



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, DC 20590

September 2, 2020

Ms. Jennifer Fletcher  
Senior Manager, Transportation Compliance  
Veolia North America  
1 Eden Lane  
Flanders, NJ 07836

Reference No. 20-0009

Dear Ms. Fletcher:

This is in response to your February 4, 2020, letter requesting further clarification of Letter of Interpretation (LOI) Reference No. 18-0027 dated February 27, 2019, and an additional request for clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the marking requirements for radioactive materials.

We have paraphrased and answered your questions as follows:

- Q1. You ask whether the markings on the outside of each package of limited quantities of Class 7 (radioactive) materials must be in letters and numbers at least 12 mm in height (as stated in LOI Reference No. 18-0027) when §§ 173.421 and 173.422(a) except, with certain conditions, these materials from having to comply with the HMR.
- A1. The answer is no. Your understanding, as stated in your February 4, 2020, letter is correct and we regret any confusion this may have caused. Limited quantities of radioactive materials that meet the requirements in §§ 173.421 and 173.422(a) are excepted from complying with the 12 mm height minimum requirement for the UN identification number marked on the outside of packages containing these materials.
- Q2. You ask whether § 173.421 excepts the outside of shrink-wrapped, radioactive materials packages from being marked with the word “OVERPACK” and repeating the word “Radioactive,” if applicable, and the proper shipping name and identification number on the outside of the package, even if these markings are obscured by the shrink wrap.
- A2. Section 173.421 provides relief from the requirements for specification packaging, marking (except for the UN identification number marking requirement described in § 173.422(a)), labeling, and if not a hazardous substance or hazardous waste, shipping

papers. This exception is extended to the need to replicate the “Radioactive” marking on the outside of an overpack. However, PHMSA would like to clarify that in accordance with § 173.25(a)(4), an “OVERPACK” mark would not necessarily be required as the packages would not be required to be a Type A or specification package.

- Q3. You ask whether affixing the label—that you provided with your letter—to a limited quantity radioactive materials packaging would satisfy the marking requirement in § 173.421(d) and the UN identification number marking requirement in § 173.422(a)(1).
- A3. The label you provided meets the requirements of § 173.422(a)(1). However, § 173.421(d) requires the outside of the inner packaging or, if there is no inner packaging, the outside of the packaging itself to bear the marking “Radioactive.” Therefore, if the package has inner packagings, the label you provided would need to be attached to each inner package to meet this requirement. If this requirement is met, then the label you provided would also meet the provisions of § 173.421(d).
- Q4. If the answer to Q3 is no, you ask whether you are required to provide separate “Radioactive” and UN identification number markings elsewhere on the package.
- A4. No further UN identification number marking is needed; however, as stated above, if the shipment utilized an inner packaging, the “Radioactive” marking must be placed on each inner package.

I hope this information is helpful. Please contact us if we can be of further assistance.

Sincerely,



T. Glenn Foster  
Chief, Regulatory Review and Reinvention Branch  
Standards and Rulemaking Division

**Dodd, Alice (PHMSA)**

**From:** INFOCNTR (PHMSA)  
**Sent:** Wednesday, February 5, 2020 11:15 AM  
**To:** Hazmat Interps  
**Subject:** FW: Request for Clarification to Interpretation Letter Reference No. 18-0027  
**Attachments:** Follow Up Question to Radioactive Interp Request Ref. No. 18-0027 (VES Interp Request).pdf

Hello Alice and Ikeya,

Please see attached for letter of interpretation request on letter 18-0027, worked on by EE regarding radioactive marking requirements. There are two questions regarding a clarification of their previous letter and one new question.

Please contact our office with any questions.

Thank you,  
Kathryn, HMIC

**From:** Fletcher, Jennifer [mailto:jennifer.fletcher@veolia.com]  
**Sent:** Tuesday, February 4, 2020 4:15 PM  
**To:** INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>  
**Cc:** Liza Krass <liza.krass@veolia.com>  
**Subject:** Request for Clarification to Interpretation Letter Reference No. 18-0027

Good afternoon, please accept the attached request for clarification to a formal written interpretation letter (Ref. No. 18-0027) from Veolia.

