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May 24, 2007

U.S. Nuclear Regulatory Commission  
ATTN: Mr. James C. Shepherd, Project Manager  
Decommissioning Branch/Division of Waste Management  
11545 Rockville Pike  
Two White Flint North  
Rockville, MD 20852

*Via Overnight Carrier*

**RE: Response to NRC's Second Request for Additional Information Dated April 5, 2007;  
Proposed Modification to License Condition 25 of SMB-911 Related to Storage of  
Packaged Material from Ponds 2 and 3.**

Dear Mr. Shepherd:

FMRI, Inc. (FMRI) is submitting this response to the Nuclear Regulatory Commission (NRC) comments contained in the referenced letter. FMRI's responses to the comments are provided in the order presented in the referenced letter.

**NRC Comment 1.** During its review of FMRI's application to amend Condition 25 of License SMB-911, the staff identified the possibility that FMRI may stack the packages (supersacks) of waste material from Ponds 2 and 3 in the proposed temporary storage area. If FMRI does intend to stack the packages, please provide a statement of the maximum number of layers FMRI will use, and the technical bases for this number.

**Response:** FMRI intends to stack the packages of dried WIP material a maximum of four layers high. The technical basis for this number of layers is supported by recent stacking tests conducted on FMRI's behalf by an independent third party, TEN-E Packaging Services, Inc. (TEN-E). The results of TEN-E's tests are included as Attachment A and indicate that the packages can be safely stacked 4 to 5 high, depending on the type of package used. Based on the results of this testing, FMRI plans to stack packages no more than 4 high.

**NRC Comment 2.** The bases should include the material properties of the packages, and a description of the equipment and procedures that will be used for the stacking and retrieval operations. Include planned sequences for stacking the packages for storage, sequences for retrieving the packages for shipment, and lifting capacity and extension requirements for the planned lifting equipment.

**Response:** The packages consist of woven plastic fiber bags or “supersacks” fitted with a separate inner impermeable liner. Information sheets for the packages are contained in the TEN-E test reports provided in Attachment A. The packages currently present on-site contain dried WIP material from Pond 3. In the future, the packages will also contain dried WIP material from Pond 2.

Procedures used for stacking operations are as follows:

1. Packages will be transported to the staging area using equipment suitable to the size, weight, and number of packages being transported. Typically, this equipment will consist of a backhoe, excavator, forklift or similar equipment.
2. Packages will be placed first into the staging areas described in the proposed modification to License Condition 25 of SMB-911 set forth below using suitable heavy equipment (backhoe, crane, etc.) for packages placed in outdoor staging areas or an overhead crane for packages placed into storage in the Thermite Building. Package placing equipment will have a lifting capacity of a minimum of 6,000 lbs. Depending upon bag stacking height, the equipment reach and extension capabilities will be such to safely allow the stacking of bags in accordance with the equipment manufacturer’s specifications (e.g., a sample specification sheet for CAT 311B is provided in Attachment B). Once a sufficient base layer of packages has been established, a second layer of packages will be placed. The outer rows of the second layer of packages will be inset the width of one half package with respect to the outer rows of the base layer of packages (i.e., in a stair step or pyramid fashion). In the event additional package layers are required, they will be positioned in a similar fashion.
3. The packages will then be covered in accordance with our proposed modification to License Condition 25 of SMB-911.

Procedures used for retrieval of packages are as follows:

1. The cover system will be removed from the staging area prior to entry to retrieve packages for a time sufficient to allow any accumulated radon to dissipate. The Thermite Building is continuously vented so no waiting period is required prior to entry.
2. Top layer packages will be retrieved first until either the top layer of packages is entirely removed or a sufficient number of top layer packages have been removed to safely allow access to the lower layer packages. Suitable heavy equipment (backhoe, crane, etc.) for packages in outdoor staging areas or an overhead crane for packages placed into storage in the Thermite Building will be used for package retrieval. Package retrieving equipment will have a lifting capacity of a minimum of 6,000 lbs. Depending upon bag stacking height, the equipment reach and extension capabilities will be such to safely allow the retrieval of bags in accordance with the equipment manufacturer’s specifications (e.g., a sample specification sheet for CAT 311B is provided in Attachment B). Retrieval will continue in a similar manner for packages in lower layers.
3. Packages retrieved from the staging areas will be transported to FMRI’s loading area for placement into containers for off-site shipment.

**NRC Comment 3. Include proposed wording for Condition 25 that includes all modifications since the original submittal, including responses to previous requests for additional information.**

***Response:*** FMRI has included the requested proposed wording for Condition 25 in **Attachment C**. It should be noted that the proposed July 1, 2008 date for equipping the outdoor staging areas with an improved cover system would involve containers in staging areas that were placed no more than 17 months previous to that date. FMRI currently has favorable experience with supersacks that were placed in Staging Areas 2A and 2B for periods up to 17 months.

Should you have any questions regarding this letter, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "E. Jonathan Jackson". The signature is fluid and cursive, with a long horizontal stroke at the end.

E. Jonathan Jackson  
President, FMRI

cc: Blair Spitzberg, Region IV  
Rob Miller, OMEGA  
Joe Harrick, Penn E&R  
Mark Wetterhahn, Winston & Strawn)  
James Burgess, , FMRI  
File (NRC-052407-01)

Enclosures