiations with the Russian Federation on the mutual disposition of weapons-usable surplus plutonium, coupled with significant funding constraints for the domestic program had caused the project schedules for the two primary disposition facilities (the Mixed Oxide Fuel Fabrication Facility (MFFF) and the Pit Disassembly and Conversion Facility (PDCF)) to be significantly extended. At that time, the WSB project, which provides waste treatment capability for waste streams produced by MFFF and PDCF, had completed the preliminary design stage and was to begin the detailed design activity. The capabilities to be provided by the WSB at this time encompassed waste treatment operations necessary to receive all waste streams produced by MFFF and PDCF to a point suitable for discharge to the environment and including packing, certification, and loading stations. Due to the delays in the disposition program, NNSA determined that the WSB project should suspend activities pending the resolution of the programmatic uncertainties. Line item funding for the project was terminated for the remainder of 2004 and 2005.

In 2005, NNSA began the initial activities to resurrect the WSB project, with design activities anticipated to resume at the beginning FY 2006. During the project suspension, revisions to the Office of Environmental Management (EM) closure schedules for SRS facilities provided an opportunity to use existing treatment capabilities that were originally scheduled to be shut down during the plutonium disposition mission. NNSA requested the SRS M&O to conduct a new alternatives analysis to identify options which would lead to the optimum configuration of the WSB. The goal was to identify which operations could be conducted in existing SRS facilities, and which unique capabilities (if any) were needed as a result of the plutonium disposition activities.

The SRS M&O submitted the alternatives analysis in June 2005 (WSR-2005-00131), which compared a range of combinations of new and existing facilities. NNSA evaluated the alternatives and determined that the most cost-effective option entailed utilization of existing facilities for waste treatment, certification, packaging, and shipping. A new capability was required for three waste streams that were not compatible with existing operations without significant and costly

modifications to facilities and closure schedules. The optimized WSB footprint was reduced from approximately 50,000 square feet to approximately 33,000 square feet as a result of the alternatives analysis. The changes to the project scope were identified and the functional requirements for the WSB authorized in revision 1 to the Facility Design Description (G-FDD-F-00007), dated April 2006.



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NA-08-064

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