



U.S. Department of Transportation
**Pipeline and Hazardous Materials
Safety Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

NOV 24 2009

Mr. Rodney Johnson
Manager Nuclear Licensing
Fermi 2
200 TAC
6400 N. Dixie Hwy
Newport, MI 48166

Ref. No.: 09-0231

Dear Mr. Johnson:

This is in response to your letter dated October 8, 2009 requesting clarification of the Hazardous Material Regulations (HMR; 49 CFR Parts 171-180) applicable to the hazard communication requirements for Class 7 (radioactive) material. In your letter you describe the material as "UN2913, Radioactive material, surface contaminated object (SCO-II), 7" transported as "exclusive use" in accordance with § 173.427(a)(6). The material is offered for transportation and transported in a bulk container that has a volumetric capacity of 96 cubic feet (2.7 cubic meters). Your questions are summarized and answered as follows:

Q1) Must the container be placarded on all 4 sides?

A1) No. A package with a volumetric capacity of less than 18 cubic meters (640 cubic feet) may be placarded on two opposing sides or, alternatively, may be labeled instead of placarded in accordance with Part 172, Subpart E. See § 172.514(c).

Q2) Can the container be labeled: Class 7, Radioactive White-I, Yellow-II or Yellow-III as appropriate, instead of placarded in accordance with § 172.514(c).

A2) Yes. See A1.

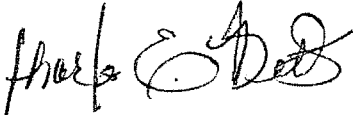
Q3) Can this package be marked "RADIOACTIVE-SCO" without being placarded or labeled?

A3) No. Packaged or unpackaged LSA or SCO containing less than an A₂ quantity of Class 7 (radioactive) material is excepted from marking and labeling requirements of the HMR provided the surface of each package or unpackaged Class 7 (radioactive) material is stenciled or otherwise marked "RADIOACTIVE-LSA" or "RADIOACTIVE-SCO" as appropriate. See § 173.427(a)(6)(vi). However, this exception does not provide relief

from the placarding requirements in Subpart F of Part 172. While labels may be displayed instead of placards in accordance with § 172.514(c), this is only an alternative method of satisfying the placarding requirements of Subpart F of Part 172. Thus, the package or unpackaged Class 7 (radioactive) material must display either the Class 7 (radioactive) placards or the appropriate labels to comply with the placarding requirements of Subpart F of Part 172.

I trust this satisfies your inquiry. If we can be of further assistance, please contact us.

Sincerely,

A handwritten signature in black ink, appearing to read "Charles E. Betts". The signature is written in a cursive style with a large initial "C" and "B".

Charles E. Betts
Chief, Standards Development
Office of Hazardous Materials Standards

Detroit Edison



Eichenlaub
§173.427
§173.24
RAM
09-0231

October 8, 2009
NANL-09-0078

U.S. DOT
PHMSA Office of Hazardous Materials Standards
Attn: PHH-10
East Building
1200 New Jersey Avenue, SE.
Washington, DC 20590-0001

Subject: Requirements for Bulk Packages less than 18 cubic meters

The purpose of this letter is to request assistance in the interpretation of regulations for a radioactive material shipment.

During the preparation and planning for a shipment of radioactive material, questions arose on the requirement for marking, labeling and placarding of a bulk package less than 18 cubic meters (640 cubic feet) of material being shipped as "exclusive use" in accordance with the regulations. A description of the scenario is provided below.

