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ENTERED
Department of Energy

United States Government

Memorandum

DATE: June 25, 2003



REPLY TO
ATTN OF: EM-40 (Mark W. Frei, 202-586-0370)

SUBJECT: Trupact-II 157 Incident Closeout

TO: Dr. Inés Triay, Manager, Carlsbad Field Office (CBFO)
Elizabeth D. Sellers, Manager, Idaho Operations Office (ID)

Attached for your information and use is the independent review report I requested to closeout the Trupact-II 157 incident. The report concludes:

- The highway accident did not compromise the integrity of Trupact-II 157 in any manner, and the investigation validates the soundness of the Trupact-II transportation system.
- The loose lock ring on drum 484 is presently the most likely cause of the release of contamination.
- Evidence of the pathway taken by the contamination between the release point and sampling point appears to be across the drum lid, as determined by positive smears taken from the drum lid.

and, recommends:

- No further activities should be conducted in an attempt to either define the precise contamination release point or to better assess the proposed contamination pathway.
- Protocol be developed and implemented to insure that drums lids are torqued to manufacturer's specifications.

I agree with the conclusions and recommendations of this report, and look to CBFO and the shipping sites to ensure the second recommendation is implemented immediately.

Feel free to distribute this report as appropriate.

Jessie Hill Roberson
Jessie Hill Roberson
Assistant Secretary for
Environmental Management

*Stations
Ladbury*

Attachment

UNIQUE #	DOE UFO	DATE REC'D	ADDRESSEES
03D4D44	SP220	JUL 0 12003	J. Triay K. Watson C. Cuprae

*Brown
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030629





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MEMORANDUM

TO: Mark Frei

FROM: Pete Maggiore *Pete Maggiore*

DATE: May 29, 2003

SUBJECT: Trupact-II 157 Review and Conclusions

Background and Methodology:

On April 29, 2003 I was requested by Mr. Mark Frei (on behalf of Asst. Secretary Roberson) to review a list of documents associated with the Trupact-II 157 incident which occurred in August, 2002. In developing the observations, conclusions and recommendations which appear below I relied on the documents listed in Attachment A to this report. Although I was offered the opportunity to contact representatives of CBFO, INL and Carlson and Associates (so that any needed additional clarification could be provided) I have concluded that the issues presented in the documents were sufficiently straightforward. For this reason, no interviews were conducted.

Key Observations:

- On August 25, 2003 shipment no. IN020271, which contained Trupact-II 157 was involved in a highway accident approximately 25 miles from the WIPP facility. No surface contamination was found on Trupact-II 157 after the accident.
- During standard unloading operations at WIPP on August 25, 2003, an analysis of the filter downstream of the vacuum tool used to evacuate the Inner Containment Vessel (ICV) before lid removal indicated elevated alpha activity in Trupact-II 157.
- On August 26, 2003, three confirmatory air samples were drawn through the ICV vent port. Based upon the analytical results from these samples it was decided not to open the ICV at WIPP and to return Trupact-II 157 to Idaho for assessment.
- Upon inspection of the drums which comprised the payload of Trupact-II 157 at Idaho the following conditions were found:
 - Radioactive contamination outside drums;
 - Drum No. IDRF741202484 (484) had a loose lock ring (it could be easily rotated around the drum);
 - Drum No. IDRF074700411 (411) had a loose lock ring jam nut

- o Smear samples taken from the lid of drum 484 yielded analytical results which demonstrated contamination above acceptable limits, providing a pathway from drum 484 to the vent port.
- o The contamination observed outside of the drums was radiologically confirmed to match the contents of drum 484.
- o A reported torque value of 40 ft-lbs was applied to the drums
- o The manufacturer recommends 50 ft-lbs of torque be applied to the drums.
- o The ICV maintained 4 inches Hg vacuum on the inside after 4 months of storage.

Conclusions:

- The highway accident did not compromise the integrity of Trupact-II 157 in any manner, and the investigation validates the soundness of the Trupact-II transportation system.
- The loose lock ring on drum 484 is presents the most likely cause of the release of contamination
- Evidence of the pathway taken by the contamination between the release point and the sampling point appears to be across the drum lid, as determined by positive smears taken from the drum lid.

Recommendations:

- No further activities should be conducted in an attempt to either define the precise contamination release point or to better assess the proposed contamination pathway.
- Protocol be developed and implemented to insure that drums lids are torqued to manufacturer's specifications.

Attachment A

References

"Draft Trupact-II 157 Examination Report" by O'Brien, Lacy and Archibald, March 2003, 32 pages

Independent Review of Trupact-II Shipping Container 2002 Occurrence, F.N. Carlson and Associates, May 5, 2003, 3 pages

Independent Review of Trupact-II Shipping Container 2002 Occurrence, F.N. Carlson and Associates, May 12, 2003, 3 pages

Draft Trupact-II 157 Fact Sheet, prepared by INEL, April 2003

Draft Trupact-II 157 Fact Sheet, prepared by INEL, electronic edits by CBFO, April 2003

Carlsbad Field Office Draft Document Review Record: Review of Draft Trupact-II 157 Examination Report, Casey Gadbury, Reviewer, March 2003.

Electronic Mail Message: From Thomas L. Clements to Jerry L. Wells and Robert D. Newbery Titled "Draft Responses to T-157 Report"