



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

FEB 15 2019

Nicholas Kohnke
Special Projects Associate
Settoon Towing
1073 Highway 70
P.O. Box 279
Pierre Part, LA 70339

Reference No. 18-0088

Dear Mr. Kohnke:

This letter is in response to your June 12, 2018, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the transportation of radionuclides.


We have paraphrased and answered your questions as follows:

- Q1. You ask if a person who offers a consignment containing radionuclides to a carrier for transportation without knowing if it meets the definition of a Class 7 radioactive material would be subject to the HMR.
- A1. In accordance with § 173.22, it is the shipper's responsibility to classify a hazardous material for transportation. If a consignment meets the definition of a hazardous material, the shipment—and any person performing a pre-transportation function—is subject to the requirements of the HMR.
- Q2. You ask if a consignment that contains radionuclides where both the activity concentration and the total activity in the consignment do not exceed the values specified in the § 173.436 table or values derived according to the instructions in § 173.433 would meet the definition of a Class 7 radioactive material.
- A2. The answer is no. See the definition of a *radioactive material* in § 173.403. Furthermore, 49 CFR Part 173, Subpart I applies only to those materials meeting the definition of a Class 7 radioactive material.
- Q3. You ask if a consignment that does not meet the definition of a Class 7 radioactive material is subject to the requirements in 49 CFR Part 173, Subpart I.
- A3. The answer is no. See A2.

- Q4. You ask if the definitions of *bulk packaging*, *packaging*, and *package* in § 171.8 apply only to radioactive materials that meet the 49 CFR Part 173, Subpart I definition of a *radioactive material*.
- A4. The answer is yes. The definitions of *bulk packaging*, *packaging*, and *package* in § 171.8 apply only to hazardous materials. Radioactive materials are defined in 49 CFR Part 173, Subpart I (see A2). Therefore, if the material does not meet the definition of a radioactive material or any other hazardous material, the definitions referenced in your question do not apply. Additionally, the bulk carriage of hazardous materials by water is governed by 46 CFR Chapter I, Subchapters D, I, N, and O (see 49 CFR 176.5(d)).
- Q4. You ask if the activity concentration for radium 226 or radium 228 as an exempt material is 10,000 Bq/L (2.7×10^{-7} Ci/L) in water.
- A4. The answer is yes. The § 173.436 table of exempt material activity concentrations for both the radionuclides radium 226 and 228 is 1.0×10^1 Bq/g (2.7×10^{-10} Ci/g). The conversion to Bq/L (Ci/L) is correct, as one liter is equal to 1,000 grams.
- Q5. You ask if the exempt material activity concentrations found in § 173.436 apply only to packaged materials.
- A5. The answer is no. The exempt material activity concentration values in § 173.436 apply to all shipments of radionuclides offered for transportation under the HMR. Furthermore, the bulk carriage of hazardous materials by water is governed by 46 CFR Chapter I, Subchapters D, I, N, and O (see 49 CFR 176.5(d)).

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

Sincerely,



Dirk Der Kinderen
Chief, Standards Development
Standards and Rulemaking Division

January, Ikeya CTR (PHMSA)

Gellee
HMR
18-0088

From: INFOCNTR (PHMSA)
Sent: Tuesday, June 12, 2018 4:50 PM
To: Hazmat Interps
Subject: FW: Settoon Formal Request for Letter of Interpretation from DOT-6.12.18
Attachments: Settoon Formal Request for Letter of Interpretation to DOT - FINAL 6.12.18.docx

Hi Ikeya,

Attached is a request for a letter of interpretation. Eugenio spoke with Mr. Kohnke about his request.

Thank you,
Jodi

From: Nicholas Kohnke [mailto:nicholas.kohnke@settoontowing.com]
Sent: Tuesday, June 12, 2018 12:33 PM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Subject: Settoon Formal Request for Letter of Interpretation from DOT-6.12.18

Good afternoon,
Please see the attached request for Interpretation from the Department of Transportation.

Subject: REQUEST FOR LETTER OF INTERPRETATION, 49 CFR 173.403 AND § 173.436 AND § 171.8.

Dear Mr. Kelley,

Settoon Towing has reviewed the Hazardous Materials Regulations (HMR) governing the transportation of Class 7 (radioactive) material. We have several questions for which we are requesting interpretation.

The first question concerns the definition of "radioactive material" found in 49 CFR 173.403 as it applies to technologically enhanced radioactive material (TENORM) in produced waters generated from oil and gas drilling and hydraulic fracturing operations. It is our understanding that this definition is to be used by any person "who offers a hazardous material for transportation in commerce, causes a hazardous material to be transported in commerce, or transports a hazardous material in commerce" (49 CFR 171.1(b)). It is our belief that a person offering any material for shipment in a consignment containing radionuclides must apply this definition when determining if the material qualifies as a Class 7 (radioactive) material. Is this correct?