There are three packages of varying sizes, specification and weights to be shipped. The first package is a 55-gallon drum (24" diameter x 33" height), weighing 450 lbs (204 Kg). The drum meets the requirements of 49CFR173.24, 49CFR173.24a, and 49CFR173.410. The second package is a 96 cubic foot metal box, with internal dimension of 88"(L) x 43"(W) x 44"(H), external dimensions of 93.5"(L) x 48.5"(W) x 52"(H), empty weight of 500 lbs (227 Kg), actual weight of 5,400 lbs (2,450 Kg), and a maximum gross weight of 6,750 lbs (3,062 Kg). The container has an approximate capacity of 620 gallons as a receptacle for a solid. There is no intermediate form of containment and the box meets the requirements of 49CFR173.24 and 49CFR173.410. The third package, is a 20' Intermodal container (Sea-Land) with, internal dimensions of 236"(L) x 93"(W) x 95"(H), external dimensions of 240"(L) x 96"(W) x 96"(H), empty weight of 4,980 lbs (2,259 Kg), actual weight of 18,300 lbs (8,301 Kg), and a maximum gross weight of 48,000 lbs (21,772 Kg). There is no intermediate form of containment. The container has an approximate capacity of 7,750 gallons as a receptacle for a solid and it meets the requirements of 49CFR173.24, and 49CFR173.410.

Each package contains tooling that is used at a nuclear facility. The tooling has surface contamination and would meet all the requirements for Surface Contaminated Object (SCO-II) in accordance with 49CFR173.403. Each package contains less than an A2 Quantity of Radioactive Material. The unshielded dose rate of the material is less than 1 R/hr. None of the packages contain a Reportable Quantity of radionuclides. The exterior of the packages meet the radiation and contamination levels specified in 49CFR173.441 and 49CFR173.443. None of the packages contain special nuclear material or fissile radionuclides.

All three packages are loaded onto a tractor trailer and will be shipped under the proper shipping name "UN2913, Radioactive material, surface contaminated object (SCO-II), 7." The shipment will be "exclusive use" under the provisions of 49CFR173.427(a)(6). The shipment will be within the USA (domestic). Shipment will be loaded by the consignor and unloaded by the consignee from the conveyance in which originally loaded (reference 49CFR173.427(a)(6)(i)). There will be no loose radioactive material in the conveyance (reference 49CFR173.427(a)(6)(ii)). Packages will be braced so as to prevent shifting of lading under conditions normally incident to transportation (reference 49CFR173.427(a)(6)(iii)). Specific instructions for maintenance of exclusive use shipment controls are provided to the carrier on the shipping papers (reference 49CFR173.427(a)(6)(iv)). For this shipment, the VEHICLE is placarded with 4 RADIOACTIVE placards (one on each end and side of the vehicle) (reference 49CFR173.427(a)(6)(v)). Each package is marked with the word "RADIOACTIVE-SCO" in accordance with 49CFR173.427(a)(6)(vi).

The drum is not a bulk package, thus will only have the "RADIOACTIVE-SCO" marking in accordance with 49CFR173.427(a)(6)(vi). Two of the packages met the definition of a "bulk packaging" as defined in 49CFR171.8. Bulk packages are required to be placarded in accordance with 49CFR172.514. The intermodal container will have four placards applied (one to each side) in accordance with 49CFR172.514.

Since the second bulk container is only 96 cubic feet (2.7 cubic meters) the following questions arise:

1. Does the container have to be placarded on all 4 sides?

This package does not have to be placarded on all 4 sides. 49CFR172.514(c) provides an exemption to placarding packaging less than 18 cubic meters. This section states that packages may be placarded on only two opposite sides or, alternatively, may be labeled instead of placarded in accordance with subpart E.

2. Can the container be labeled: Class 7, Radioactive White -I, Yellow-II or Yellow-III as appropriate, instead of placarded in accordance with 49CFR172.514(c)?

This package may be labeled, as stated above, with two "Radioactive" labels based on the radiation levels.

3. Can this package be just marked "RADIOACTIVE-SCO" and be excepted from labels and placards?

Since this package is being shipped as "exclusive use", SCO as stated above in accordance with 49CFR173.427, and is exempt from placarding if labeled: Reference 49CFR172.514(c), and is exempt from labeling if marked "RADIOACTIVE-SCO" in accordance with 49CFR173.427(a)(6)(vi) and 49CFR172.400a(a)(7), it would only require the marking RADIOACTIVE-SCO; therefore it does not require labels or placards as long as all the conditions of 49CFR173.427 are met.

