



Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

OCT 28 2010

Mr. Manuel Bettencourt, Chair
Savannah River Site Citizens Advisory Board
P.O. Box A
Building 730-B, Room 1184
Aiken, SC 29802

Dear Mr. Bettencourt:

SUBJECT: Citizens Advisory Board (CAB) Recommendation Number #273 Preservation of Shield Doors to Support Nuclear Non-Proliferation Programs and Other Scientific Programs at Savannah River Site (SRS) and the Department of Energy (DOE)-wide

Thank you for the subject recommendation regarding the potential reuse of P- and R-Area Reactor shield doors. The recommendation is listed below:

1. **Determine the pedigree of the P&R reactor shield door steels to assess if the radioactive background level of the steel is low enough to be considered for such uses as the ultra low counting devices to support the Nuclear Non-Proliferation programs at SRS.**
2. **Evaluate the cost effective use of the steel at SRS and inform other potential users (DOE/NNSA/DoD).**
3. **If the steel has the desired pedigree, it is recommended that the shield doors be removed from the P & R reactors, transported and stored in a suitable location.**

SRS has reviewed reactor shield door construction drawings and purchase orders. The drawings and welding procedures for this material were released for fabrication in 1952. Considering the massive resources consumed to support the World War II efforts during the 1940s, it is not feasible to conclude that the material used in the 1950s to fabricate the shield doors originated prior to World War II. Also, considering the shield doors for all the reactors were exposed to atmospheric conditions during construction are located in posted radiation areas and subsequently exposed to an operating environment during nuclear reactor process, re-use of this material for ultra-low background applications is not practicable. Discussions with SRS subject matter experts confirm this position.

To eliminate the potential for inadvertent release of radioactive material, DOE has issued a moratorium on the release of volumetrically contaminated metals and suspension on release from radiological areas of scrap metals for recycling. Considering the shield doors have been located in posted radiological areas, this material is ineligible for release external to the Department.

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Based on the above discussion, this recommendation cannot be implemented for any of the SRS reactors. DOE-SR continues to appreciate and value CAB input on the SRS operations.

If you have any questions, please call me or Rita Stubblefield, of my staff, at (803) 952-7817.

Sincerely,

A handwritten signature in black ink that reads "David C. Moody". The signature is written in a cursive style with a large, sweeping "M" and a long, trailing flourish at the end.

David C. Moody
Manager

ACP-11-010

cc: Robert Pope, (EPA-4)
Van Keisler, (SCDHEC)