



A URS-led partnership with B&W and APEVA

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UFC:5822.00

October 08, 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: REPORT PURSUANT TO 10 CFR 71.95

Dear Ms. Akhavannik:

Nuclear Waste Partnership (NWP) LLC, on behalf of the U.S. Department of Energy Carlsbad Field Office, submits this letter to report a condition pursuant to 10 CFR 71.95 regarding the use of the Type B packaging model number TRUPACT-II, serial number 155. This packaging operates under the U.S. Nuclear Regulatory Commission Certificate of Compliance (CofC) No. 9218. During shipments of transuranic (TRU) waste to Idaho National Labs (INL) originating from Los Alamos National Laboratory (LANL), the conditions in Section 7 of CofC No. 9218 were not followed in their entirety.

Following is a description of the event, reported in accordance with 10 CFR 71.95(c):

(1) A brief abstract describing the major occurrences during the event, including all component or system failures that contributed to the event and significant corrective action taken or planned to prevent recurrence:

CofC 9218 specifies, "Each payload container must be assigned to a shipping category in accordance with CH-TRAMPAC..." Seven drums, overpacked into two Standard Waste Boxes (SWB), were part of an intersite shipment between LANL and INL made on January 30, 2013, and received on February 1, 2013. The seven drums were assigned to incorrect CH-TRUCON codes that did not correctly bound the actual packaging configurations.

There were no major occurrences during the event and no component or system failures that contributed to the event. An evaluation with regard to payload parameters using the approved CH-TRAMPAC methodology showed that the containers were shipped in compliance with the applicable gas generation rate limits and met all other payload limits for transport in the

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TRUPACT-II. However, due to the error in CH-TRUCON code assignment, the conditions in CofC 9218 were not followed in their entirety for this shipment.

(2) A clear, specific, narrative description of the event that occurred so that knowledgeable readers conversant with the requirements of part 71, but not familiar with the design of the packaging, can understand the complete event. The narrative description must include the following specific information as appropriate for the particular event:

The NRC CofC 9218, Revision 21, issued for the TRUPACT-II states in Section 7, "Each payload container must be assigned to a shipping category in accordance with CH-TRAMPAC..." CH-TRAMPAC Section 1.5, *CH-TRUCON Document*, refers to the CH-TRUCON document as a "catalog of TRUPACT-II and HalfPACT authorized contents and a description of the methods utilized to demonstrate compliance with the CH-TRAMPAC." Seven drums at LANL were assigned one of two CH-TRUCON codes. One code describes one twist and tape drum liner bag, the other describes two twist and tape drum liner bags. The drums were then shipped from LANL to INL and awaited certification for shipment to the Waste Isolation Pilot Plant (WIPP) for disposal. It was discovered during the certification process for shipment to WIPP that the actual packaging configuration for the seven drums was either two or one twist and tape inner bag(s), not liner bag(s). As listed in the CH-TRU Payload Appendix Table 2.2-1, the resistance factor for a twist and tape inner bag is much higher than that for a twist and tape liner bag. Therefore, the assigned CH-TRUCON codes did not correctly bound the actual packaging configurations and did not comply with the CH-TRAMPAC. The determination of an NRC reportable condition pursuant to 10 CFR 71.95 was made on August 22, 2013.

The incorrect CH-TRUCON codes were assigned to the following containers:

Date Shipped (MST)	Shipment No.	TRUPACT-II No.	Payload ID Number	Container ID Number
1-30-2013	LAIN13001	155	LA3018	LA00000062547 LA00000063116 LA00000063198 LA00000063497 LA00000064665 LA00000064863 LAS822714

Although these seven drums used incorrect CH-TRUCON codes, an independent CH-TRAMPAC evaluation was performed based on the actual packaging configuration and showed that all seven drums were compliant.

All other conditions required for the operation and shipment of the packages in accordance with the CofC were adhered to.

(2)(i) Status of components or systems that were inoperable at the start of the event and that contributed to the event;

This criterion is not applicable to the event because there were no components or systems that were inoperable at the start of the event.

(2)(ii) Dates and approximate times of occurrences;

See table above for shipment dates.

(2)(iii) The cause of each component or system failure or personnel error, if known;

No components or systems failed. Personnel assigned incorrect CH-TRUCON code to seven drums.

(2)(iv) The failure mode, mechanism, and effect of each failed component, if known:

This criterion is not applicable to the event because no components failed.

(2)(v) A list of systems or secondary functions that were also affected for failures of components with multiple functions;

This criterion is not applicable to the event because no components failed.

(2)(vi) The method of discovery of each component or system failure or procedural error;

The error was discovered during certification for shipment from INL to the WIPP.

(2)(vii) For each human performance-related root cause, a discussion of the cause(s) and circumstances;

The cause of the non-compliance stems from an error made by personnel in assigning incorrect CH-TRUCON codes to seven drums.

(2)(viii) The manufacturer and model number (or other identification) of each component that failed during the event; and

Manufacturer and model numbers associated with component failure are not applicable because no components failed.

(2)(ix) For events occurring during use of a packaging, the quantities and chemical and physical form(s) of the package contents.

Payload ID LA3018:

Radionuclides:

Radionuclide	Activity (Ci)	Percent
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Security-Related Information
Table Withheld Under 10 CFR 2.390

Physical and Chemical Form:

Material Category	Material Type	Weight (lbs)
Waste	Metallic	429.75
	Inorganic	154.57
	Organic	214.99
Payload Materials	Metallic	1,280.22
Total		2,079.54

(3) An assessment of the safety consequences and implications of the event. This assessment must include the availability of other systems or components that could have performed the same function as the components and systems that failed during the event.

There were no systems or components that failed during the event. There were no safety consequences or implications of the event.

(4) A description of any corrective actions planned as a result of the event, including the means employed to repair any defects, and actions taken to reduce the probability of similar events occurring in the future.

- Peer review will be performed on all intersite shipment containers to ensure the assignment of the correct CH-TRUCON code.
- Additional training will be given to personnel responsible for assigning TRUCON codes to all payloads.

There were no defects requiring repair associated with this event.

(5) Reference to any previous similar events involving the same packaging that are known to the licensee or certificate holder.

Washington TRU Solutions letter number CP:12:01464, dated 9/27/2012:
Incorrect CH-TRUCON code assigned to a single 55-gallon drum

Washington TRU Solutions letter number CP:12:01074, dated 1/26/2012:
Incorrect Content Code assigned to thirteen drums.

Washington TRU Solutions letter number CP:07:00035, dated 12/14/2007
Incorrect shipping categories assigned to five drums.

The name and telephone number of a person within the licensee's organization who is knowledgeable about the event and can provide additional information.

T.E. Sellmer, Manager, NWP, Transportation Packaging (575) 234-7396
M.W. Percy, Manager, NWP, CCP Certification (575) 234-7394

(7) The extent of exposure of individuals to radiation or to radioactive materials without identification of individuals by name.

There were no exposures to individuals as a result of the event.

If you have any questions or require additional information regarding this report, please contact me at (575) 234-7396.

Sincerely,

A handwritten signature in black ink, appearing to read "T. E. Sellmer". The signature is fluid and cursive, with the first name "T. E." and the last name "Sellmer" clearly distinguishable.

T. E. Sellmer, Manager
Transportation Packaging
Central Characterization Program

MAL:jmc

cc: M. R. Brown, CBFO
G. Hellstrom, CBFO
D. S. Miehl, CBFO
J. C. Rhoades, CBFO
J. R. Stroble, CBFO