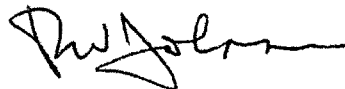
I greatly appreciate your assistance by concurring or providing other comments on the positions stated above.

Please respond to:

Mr. Rodney Johnson, Manager Nuclear Licensing
Fermi 2
200 TAC
6400 N. Dixie Hwy
Newport, Mi. 48166

Should you have any additional questions, please contact Bryan Weber at 734-586-4926.

Sincerely,



Manager, Nuclear Licensing



U.S. Department of Transportation
**Pipeline and Hazardous Materials
Safety Administration**

1200 New Jersey Ave, SE
Washington, D.C. 20590

MAR 18 2010

Ms. Dana Willaford
Transportation Safety
U.S. Department of Energy
P.O. Box 2001
Oak Ridge, TN 37831

Ref. No. 10-0001

Dear Ms. Willaford:

This responds to your email dated December 30, 2009 requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to placarding requirements for Class 7 (radioactive) materials. You request clarification of a letter of interpretation that was issued November 24, 2009 (Ref. No. 09-0231). Your questions are summarized and answered as follows:

- Q1) The PDF file on the PHMSA website did not include the complete incoming letter from Mr. Rodney Johnson requesting clarification. Can you please provide a complete copy of the incoming request from Mr. Johnson?
- A1) The complete incoming letter from Mr. Rodney Johnson along with our response (Ref. No. 09-0231) is attached. In addition, we have updated our website to include the complete incoming letter.
- Q2) Please clarify the statement in your letter, "*Thus, the package or unpackaged Class 7 (radioactive) material must display either the Class 7 (radioactive) placards or the appropriate labels to comply with the placarding requirements of Subpart F of Part 172.*" I interpret this statement to mean that "*appropriate labels*" are the required labels. Section 173.427(a)(6)(vi) provides for an exception to package labeling when the package is marked as required. Therefore, no labels are required when LSA/SCO shipments are conducted as "exclusive use" shipments in accordance with § 173.427(a)(6)(vi).
- A2) LSA and SCO shipments consigned as "exclusive use" in accordance with § 173.427(a)(vi) are exempted from the requirement to label the packages. The shipper is not required to take advantage of this exception; and, in some circumstances may apply labels in place of placards (see § 172.514(c)) to satisfy the placarding requirements in Subpart F of Part 172.

Q3) Section 172.514(a) requires placards to be affixed as specified for the material in §§ 172.504 and 172.505. Section 172.504 requires placards for Class 7 materials only under two conditions:

1. When a shipment contains a packaging that is required to bear a Radioactive Yellow III label; or,
2. LSA/SCO shipments transported as “exclusive use” in accordance with §§ 173.427(b)(4) and (5) or (c).

My understanding is that § 173.427(a)(6)(vi) exempts LSA/SCO shipments conducted under “exclusive use” provisions from labeling. Section 173.427 requires vehicles carrying LSA/SCO as “exclusive use” in accordance with § 173.427(a)(6) to bear placards. Since labels are not required on radioactive materials packaging properly prepared as specified in § 173.427(a)(6), a placard is not required on the packaging. However, the transport vehicle must be placarded. Is this interpretation correct?

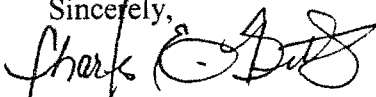
A3) No. Section 172.504 (Table 1, Footnote 1) requires placards to be applied to bulk packages and transport vehicles containing LSA/SCO transported as “exclusive use” in accordance with §§ 173.427(b)(4) and (5) or (c). Thus, placards are required on the packages for such shipments whether or not labels are required. Placards must also be affixed to the transport vehicle, however, § 172.516 provides that the requirement to placard a motor vehicle may be met by the placards displayed on a freight container or portable tank loaded on a motor vehicle. For other types of bulk packages, placards must also be displayed on the motor vehicle.

