



A URS-led partnership with B&W and ARCV

CP:13:01551
UFC:5822.00

November 12, 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:

This letter is submitted as a replacement to letter number CP:13:01530, UFC:5822.00 submitted November 11, 2013 by Nuclear Waste Partnership (NWP), LLC. The referenced letter did not fully address all of the required information delineated by the reporting format described in 10 CFR 71.95(c), and as such should replace the previously submitted referenced letter. NWP, 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 numbers 125, 132, 159 and 191. These packagings operate under the U.S. Nuclear Regulatory Commission Certificate of Compliance (CofC) No. 9218. During four shipments of transuranic (TRU) waste to the Waste Isolation Pilot Plant (WIPP) originating from Idaho National Laboratory (INL) and one shipment of TRU waste to the WIPP originating from Los Alamos National Laboratory (LANL), the conditions in Section 11.(b) of CofC No. 9218 were not followed in their entirety.

Following is a description of the events, 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:

TRU waste shipment number IN130160 originated at INL on August 3, 2013 bound for delivery to the Waste Isolation Pilot Plant (WIPP) in New Mexico. The shipment consisted of one tractor-trailer hauling two TRUPACT-II and one HalfPACT packages, units 125, 171 and 502. Each package contained one payload assembly. During data package review of the maintenance records, on September 18, 2013, it was discovered that the Main ICV containment O-ring had not been replaced within the 12-month period prior to shipment for TRUPACT-II unit 125.

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TRU waste shipment number IN130162 originated at INL on August 5, 2013 bound for delivery to the Waste Isolation Pilot Plant (WIPP) in New Mexico. The shipment consisted of one tractor-trailer hauling two TRUPACT-II and one HalfPACT packages, units 126, 159 and 503. Each package contained one payload assembly. During data package review of the maintenance records, on September 18, 2013, it was discovered that the Main ICV containment O-ring had not been replaced within the 12-month period prior to shipment for TRUPACT-II unit 159.

TRU waste shipment number IN130184 originated at INL on August 26, 2013 bound for delivery to the Waste Isolation Pilot Plant (WIPP) in New Mexico. The shipment consisted of one tractor-trailer hauling two TRUPACT-II and one HalfPACT packages, units 125, 188 and 512. Each package contained one payload assembly. During data package review of the maintenance records, on September 18, 2013, it was discovered that the Main ICV containment O-ring had not been replaced within the 12-month period prior to shipment for TRUPACT-II unit 125.

TRU waste shipment number IN130190 originated at INL on September 12, 2013 bound for delivery to the Waste Isolation Pilot Plant (WIPP) in New Mexico. The shipment consisted of one tractor-trailer hauling two TRUPACT-II packages, units 154 and 159. Each package contained one payload assembly. During data package review of the maintenance records, on September 18, 2013, it was discovered that the Main ICV containment O-ring had not been replaced within the 12-month period prior to shipment for TRUPACT-II unit 159.

TRU waste shipment number LA130124 originated at LANL on August 27, 2013 bound for delivery to the Waste Isolation Pilot Plant (WIPP) in New Mexico. The shipment consisted of one tractor-trailer hauling three TRUPACT-II packages, units 132, 162 and 191. Each package contained one payload assembly. During data package review of the maintenance records, on September 18, 2013, it was discovered that the Main ICV containment O-ring had not been replaced within the 12-month period prior to shipment for TRUPACT-II units 132 and 191.

There were no major occurrences during the event and no component or system failures that contributed to the event, however, due to not replacing the O-rings within the 12-month period as required by Section 8.2.4.3 of the Safety Analysis Report, the conditions in CofC 9218 were not followed in their entirety resulting in four shipments traveling from INL to the WIPP and one shipment traveling from LANL to the WIPP in a non-compliant condition.

Prior to each shipment from INL to the WIPP and from LANL to the WIPP, all required pre-shipment leakage rate tests (Helium) were performed on TRUPACT-II Units 125, 132, 159 and 191 and met the applicable acceptance criteria for these tests.

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

- The Main ICV containment O-rings for TRUPACT-II Units 125, 132, 159 and 191 were replaced as required.
- NWP Transportation Packaging performed an extent of condition review for the remaining fleet of Type B Packages and confirmed that the same condition does not exist for any other units.

(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 11 (b), "Each package must be tested and maintained in accordance with the procedures described in Chapter 8.0 *Acceptance Tests and Maintenance Program*, of the application as supplemented." Section 8.2.4, "Valves, Rupture Discs, and Gaskets" states; in Section 8.2.4.3, "ICV containment boundary O-ring seals shall be replaced within the 12-month period prior to shipment or when damaged (whichever is sooner), per the size and material requirement delineated on the drawings in Appendix 1.3.1, *Packaging General Arrangement Drawings*."

