



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
WASHINGTON, D.C. 20555-0001

May 28, 2019

MEMORANDUM TO: Christopher M. Regan, Deputy Director
Division of Spent Fuel Management
Office of Nuclear Material Safety
and Safeguards

FROM: Norma García Santos, Project Manager **/RA/**
Spent Fuel Licensing Branch
Division of Spent Fuel Management
Office of Nuclear Material Safety
and Safeguards

SUBJECT: SUMMARY OF APRIL 16, 2019, PRE-APPLICATION MEETING WITH THE
NUCLEAR WASTE PARTNERS LLC AND THE UNITED STATES
DEPARTMENT OF ENERGY TO DISCUSS THE APPLICATION FOR THE
REVISION OF THE MODEL NOS. TRUPACT-II AND HALFPACT WASTE
SHIPPING CONTAINER PACKAGES (DOCKET NOS. 71-9218 AND 71-9279)

Background.

On April 16, 2019, a public meeting was held in Rockville, Maryland, at the request of the Nuclear Waste Partners LLC (NWP) and a representative of the United States (U.S.) Department of Energy (DOE) with the U.S. Nuclear Regulatory Commission (NRC) staff. The meeting was announced by notice dated March 27, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML19086A085 and ML19101A444) as an open meeting. The applicant provided the presentation slides on April 11, 2019 (ADAMS Accession No. ML19101A436). Enclosure 1 includes the list of participants (in person and by phone). Enclosure 2 includes the meeting agenda. Copies of the most recent certificates of compliance (CoC) for the Model No. TRUPACT-II (ADAMS Accession No. ML14174A157) and HalfPACT Waste Shipping Container (thereafter, HalfPACT) (ADAMS Accession No. ML15308A563) were provided at the meeting.

Discussion.

The purpose of the meeting was to discuss details related to an upcoming application from NWP to revise the Model No. HalfPACT to add four shielded containers. The Model No. HalfPACT is used to transport waste from the DOE facilities to the Waste Isolation Pilot Plant (WIPP). The following section includes a summary of the discussion during April 16th meeting.

CONTACT: Norma García Santos, NMSS/DSFM
301-415-6999

I. SCHEDULE

The applicant mentioned that it may be submitting an application to revise the design of the Model No. HalfPACT by the end of this calendar year. Therefore, the applicant briefly described the proposed schedule as follows:

- 1) End - November 2019 – Subcontract for Prototype Fabrication and Testing
- 2) End - July 2019 – Fabrication of prototypes (Packaging and dummy proposed contents)
- 3) End - August 2019 – Type A testing.
- 4) End - November 2019 – Type B testing, hypothetical accident conditions.
- 5) End - November 2019 – Submit application to NRC
- 6) End - November 2021 – NRC finalizes the review of the application

The staff noted that it may be beneficial for some staff to observe the tests performed to this package. NWP mentioned that it would inform the NRC when they are planning to perform the testing.

II. TECHNICAL DISCUSSION

NWP, on behalf of DOE (the CoC holder), briefly discussed background information about WIPP and aspects related to the upcoming application. The WIPP currently receives approximately 10 shipments per week of contact handled waste (CHW). The facility has also received about a total of 700 shipments of remote-handled (RH) transuranic (TRU) waste (thereafter, RH). Per NWP, RH shipments are more complex than CHW shipments.

NWP briefly discussed the information to be submitted in the application. NWP will seek approval to add four shielded payload container designs to the certificate of compliance (CoC) for the Model No. HalfPACT. These containers will be used for transporting 30- and 55-gallon drums. The shielded payload containers, along with ancillary dunnage that is an integral part of the new shielded container design, make up the payload assembly. NWP explained that, among a few issues, events that occurred on February 14, 2014 greatly reduced ventilation of the underground facilities, and concerns about airborne contamination resulted in halting the shipment of RH waste in RH-TRU 72B packages. There are plans to build an additional shaft and install a new ventilation system by 2024/2025. Meanwhile, for these reasons and the delay of future 72B shipments, NWP needs additional alternatives to accommodate shipments of RH waste. (Per NWP about 56% of RH waste is shipped in 55-gallon drums and DOE does not want to repackage these drums.)