Q4) Could you clarify the statement in your letter that specifies placarding “unpackaged material”? I cannot find any requirement in Part 172 that addresses placarding unpackaged material.

A4) Section 172.504(e), Table 1 (Footnote 1) requires Radioactive placards for “exclusive use” shipments of LSA/SCO transported in accordance with § 173.427(c). Section 173.427(c) authorizes LSA-I and SCO-I to be transported “unpackaged”. Thus placards are required for unpackaged LSA-I and SCO-I transported as exclusive use in accordance with § 173.427(c).

I hope this answers your inquiry. If you need further assistance, please contact this office at 202-366-8553.

Sincerely,



Charles E. Betts
Chief, Standards Development
Office of Hazardous Materials Standards

[Attachment]



U.S. Department of Transportation
Pipeline and Hazardous Materials
Safety Administration

1200 New Jersey Avenue, SE
Washington, DC 20590

NOV 24 2009

Mr. Rodney Johnson
Manager Nuclear Licensing
Fermi 2
200 TAC
6400 N. Dixie Hwy
Newport, MI 48166

Ref. No.: 09-0231

Dear Mr. Johnson:

This is in response to your letter dated October 8, 2009 requesting clarification of the Hazardous Material Regulations (HMR; 49 CFR Parts 171-180) applicable to the hazard communication requirements for Class 7 (radioactive) material. In your letter you describe the material as "UN2913, Radioactive material, surface contaminated object (SCO-II), 7" transported as "exclusive use" in accordance with § 173.427(a)(6). The material is offered for transportation and transported in a bulk container that has a volumetric capacity of 96 cubic feet (2.7 cubic meters). Your questions are summarized and answered as follows:

Q1) Must the container be placarded on all 4 sides?

A1) No. A package with a volumetric capacity of less than 18 cubic meters (640 cubic feet) may be placarded on two opposing sides or, alternatively, may be labeled instead of placarded in accordance with Part 172, Subpart E. See § 172.514(c).

Q2) Can the container be labeled: Class 7, Radioactive White-I, Yellow-II or Yellow-III as appropriate, instead of placarded in accordance with § 172.514(c).

A2) Yes. See A1.

Q3) Can this package be marked "RADIOACTIVE-SCO" without being placarded or labeled?

A3) No. Packaged or unpackaged LSA or SCO containing less than an A₂ quantity of Class 7 (radioactive) material is excepted from marking and labeling requirements of the HMR provided the surface of each package or unpackaged Class 7 (radioactive) material is stenciled or otherwise marked "RADIOACTIVE-LSA" or "RADIOACTIVE-SCO" as appropriate. See § 173.427(a)(6)(vi). However, this exception does not provide relief

from the placarding requirements in Subpart F of Part 172. While labels may be displayed instead of placards in accordance with § 172.514(c), this is only an alternative method of satisfying the placarding requirements of Subpart F of Part 172. Thus, the package or unpackaged Class 7 (radioactive) material must display either the Class 7 (radioactive) placards or the appropriate labels to comply with the placarding requirements of Subpart F of Part 172.

I trust this satisfies your inquiry. If we can be of further assistance, please contact us.

Sincerely,

A handwritten signature in black ink, appearing to read "Charles E. Betts". The signature is written in a cursive style with a large initial "C" and "B".

Charles E. Betts
Chief, Standards Development
Office of Hazardous Materials Standards

Drakeford, Carolyn (PHMSA)

From: Betts, Charles (PHMSA)
Sent: Monday, January 04, 2010 3:33 PM
To: Drakeford, Carolyn (PHMSA)
Subject: FW: Questions regarding Letter of Interpretation 09-0231
Importance: High
Attachments: 090231.pdf

Eichenlaub
 § 173.427
 § 172.514
 Placarding / R&M
 10-0001

From: Willaford, Dana M [mailto:WillafordDM@oro.doe.gov]
Sent: Wednesday, December 30, 2009 8:03 AM
To: Betts, Charles (PHMSA)
Cc: Boyle, Rick (PHMSA)
Subject: Questions regarding Letter of Interpretation 09-0231

Mr. Betts:

I am requesting clarification regarding your interpretation letter, 09-0231 (attached) regarding placarding for LSA/SCO shipments. The interpretation addressed the requirements in 173.427(a)(6)(v).

