Washington
TRU Solutions LLC

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October 14, 2005

Mr. M. Rahimi, Project Manager
NMSS/SFPO, Mail Stop O13D13
U.S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

Subject: REVISION 4 OF THE RH-TRU 72-B SHIPPING PACKAGE APPLICATION, DOCKET NO. 71-9212

Dear Mr. Rahimi:

Washington TRU Solutions LLC, on behalf of the U.S. Department of Energy (DOE), hereby submits Revision 4 to the application for a Certificate of Compliance for the RH-TRU 72-B Package, U.S. Nuclear Regulatory Commission (NRC) Docket No. 71-9212.

The application consists of the following documents:

- *RH-TRU 72-B Safety Analysis Report* (SAR), *Revision 4*
- *Remote-Handled Transuranic Waste Authorized Methods for Payload Control* (RH-TRAMPAC), *Revision 0*
- *RH-TRU Payload Appendices, Revision 0.*

The key elements of these document revisions are as follows:

- Reformat of the RH-TRU 72-B SAR based on the template of the current versions of the TRUPACT-II and HalfPACT SARs.

- Revisions to the RH-TRU 72-B SAR to demonstrate compliance with the requirements of Title 10, Code of Federal Regulations (CFR), Part 71 (10 CFR 71), Packaging and Transportation of Radioactive Material, Final Rule, 01-26-04. In accordance with 10 CFR 71.91(e), we are requesting the package designation be changed from USA/9212/B(M)F-85 to USA/9212/B(M)F-96.

- Consolidation of governing payload requirements for the RH-TRU 72-B packaging into the RH-TRAMPAC document.

  The RH-TRAMPAC (Revision 0) is a new document referenced by the RH-TRU 72-B SAR and replaces Appendix 1.3.7, Remote-Handled Transuranic Waste Authorized Methods for Payload Control, previously approved as part of the

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RH-TRU 72-B SAR, Revision 3. The RH-TRAMPAC defines the authorized contents for the RH-TRU 72-B packaging.

- Creation of the RH-TRU Payload Appendices document to consolidate supporting information for the RH-TRAMPAC.

  The RH-TRU Payload Appendices (Revision 0) is submitted as an accompanying document to Revision 0 of the RH-TRAMPAC. The purpose of the document is to provide supplemental information pertaining to the transportation requirements defined in the RH-TRAMPAC, including associated methodology and logic, and documentation of related assessments and evaluations. The RH-TRU Payload Appendices is a new document comprised of payload-related appendices previously approved in Revision 3 of the RH-TRU 72-B SAR.

- Revision and expansion of the criticality evaluation to incorporate NUREG/CR-5661 regulatory guidance and to establish multiple fissile mass limits as a function of the bounding moderating and reflecting properties of various remote-handled transuranic waste forms. The KENO criticality evaluations are based on the moderator, reflector, and Pu-240 poison methodologies previously approved in the TRUPACT-II and HalfPACT SARs and the low-enriched uranium evaluation previously approved in Revision 3 of the RH-TRU 72-B SAR.

- Other changes to the RH-TRU 72-B SAR include optional leakage rate testing of the inner vessel, optional rail transport, optional painting of the package exterior, changing from a "time-based" to a "cycle-based" replacement strategy for bolts, optional lubrication of bolts, addition of a crush and deep immersion evaluation, comprehensive revision of the buckling evaluation, addition of an alternative seal material discussion, revision and clarification of the operating procedures, revision to the pressure rise leakage rate test procedure for consistency with the TRUPACT-II and HalfPACT SARs, revisions to the lifting device load tests, revision and clarification of the fabrication and maintenance/periodic leakage rate tests, revision of the quality assurance discussion for consistency with the TRUPACT-II and HalfPACT SARs, and general correction of numerical inconsistencies.

- Inclusion of revised methodology for the evaluation of site- and waste-specific descriptions of authorized contents for the RH-TRU 72-B consistent with the logic for authorized contents for the TRUPACT-II and HalfPACT packagings. The revised methodology authorizes the WIPP RH-TRU Payload Engineer to review and approve RH-TRUCON codes within the bounding parameters specified in the RH-TRAMPAC and RH-TRU Payload Appendices, approved by the NRC. The WIPP RH-TRU Payload Engineer may approve a content code only if compliance with the transportation requirements of the RH-TRAMPAC can be demonstrated. The WIPP RH-TRU Payload Engineer does not have the authority to change the transportation requirements for the RH-TRU 72-B as specified in the RH-TRAMPAC without approval from the NRC.

- Inclusion of a maximum shipping period of 10 days for shipments completed under strict administrative controls, similar to that previously approved in the TRUPACT-II and HalfPACT SARs. This shipping period is in addition to the general case shipping period of 60 days.

- Inclusion of a revised pressure analysis for 60 days consistent with 10 CFR 71.41(c). All RH-TRU 72-B shipments have controls in place, including satellite tracking, to ensure completion of shipments well within 60 days.

- Additional payload- and packaging-related changes as detailed in Attachments B1 through B3.

- Changes requested to the RH-TRU packaging and RH-TRU canister design drawings, along with justifications for the changes, as summarized in Attachment C.

This letter includes the following attachments:

- Attachment A lists all enclosures to this letter.

- Attachments B1 through B3 provide abstracts of requested changes in Revision 4 of the RH-TRU 72-B SAR, Revision 0 of the RH-TRAMPAC, and Revision 0 of the RH-TRU Payload Appendices.

- Attachment C summarizes requested changes to the RH-TRU 72-B packaging and RH-TRU canister design drawings.

- Attachment D provides the three documents comprising the application.

As noted in previous application submittals, an NRC/DOE agreement exists to waive applicable review fees.

If you have any questions regarding this submittal, please contact Mr. S. A. Porter at (253) 858-6690 or me at (505) 234-7469.

Sincerely,

Phillip C. Gregory

P. C. Gregory, Manager
Packaging Engineering

SAP:clm

Attachments

cc: M. A. Italiano, CBFO

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