



A URS-led partnership with B&W and AREVA

CP:14:01202
UFC:5822.00

August 08, 2014

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 TRUPACT-II. The package operates under the U.S. Nuclear Regulatory Commission Certificate of Compliance (CofC) No. 9218. During shipments of transuranic (TRU) waste to the Waste Isolation Pilot Plant (WIPP) and Waste Control Specialists (WCS) in Andrews, TX, originating from Los Alamos National Laboratory (LANL), the conditions in Section 6 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:

Section 4.3.2 of the Contact-Handled Transuranic Waste Authorized Methods for Payload Control (CH-TRAMPAC) requires WIPP CH-TRU Payload Engineer (PE) evaluation of any waste process technology change associated with a given content code to ensure continued compliance with chemical composition and chemical compatibility requirements. During the review of recent LANL shipments, made to both the WIPP and WCS, a process change was identified resulting in a revised chemical composition for the waste that had not been reviewed and approved by the WIPP CH-TRU PE.

There were no major occurrences during transportation associated with this event and no component or system failures that contributed to the event. However, the conditions in CofC 9218 were not followed in their entirety for these shipments.

JE 72

The following interim corrective/preventive actions were implemented to preclude recurrence:

All shipments from LANL and to the WIPP have been suspended until investigations and corrective actions are complete

(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 No. 9218, Revision 21, states in Section 6 "...chemical properties, chemical compatibility...must be determined and limited in accordance with CH-TRAMPAC, Rev.4." Section 4.3.2 of the CH-TRAMPAC, *Methods of Compliance and Verification*, under Section 4.3, *Chemical Composition*, states, "Any proposed change in process technology at a generator site for a given content code must be evaluated for compliance with the lists of allowable materials in Table 4.3-1 through Table 4.3-9. This change shall be evaluated and approved by the WIPP CH-TRU Payload Engineer for compliance with existing waste material type restrictions. All changes in the chemical characteristics of the waste shall be recorded, and the date of the new process, description of the process, and list of new chemicals submitted to the WIPP CH-TRU Payload Engineer."

In August 2012, LANL Procedure EP-WCRR-WO-DOP-0233 (Revision 36, effective August 1, 2012) was changed to authorize the use of organic absorbents to sorb free liquids. The previous practice directed the use of inorganic absorbents. This change in the waste chemical composition and process was not submitted to the WIPP CH-TRU PE for evaluation review and approval as required by the CH-TRAMPAC.

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;

There were no components or systems that were inoperable at the start of this event.

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

On September 28th, 2012, LANL began using organic absorbents to remediate free liquids of repackaged waste. A total of 255 shipments, containing 656 packages, were made containing repackaged LANL drums that were shipped from LANL to WIPP or WCS until shipments ceased on May 1, 2014.

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

In August 2012, the LANL waste process procedure was changed and the previously approved inorganic absorbent was replaced with organic absorbent. The WIPP PE was not notified of such a change.

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

No components failed.

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

No components failed.

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

The change in the waste process was identified during a review of the most recent LANL shipments made to the WIPP and WCS.

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

Personnel at LANL responsible for performing the waste treatment process on this waste stream deviated from the approved procedures for the waste with an approved CH-TRU Waste Content Code (CH-TRUCON). This deviation from the NWP CCP approved process was not performed in accordance with the approved procedures established in the applicable documents governing this work.

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

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.

Due to the number of shipments affected by this non-compliance and the fact that this event did not result in a breach of containment during those shipments or affect the health and welfare of the public, the chemical and physical form of the contents of each package are not provided. If the commission feels that the chemical and physical form are relevant to this event, a table with all chemical and physical form(s) of the contents for each package can be provided separately.

(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 this event. There were no direct safety consequences of this event during transport. However, the waste process technology change implemented at LANL was not submitted for PE review and evaluation to ensure that the previously approved process for content code chemical compatibility was still valid. As a result, the potential for a chemical reaction to occur within the package contents may have existed during transport, which would have violated the requirements of 10 CFR 71.43(d).

(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 event occurring in the future.

The governing documents used to establish the treatment for the waste processing at LANL for waste assigned an approved CH-TRUCON Code will be revised to reiterate the following;

- All changes to approved waste treatment processes for waste assigned an approved CH-TRUCON code must be approved by NWP Packaging Payloads Engineer prior to implementation
- All personnel performing waste treatment processes for waste assigned an approved CH-TRUCON Code will receive additional training on applicable CH-TRAMPAC requirements
- Establishment of increased oversight of waste treatment processes

There were no defects requiring repair associated with these events.

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

No similar previous events to reference.

(6) 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, Central Characterization Program (CCP), Transportation Packaging
(575) 234-7396

(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 during shipment as a result of this event. All pre-shipment surveys satisfied the regulatory dose rate limits.

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

Sincerely,



T. E. Sellmer, Manager
Transportation Packaging
National TRU Program

ML:jmc

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