NWP and DOE are planning to perform full scale testing for the structural analysis as part of the submittal of this application. NWP is planning to address the following:

- 1) load distribution
- 2) shielding failure
- 3) comparison of the initial analysis (i.e., empirical analysis) of the package with the results of the actual testing.

NWP assumed that the aluminum honeycomb distributes the load of the package during the drop test. (The design uses a "General Plastics" foam.) The aluminum honeycomb is only used in the HalfPACT package as part of the spacer assemblies used at each end of the inner container vessel (ICV). The ancillary dunnage that is part of the shielded container payload assembly will be foam-filled aluminum shells inside the ICV and adds additional impact

absorbing characteristics in addition to the impact limiters installed on the package. Even though the discussion focused on aspects related to the structural analysis, NWP also mentioned that the source term should be the same and that it will be using the same methodology to perform the shielding analysis as in previous applications.

Lastly, the staff pointed out that the applicant should consider providing the following information in the upcoming application:

- 1) a summary of changes,
- 2) a comparison of previously approved content and new proposed content,
- 3) applicability of previous analyses of the package to the new proposed content,
- 4) a demonstration about how previous analyses bound the proposed new content, and
- 5) explain how the licensing bases for the package are maintained.

The staff noted that it would be reviewing empirical data to determine if NWP maintained the licensing bases of the package design.

Docket Nos. 71-9218 and 71-9279
EPID No. L-2019-LRM-0017

Enclosures:

1. Meeting Attendees
2. Meeting Agenda

cc: Attendees

SUBJECT: SUMMARY OF APRIL 16, 2019, PRE-APPLICATION MEETING WITH THE NUCLEAR WASTE PARTNERS LLC AND THE UNITED STATES DEPARTMENT OF ENERGY TO DISCUSS THE APPLICATION FOR THE REVISION OF THE MODEL NOS. TRUPACT-II AND HALFPACT WASTE SHIPPING CONTAINER PACKAGES (DOCKET NOS. 71-9218 AND 71-9279), DOCUMENT DATE: May 28, 2019

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ADAMS Package Accession No.: ML19148A139**Memo: ML19148A136**

OFFICE:	DSFM	E	DSFM	N	DSFM	N
NAME:	NGarcía Santos		S Figueroa		JMcKirgan	
DATE:	5/24/19		5/24/19		5/28/19	

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Public Meeting
Model Nos. TRUPACT-II and HalfPACT
Docket Nos. 71-9218 and 71-9279

April 16, 2019
1:00 P.M. – 3:30 P.M.
Location: TWFN-7-B51

Attendees List

Name	Organization
Travis Tate	NRC
Norma García Santos	NRC
Bernard White	NRC
John Wise	NRC
Jeremy Tapp	NRC
Eli Goldfeiz	NRC
David Tang	NRC
Chris Bajwa	NRC
Jeremy Smith	NRC
Jason Piotter	NRC
Dan Standiford	DOE
Todd E. Sellmer	NWP
Scott Burns	NWP
Steven A. Porter	NWP

Public Meeting
Model Nos. TRUPACT-II and HalfPACT
Docket Nos. 71-9218 and 71-9279

Agenda

April 16, 2019
1:00 P.M. – 3:30 P.M.
Location: TWFN-7-B51

Purpose:

Discuss information related to the application for revising the certificates of compliance for the Model Nos. TRUPACT-II and HalfPACT.

Outcome:

Clarify questions from the staff regarding application and applicant's need for revising the Model Nos. TRUPACT-II and HalfPACT.

Process:

Opening remarks	NRC\NWP
Introductions	All
Discussion of the purpose of the application	NWP
Discussion of the proposed action	NWP
Questions	NWP\NRC
Discussion of next steps	NWP\NRC
Adjourn meeting	All