NWP
Nuclear Waste Partnership LLC

A URS-led partnership with B&W and AREVA

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September 26, 2013

ATTN: Document Control Desk
Director, Spent Fuel Project Office
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: REVISION 6 OF THE RH-TRU 72-B SHIPPING PACKAGE APPLICATION, DOCKET NO. 71-9212

Dear Sir or Madam:

Nuclear Waste Partnership LLC, on behalf of the U.S. Department of Energy (DOE), hereby submits Revision 6 of the application for a Certificate of Compliance (CoC) for the RH-TRU 72-B Packaging, U.S. Nuclear Regulatory Commission (NRC) Docket No. 71-9212. The application consists of the following documents (page changes):

- RH-TRU 72-B Safety Analysis Report (SAR), Revision 6
- Remote-Handled Transuranic Waste Authorized Methods for Payload Control (RH-TRAMPAC), Revision 2
- RH-TRU Payload Appendices, Revision 2.

The sole purpose of the application is to seek minor revisions to Section 3.1, *Nuclear Criticality*, of the RH-TRAMPAC. The revisions are to implement a more encompassing set of payload controls required for compliance with the U-235 Fissile Equivalent Mass (FEM) Limit. The revised U-235 FEM payload controls are required to transport and dispose of decommissioned Experimental Breeder Reactor I (EBR-I) components from Idaho National Laboratory (INL) in support of the 1995 Batt Settlement Agreement. An expedited review is requested to facilitate a revised CoC by December 31, 2013, thereby allowing DOE to meet TRU waste removal commitments with the State of Idaho.

The EBR-I components (blanket bricks, ring, plug, and control rods) are comprised of natural uranium encased in stainless steel with small amounts of inbred plutonium that readily satisfies the Case D – Low Enriched Uranium (LEU) criticality analysis payload assumptions delineated in the SAR. The requested revisions remove the existing and overly restrictive payload requirement that the waste form be a homogenous solid/sludge with a particle size characteristic dimension of 1 inch or less. Demonstration of compliance with the revised payload controls will continue to rely upon the use of a documented waste stream process with sampling and/or process knowledge to ensure that the 0.96% U-235 FEM enrichment requirement is ensured throughout the waste matrix. This letter includes the following attachments:

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- Attachment A – Summary of Revisions
- Attachment B – Revised Documents (page changes)

All technical changes are indicated by right-bars in the margin of the documents ("|") and are summarized in Attachment A. The revised documents, in the form of page changes, are provided in Attachment B.

To facilitate implementation, it is requested that the current package CoC be valid for use at least one month from the date of issuance of the revised CoC.

If you have any questions regarding this submittal, please contact Mr. B. A. Day of my staff at (575) 234-7414.

Sincerely,

Todd Sellmer

T. E. Sellmer, Manager
Transportation Packaging

TES:clm

cc: J.R. Stroble, CBFO
H. Akhavannik, USNRC

RH-TRU 72-B SAR, Revision 6, September 2013			
Section	**Page**	**Change Description**	**Justification**
General		Revised title page and spine for revision and date.	Administrative change. No impact to safety basis.

RH-TRAMPAC, Revision 2, September 2013			
Section	**Page**	**Change Description**	**Justification**
General		Revised title page and spine for revision and date.	Administrative change. No impact to safety basis.
3.1.1	3.1-2	Revised Section 3.1, Requirements, for U-235 Fissile Equivalent Mass Limit for Canisters without Neutron Shielding, by deleting the last sentence: "In addition, the waste shall be a homogeneous solid/sludge generated from a process that ensures a particle size characteristic dimension of 1 inch or less."	The key payload characteristics for use of the U-235 FEM compliance evaluation are that the material be not machine compacted and primarily uranium (in terms of the heavy metal component) with the waste matrix distributed within the canister such that the maximum enrichment of fissile radionuclides does not exceed 0.96% U-235 FEM in any location. Documenting the waste stream process in a programmatic or waste-specific data package TRAMPAC that includes sampling and/or process knowledge data ensures that the U-235 FEM limits are satisfied and the payload is safely subcritical in accordance with the analysis assumptions for the Case D – Low Enriched Uranium Payload. No impact to safety basis.
3.1.1	3.1-3	Revised contents requirement for FEM Limit in Table 3.1-1 by replacing "homogenous solid/sludge with a particle size characteristic dimension of 1 inch or less that is" with "and."	
3.1.2	3.1-7	Revised first sentence in 2nd paragraph under FEM by deleting "homogeneous solid/sludge" and replacing "particle size dimensional" with "enrichment."	

RH-TRU Payload Appendices, Revision 2, September 2013			
Section	**Page**	**Change Description**	**Justification**
General		Revised title page and spine for revision and date.	Administrative change. No impact to safety basis.

(One Hard Copy and One CD[1] – Document Control Desk)
(Five Hard Copies and One CD[1] – H. Akhavannik)

- RH-TRU 72-B SAR, Revision 6, September 2013
  - Title page and spine
- RH-TRAMPAC, Revision 2, September 2013
  - Title page and spine
  - Pages 3.1-1 through 3.1-8
- RH-TRU Payload Appendices, Revision 2, September 2013
  - Title page and spine

[1] CD contains a PDF version of the complete documents listed in Attachment B.