As described in section 1.2.1.1.2 of the applicable Safety Analysis Report and the applicable Packaging General Arrangement Drawings; The containment boundary provided by the ICV consist of a stainless steel vessel formed by a mating lid and body, plus the uppermost of two main O-ring seals enclosed between and upper and lower seal flange.

On August 3, 2013, TRUPACT-II Unit 125 was assembled for loaded shipment at INL with an expired Main ICV containment O-ring and then shipped to the WIPP. All required pre-shipment leakage rate testing met the applicable acceptance criteria for these tests, shipment number IN130160 was then released for shipment to the WIPP.

On August 5, 2013, TRUPACT-II Unit 159 was assembled for loaded shipment at INL with an expired Main ICV containment O-ring and then shipped to the WIPP. All required pre-shipment leakage rate testing met the applicable acceptance criteria for these tests, shipment number IN130162 was then released for shipment to the WIPP.

On August 26, 2013, TRUPACT-II Unit 125 was assembled for loaded shipment at INL with an expired Main ICV containment O-ring and then shipped to the WIPP. All required pre-shipment leakage rate testing met the applicable acceptance criteria for these tests, shipment number IN130184 was then released for shipment to the WIPP.

On September 12, 2013, TRUPACT-II Unit 159 was assembled for loaded shipment at INL with an expired Main ICV containment O-ring and then shipped to the WIPP. All required pre-shipment leakage rate testing met the applicable acceptance criteria for these tests, shipment number IN130190 was then released for shipment to the WIPP.

On August 27, 2013, TRUPACT-II Units 132 and 191 were assembled for loaded shipment at LANL with expired Main ICV containment O-rings and then shipped to the WIPP. All required pre-shipment leakage rate testing met the applicable acceptance criteria for these tests, shipment number LA130124 was then released for shipment to the WIPP.

The condition identified above for these Packages was initiated at the receiving Site (WIPP Site) during the unloading of the Package activities.

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;

August 3, 2013; 1040 hours (MST)
August 5, 2013; 1120 hours (MST)
August 26, 2013; 1040 hours (MST)
September 12, 2013; 1130 hours (MST)
August 27, 2013; 1545 hours (MST)

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

No components or systems failed. Personnel failed to replace the ICV containment boundary O-ring within the 12-month period prior to shipment.

(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 non-compliance on TRUPACT-II Units 125, 132, 159 and 191 was discovered by NWP Transportation Packaging personnel on September 18, 2013, during routine data package/maintenance record review.

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

The cause of the non-compliance was a failure of WIPP operations and/or maintenance personnel to replace the expired O-rings within the timeframe required.

(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.

Package Unit 125
Payload ID 97054

Security-Related Information
Figure Withheld Under 10 CFR 2.390

Physical and Chemical Form:

Security-Related Information
Figure Withheld Under 10 CFR 2.390

Package Unit 159
Payload ID 97037:

Security-Related Information
Figure Withheld Under 10 CFR 2.390

Physical and Chemical Form:

Security-Related Information
Figure Withheld Under 10 CFR 2.390

Package Unit 125
Payload ID 97144:

Security-Related Information
Figure Withheld Under 10 CFR 2.390

Physical and Chemical Form:

Security-Related Information
Figure Withheld Under 10 CFR 2.390

Package Unit 159
Payload ID 97177:

Security-Related Information
Figure Withheld Under 10 CFR 2.390

Physical and Chemical Form:

Security-Related Information
Figure Withheld Under 10 CFR 2.390

Package Unit 191
Payload ID LA3360:

Security-Related Information
Figure Withheld Under 10 CFR 2.390

Physical and Chemical Form:

Security-Related Information
Figure Withheld Under 10 CFR 2.390

Package Unit 132
Payload ID LA3358:

Security-Related Information

Figure Withheld Under 10 CFR 2.390

Physical and Chemical Form:

Security-Related Information

Figure Withheld Under 10 CFR 2.390

(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 safety consequences relating to the event. There were no systems or components that failed during 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.

In addition to the completed corrective actions described at the beginning of this letter, the following additional corrective actions are being taken to prevent recurrence:

- Evaluate current process associated with annual replacement of O-rings, including applicable DOE/CBFO Operating Manuals and WIPP Waste Handling procedures, and revise as necessary to ensure adequate controls are in place to prevent recurrence of this event.
- Train responsible personnel on any process and procedure revisions.

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.

There have been no similar events involving the annual replacement of O-rings on TRUPACT-II packaging.

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, Transportation Packaging (575) 234-7396

S.V. McGonagill, Cognizant Engineer, NWP Transportation Packaging (575) 234-7120

(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,



T. E. Sellmer, Manager
Transportation Packaging

ML:jmc

cc: M. R. Brown, CBFO
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