

# 10 CFR 71.95 REPORT EVALUATION FORM

Docket No.: 71-9218

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Package Model No.: TRUPACT-II

Report Submitted By: T. E. Sellmer

Report Date: March 21, 2007

Review the incoming report to determine if additional Commission or staff action is warranted. The review should consider whether the report identifies a generic defect or problem with the package design and the safety significance of the issue. Note that a high safety significance represents a potential for significant radiation exposure, medium safety significance represents a potential for some moderate radiation exposure, and low safety significance represents little or no potential for radiation exposure.

## 1. The report identifies:

- Significant reduction in the effectiveness of a package during use;
- Defect with a safety significance;
- Shipment in which conditions of the approval were not observed.

2. What is the safety significance?  High  Medium  Low

## 3. Summary of the report:

A report (ML071700520) pursuant to 10 CFR 71.95 dated March 21, 2007, was received from Washington TRU Solutions, LLC (DOE's operator in charge of this shipping operation). Three shipments of transuranic waste contained in 44 drums were shipped in TRUPACT-IIs to Waste Isolation Pilot Plant (WIPP). The three shipments were:

- (1) January 08, 2007, Shipment SR070001 from Savannah River Site, TRUPACT-II No. 187 containing one Ten Drum Overpack No. SRTP01740.
- (2) January 10, 2007, Shipment SR070002 from Savannah River Site, consisting of TRUPACT-II No. 172 containing one Ten Drum Overpack No. SRTP01741, and TRUPACT-II No. 188 containing one Ten Drum Overpack No. SRTP01742.
- (3) January 18, 2007, Shipment LA070005 from Los Alamos National Laboratory, TRUPACT-II No. 170 containing 14 55-gallon drums - One Nonconforming Drum.

The contents were removed from the TRUPACT-IIs and the payload containers emplaced in WIPP underground. After this operation, twelve (12) drums were found to have incorrect evaluations of the hydrogen/methane concentration. The concentration would not have passed the electronic flammable gas compliance evaluation. However, Washington TRU Solutions, LLC, considers that this noncompliance is not a safety violation because the actual duration and waste configuration did not exceed 5% hydrogen equivalent concentration in the innermost waste confinement layer.

Washington TRU Solutions, LLC, determined that the events were caused by incorrect v%/ppmv data entries in the electronic data base system used to record and calculate concentrations of flammable gasses.

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## 4. Corrective actions taken by the licensee:

- The programming error in the electronic data system program has been corrected to ensure that hydrogen and methane data entries are correctly evaluated for either v% or ppmv data field entries. This will prevent recurrence of this incident.
- The electronic database system has been evaluated to ensure that similar errors did not occur in other compliance evaluations.
- All previous shipment data were reviewed to ensure the non-compliance is limited to the above listed shipments.
- A software correction was implemented.
- A revision to DOE/CBFO 97-2273, WWIS User's Manual, Revision 12, was issued on March 27, 2007. WWIS development staff are also required to provide the shipping sites with a beta test version of the pre-release WWIS and to report shipping site beta test results through CBFO. The operator will also revise WIPP WWIS software and expand the program to include beta testing by the shipping site users to further reduce recurrence of similar incident.

The following corrective actions are planned for implementation:

- Perform periodic, independent evaluation of the Payload Container Transportation Certification Documents (PCTCD) and Payload Assembly Transportation Certification Documents (PATCD). This will ensure that the results of the software compliance evaluation program are within expected values for the different parameters, including gas generation evaluations.
- Additional training for certification officials on PCTCD and PATCD and look for trends and potential discrepancies prior to shipments.

The operator has determined that there are no known similar events of incorrect hydrogen/methane concentration due to the programming error.

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**5. Staff comments:**

There were no safety consequences as a result of the event.

**6. Staff conclusion:**

- The report does NOT identify generic design or license/certificate issues that warrant additional Commission or staff action. This report is considered closed.
- There is a need to take additional action. Provide a summary of the bases and recommended actions:

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