Thank you,

**Jennifer Fletcher**  
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Technical and Performance*  
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Resourcing the world  **VEOLIA**  
  



February 4, 2020

Standards and Rulemaking Division  
Pipeline and Hazardous Materials Safety Administration  
Attn: PHH-10  
US Department of Transportation  
East Building  
1200 New Jersey Avenue SE.  
Washington DC 20590-0001

**Request for Clarification to Interpretation Letter Reference No. 18-0027**

To Whom It May Concern:

Please accept this letter as a request for clarification to a formal written interpretation letter (Ref. No. 18-0027) issued by T. Glenn Foster, USDOT, Chief, Regulatory Review and Reinvention Branch, Standards and Rulemaking Division on February 27, 2019.

**Clarification Request #1:**

On February 22, 2018, myself and Ms. Liza Krass of Veolia North America jointly submitted an interpretation request related to the radioactive materials packaging requirements of §§173.421, 173.422 and 173.410. As part of PHMSA's response to question 1, PHMSA stated that the identification number (e.g., UN2910) marking on the outside of each package must be in letters and numbers of at least 12 mm in height.

§173.421 currently states, "*A Class 7 (radioactive) material with an activity per package which does not exceed the limited quantity package limits specified in Table 4 in §173.425, and its packaging, are excepted from requirements in this subchapter for specification packaging, marking (except for the UN identification number marking requirement described in §173.422(a)), labeling, and if not a hazardous substance or hazardous waste, shipping papers, and the requirements of this subpart if*"...

For reference, §173.422(a) currently states, "*An excepted package of Class 7 (radioactive) material that is prepared for shipment under the provisions of §173.421, §173.424, §173.426, or §173.428, or a small quantity of another hazard class transported by highway or rail (as defined in §173.4) which also meets the requirements of one of these sections, is not subject to any additional requirements of this subchapter, except for the following:*

*(a) The outside of each package must be marked with:*

*(1) The UN identification number for the material preceded by the letters UN, as shown in column (4) of the Hazardous Materials Table in §172.101 of this subchapter; and*"...

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Veolia is requesting clarification specifically on the 12 mm height requirement for the identification number marking on the outside of the package. §173.421 initially provides an exception from the entire subchapter (Title 49, Subtitle B, Chapter I, Subchapter C, the Hazardous Materials Regulations, 49 CFR parts 171-180), which includes the Subpart D marking requirements, and then goes on to require, *except for the identification number marking requirement described in §173.422(a)*. As it is currently written, §173.422(a) does not impose a height requirement for the identification number marking. Therefore, by PHMSA requiring the marking to appear in 12 mm in height is imposing a requirement over and above the current regulation found under §173.422(a). Veolia respectfully requests clarification regarding why PHMSA is imposing a size requirement on the identification number marking for packages prepared in accordance with §173.421 and §173.422(a).

**Clarification Request #2:**

Veolia indicated in the original interpretation request that we currently shrink wrap the completed packages containing the radioactive material to a pallet, essentially creating an overpack, and if the shrinkwrap obscures the "Radioactive" marking on the box, Veolia also marks the outside of the shrinkwrap with the word "Radioactive". PHMSA's response supported this action in order to maintain compliance with the overpack marking requirements found under §173.25(a)(2).

§173.25(a)(2) currently requires, "*Authorized packages containing hazardous materials may be offered for transportation in an overpack as defined in §171.8 of this subchapter, if all of the following conditions are met:*"

*"(2) The overpack is marked with the proper shipping name and identification number, when applicable, and is labeled as required by this subchapter for each hazardous material contained therein, unless marking and labels representative of each hazardous material in the overpack are visible."*

Since §173.421 essentially provides an exception from the entire subchapter (Title 49, Subtitle B, Chapter I, Subchapter C, the Hazardous Materials Regulations, 49 CFR parts 171-180) except for the specific requirements noted in §173.421 and §173.422(a), this exception also provides relief from compliance with the requirements of §173.25, therefore the overpack for the radioactive material packages is also excepted from the overpack marking requirements. Given this logic, does PHMSA agree that Veolia is not required to mark the outside of the overpack with the word "OVERPACK" or repeat the "Radioactive" marking, proper shipping name and identification number on the outside of the overpack even if the marking is obscured by the shrink wrap?

