

Recommendation 340  
Commend the Originators of the Double-Stacking Idea

Background:

The Department of Energy's (DOE) Savannah River Site (SRS) has two Glass Waste Storage Buildings (GWSB). Each GWSB is capable of holding about 2,200 canisters of vitrified high-level waste. GWSB#1 became operational in 1996, and filled to capacity in 2006. GWSB#2 began operation in 2006 and was originally expected to become filled by 2016, which would have necessitated construction of a third GWSB to hold the remaining canisters. The first two GWSBs cost about \$80 million apiece. Construction of GWSB#3 was estimated to cost between \$98 million to \$138 million.

The canisters in the GWSBs are intended for eventual disposal in a deep geologic repository for HLW and spent nuclear fuel. Previously, Yucca Mountain was intended to be the repository however, the current administration believes it is not a workable option and DOE initiated a consent-based siting process for establishing a repository location, which would become operational by 2048. In March 2015, The President tasked DOE with establishing a separate disposal site for defense HLW, which theoretically could be sited, licensed, constructed, and operated "more quickly" than a common repository for both commercial and defense wastes. In any case, the glass waste at SRS is likely to continue to be stored here for decades.

Based upon a prior briefing, in January 2015, the SRS CAB recommended... *"If research results indicate that double-stacked containers do not pose a threat to the public and environment utilize this temporary storage method while a federal repository is sought."*<sup>1</sup> DOE implemented this recommendation and began double stacking of HLW canisters during June 2016. Double-stacking of canisters is expected to increase storage capacity of GWSB#1 from 2,254 to 4,508 canisters. This will create adequate safe interim storage through Fiscal Year 2026, significantly postponing the large expense to construct another storage building.

Discussion:

DOE and its contractors have ongoing incentive award processes to reward worker accomplishments and encourage ingenuity. However, the idea to take advantage of the design of existing GWSB #1 to safely double-stack HLW canisters was brilliantly innovative and will result in an unusually substantial savings to Department of Energy and taxpayers. The originator(s) of this idea deserve to be publicly recognized as a demonstration of appreciation by the government and citizens of the nation and to inspire others to emulate their resourcefulness.

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<sup>1</sup> SRS CAB Recommendation # 326, "Double-Stacking of Defense Waste Processing Facility Canisters," adopted January 27, 2015

Recommendations:

The SRS Citizens Advisory Board recommends that the DOE:

1. Identify the person or persons who first broached the idea of converting Glass Waste Storage Building #1 to a double-stacking configuration.
2. Introduce these person(s) at a future SRS CAB full board meeting so that we may publicly recognize them.