If a consignment contains material whose radionuclides are in quantities that do not exceed both the activity concentration and total activity limits specified in the table in §173.436 or the values derived according to the instruction in § 173.433, it is our understanding that the material does not qualify as a Class 7 (radioactive) material. Is this correct?

It is our understanding that the definitions of bulk packaging, packaging, and package found in 49 CFR §171.8 only apply to materials containing radionuclides that meet the definition of a Class 7 (radioactive) material, as defined in 49 CFR 173.403. Is this correct?

The table in 49 CFR 173.436 specifies the activity concentration for exempt material. The activity concentration for exempt material for radium 226 and radium 228 is 1×10^1 Bq/g (2.7×10^{-10} Ci/g). For water at a density of one gram per milliliter this equates to an activity concentration for exempt material of 10,000 Bq/L (2.7×10^{-7} Ci/L or approximately 270,000 pCi/L). Is this correct?

Per 49 CFR 173.436, does exempt material activity concentrations only apply to packaged materials or do they apply to any material offered for transport that contains radionuclides?

It is our understanding that of the regulations found in 49 CFR 173 Subpart I only apply if the material is a radioactive material per the definition in §173.403? Is this correct?

We appreciate your consideration of these questions and the time and effort the DOT takes to provide a response. I eagerly await your formal clarification which can be sent to me at nick.kohnke@settoontowing.com. Please reach me at 504-782-7944 if you have any questions.

Respectfully,

Nick Kohnke



SETTOON TOWING

Nick Kohnke

Special Projects Associate

Mobile: 504-782-7944

Office: 985-252-4499

nick.kohnke@settoontowing.com



SETTOON TOWING

Mr. Shane Kelley
Director, Standards and Rulemaking Division
U.S DOT/PHMSA (PHH-10)
1200 New Jersey Avenue, SE East Building, 2nd Floor
Washington, DC 20590

Date: June 8, 2018

Subject: REQUEST FOR LETTER OF INTERPRETATION, 49 CFR 173.403 AND § 173.436 AND § 171.8.

Dear Mr. Kelley,

Settoon Towing has reviewed the Hazardous Materials Regulations (HMR) governing the transportation of Class 7 (radioactive) material. We have several questions for which we are requesting interpretation.

The first question concerns the definition of "radioactive material" found in 49 CFR 173.403 as it applies to technologically enhanced radioactive material (TENORM) in produced waters generated from oil and gas drilling and hydraulic fracturing operations. It is our understanding that this definition is to be used by any person "who offers a hazardous material for transportation in commerce, causes a hazardous material to be transported in commerce, or transports a hazardous material in commerce" (49 CFR 171.1(b)). It is our belief that a person offering any material for shipment in a consignment containing radionuclides must apply this definition when determining if the material qualifies as a Class 7 (radioactive) material. Is this correct?

If a consignment contains material whose radionuclides are in quantities that do not exceed both the activity concentration and total activity limits specified in the table in §173.436 or the values derived according to the instruction in § 173.433, it is our understanding that the material does not qualify as a Class 7 (radioactive) material. Is this correct?

It is our understanding that the definitions of bulk packaging, packaging, and package found in 49 CFR §171.8 only apply to materials containing radionuclides that meet the definition of a Class 7 (radioactive) material, as defined in 49 CFR 173.403. Is this correct?

The table in 49 CFR 173.436 specifies the activity concentration for exempt material. The activity concentration for exempt material for radium 226 and radium 228 is 1×10^1 Bq/g (2.7×10^{-10} Ci/g). For water at a density of one gram per milliliter this equates to an activity concentration for exempt material of 10,000 Bq/L (2.7×10^{-7} Ci/L or approximately 270,000 pCi/L). Is this correct?

Per 49 CFR 173.436, does exempt material activity concentrations only apply to packaged materials or do they apply to any material offered for transport that contains radionuclides?

It is our understanding that of the regulations found in 49 CFR 173 Subpart I only apply if the material is a radioactive material per the definition in §173.403? Is this correct?

Commented [SA1]: I do not believe this is required based on the text stated above

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SETTOON TOWING

Thank you for your consideration of these questions and the time and effort the DOT takes to provide a response. I eagerly await your formal clarification which can be sent to me at nick.kohnke@settoontowing.com. Please reach me at 504-782-7944 if you have any questions.

Respectfully,

Nick Kohnke
Special Projects Director
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