**New Question #1:**

Veolia would also like to take this opportunity to pose a question related to the radioactive marking requirement listed under §173.421(d). Veolia currently affixes a barcode label similar to the example provided below to all packages containing radioactive material. The label is used to facilitate tracking of the package through Veolia's computerized electronic tracking system. The label lists the proper shipping name which includes the word, "Radioactive" and UN identification number. In PHMSA's opinion, does affixing this label to the package satisfy the radioactive marking requirement under §173.421(d) and the UN identification number marking required under §173.422(a)(1)? If not, is Veolia required to provide separate "Radioactive" and UN identification number markings elsewhere on the package?



Example of Veolia barcode tracking label:

	
LK-2523470000-001-01-0	
<b>DTK662795</b>	
<small>DOT SHIPPING DESCRIPTION</small>	
<b>UN2910</b>	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE- LIMITED QUANTITY OF MATERIAL, 7
EPA CODE: -/NONE WIP#: 917046 CONT. TYPE: 30 GAL DF DATE ACCUMULATED: 08/05/2019 PHY STATE: S DATE SHIPPED: 08/05/2019 GEN DRM ID: 190226-1	
<b>NON-HAZARDOUS WASTE</b>	
<small>IF FOUND, PLEASE CONTACT THE NEAREST PUBLIC SAFETY AUTHORITY AND VEOLIA'S TECHNICAL SOLUTIONS AT 1-800-426-2362</small>	

Your written response to this request is greatly appreciated. If you require any further information regarding this request please feel free to contact me at [jennifer.fletcher@veolia.com](mailto:jennifer.fletcher@veolia.com) / 973-691-7331.

Thank you,

*Jennifer Fletcher*

Jennifer Fletcher (formerly Eberle)  
Manager, Transportation Compliance  
Industrial Business  
**VEOLIA NORTH AMERICA**



U.S. Department  
of Transportation

Pipeline and Hazardous  
Materials Safety  
Administration

FEB 27 2019

1200 New Jersey Avenue, SE  
Washington, DC 20590

Ms. Jennifer Eberle  
Manager, Transportation Compliance  
Industrial Business  
Veolia North America  
1 Eden Lane  
Flanders, NJ 07836

Reference No. 18-0027

Dear Ms. Eberle:

This letter is in response to your February 22, 2018, letter and your and Ms. Liza Krass' March 28, 2018, telephone conversations with a member of my staff requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to excepted packages for limited quantities of Class 7 (radioactive) materials transported by motor vehicle for disposal.

In these communications, you described a packaging configuration consisting of non-specification, non-bulk fiberboard boxes containing excepted quantities of Class 7 (radioactive) materials. Specifically, the boxes contain a sealed polyethylene bag containing frozen animal carcasses contaminated with low levels of Tritium (T(H-3)) and Carbon 14 (C-14), which is placed in the box along with absorbent materials and mixed dry waste, including lab debris, glass, and plastic, that is contaminated with biological or radioactive material. You confirmed that the boxes' contents do not meet the definition of a "hazardous substance" nor a "hazardous waste" in § 171.8 of the HMR. You also confirmed that the boxes and their contents comply with all applicable provisions in §§ 173.410, 173.421, and 173.422, including the general packaging requirements in Subparts A and B of 49 CFR Part 173.

You further stated that each box is marked with the appropriate UN numbers and the word "RADIOACTIVE." These boxes are shrink-wrapped to a pallet. Because the shrink wrap obscures the "RADIOACTIVE" marking on the box, the outside of the shrink wrap is also marked with the word "RADIOACTIVE." The pallets are transported by motor vehicle for disposal.

Q1: You ask whether the packaging configuration you described meets the packaging requirements of 49 CFR §§ 173.421 and 173.410.

A1: Provided each box that has been prepared for shipment is surveyed for radiation levels at the surface of each package on all six sides and does not exceed 0.005mSv/h, the activity of the box does not exceed the limited quantity package limits specified in Table 4 in § 173.425, and the identification number (e.g., UN2910) marking for the materials is in letters and numbers at least 12 mm in height, based on the information you provided it is the opinion of this Office that the boxes comply with §§ 173.410 and 173.421.

Q2: You ask whether the completed pallet secured with shrink-wrap can be indicated as a single container on the shipping paper.

A2: The answer is no.

The closed box meets the definition of a "package" for Class 7 materials (see § 173.403). Section 173.403 describes a Class 7 packaging as "the assembly of components necessary to ensure compliance with the packaging requirements of" 49 CFR Part 173, Subpart I (Class 7-Radioactive Materials); and a package as "the packaging together with its radioactive contents" that meets the HMR requirements for transport. The enclosure you use (i.e., the shrink wrap and pallet) to consolidate the packages meets the definition of an "overpack" when used by a single consignor to provide protection or convenience in handling of a package or to consolidate two or more packages (see § 171.8).

However, the HMR do not require the packages (in this instance, the individual boxes) to be described on a shipping paper (see § 173.421, introductory paragraph).

Additionally, because you stated the shrink wrap obscures the markings on the box, we want to clarify that in accordance with § 173.25(a)(2), if any of the required marks and labels are not visible on the packages through the shrink-wrap, they must be repeated on the outer surface of the overpack.

I hope this information is helpful. Please contact us if we can be of further assistance.

Sincerely,



T. Glenn Foster  
Chief, Regulatory Review and Reinvention Branch  
Standards and Rulemaking Division



Edmonson  
173.421 + 173.410  
Packaging Excepts  
18-0027

February 22, 2018

Standards and Rulemaking Division  
Pipeline and Hazardous Materials Safety Administration  
Attn: PHH-10  
US Department of Transportation  
East Building  
1200 New Jersey Avenue SE.  
Washington DC 20590-0001

**Request for Interpretation Regarding the Use of a Shrink Wrapped Pallet as an Outer Package for the Transportation of Limited Quantities of Class 7 Radioactive Materials (Excepted Package)**

To Whom It May Concern:

Please accept this letter as a request for a formal written interpretation from your office. Veolia currently prepares excepted packages of limited quantities of Class 7 radioactive materials for transportation to the processing disposal facility. The packagings are prepared in accordance with the requirements of 49 CFR §173.421 *Excepted packages for limited quantities of Class 7 (radioactive) materials*. An example of the packaging configuration used for these shipments includes frozen animal carcasses which are contaminated with low levels of tritium and carbon 14, placed into a sealed bag, the bag is then placed into a non-UN specification non-bulk carton fiber package containing absorbent materials and possibly mixed dry waste including PPE, lab debris, glass, plastic, etc. The closed non-UN specification non-bulk carton fiber packagings are then loaded onto a pallet and secured with shrink-wrap. Veolia believes that this entire packaging configuration meets the general design requirements of 49 CFR §173.410.

- 1) Does PHMSA agree that the complete packaging configuration as described meets the packaging requirements of 49 CFR 173.421 and 173.410?
- 2) If so, does PHMSA agree that it is correct for Veolia to indicate each completed pallet secured with shrink-wrap as a single container on the shipping paper (e.g. 1 pallet)?

Your written response to this request is greatly appreciated. If you require any further information regarding this request please feel free to contact me at [jennifer.eberle@veolia.com](mailto:jennifer.eberle@veolia.com) / 973-691-7331.

Thank you,

Jennifer Eberle  
Manager, Transportation Compliance  
Industrial Business  
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