The PDF file on your interpretations website did not include the full letter that was submitted by Mr. Rodney Johnson. We maintain a reference file on various interpretations. Is it possible for you to provide the full letter?

Also, could you please clarify the statement in your letter, "*Thus, the package or unpackaged Class 7 (radioactive) material must display either the Class 7 (radioactive) placards or the appropriate labels to comply with the placarding requirements of Subpart F of Part 172.*" I interpret this statement to mean that "*appropriate labels*" are the required labels. 173.427(a)(6)(vi) provides for an exception to package labeling when the package is marked as required. Therefore, no labels are required when LSA/SCO shipments are conducted as exclusive use shipments in accordance with 173.427(a)(6)(vi).

Section 172.514(a), Bulk Packagings, requires placards to be affixed as specified for the material in 172.504 and 172.505. Section 172.504 requires placards for Class 7 materials only under two conditions:

- when a shipment contains a packaging that is required to bear a Radioactive Yellow III label
- LSA/SCO shipments, when transported in accordance with 173.427(b)(4), (5) or (c). Each of these sections in 173.427 provides for the shipment to be conducted under exclusive use provisions.

My understanding is that 173.427(a)(6)(vi) excepts LSA/SCO shipments conducted under exclusive use provisions from labeling. 173.427(a)(6)(v) requires exclusive use LSA/SCO shipments to have placarded vehicles. Since labels are not required on radioactive materials packagings properly prepared as specified in 173.427(a)(6), a placard is not required on the packaging. however, the transport vehicle must be placarded.

Additionally, could you clarify the statement in your letter that specifies placarding unpackaged material? I cannot find any requirement in Part 172 that addresses placarding unpackaged material.

Respectfully,

Dana M. Willaford

Department of Energy, Oak Ridge

Dana M. Willaford
Packaging & Transportation Safety

Aviation Manager/Safety Officer

DOE/ORO, SE-31
Phone: 865-576-5338
Fax: 865-576-3725

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<<090231.pdf>>



U.S. Department of Transportation
Pipeline and Hazardous Materials
Safety Administration

1200 New Jersey Ave, SE
Washington, D.C. 20590

APR -2 2010

Mr. James H. Portsmouth
Energy Solutions
2345 Stevens Drive, Suite 240
Richland, WA 99354

Ref. No. 10-0032

Dear Mr. Portsmouth:

This responds to your letter dated February 2, 2010 requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to placarding requirements for Class 7 (radioactive) material. Specifically, you ask for clarification of the placarding requirements for four unique scenarios. Your scenarios and questions are summarized and answered as follows:

Scenario 1:

Four cargo containers (large freight containers with a capacity of approximately 1280 cubic feet each) used to transport LSA and SCO material on an Articulated Bulk Container (ABC) Railcar:

- Each container contains less than an A₂ quantity.
- The containers are transported exclusive use.
- The shipment is excepted from the marking and labeling requirements under 49 CFR 173.427(a)(6)(vi).
- The containers are marked "RADIOACTIVE-LSA" or "RADIOACTIVE-SCO" in accordance with § 173.427(a)(6)(vi).
- Each freight container is placarded on all four opposing sides with Class 7 (radioactive) material placards before being loaded on the ABC railcar.
- The freight containers are loaded on the ABC railcar by the consignor and remain on the ABC car until they are removed by the consignee.
- There is no intermediate loading or unloading associated with the freight containers or transport vehicle.
- There are no subsidiary hazards requiring additional communication.
- The appropriate container testing certifications (e.g., AAR compliance statement) are appropriately affixed.
- A shipping paper (in this case a Uniform Low Level Radioactive Waste Manifest) is properly completed and delivered to the first rail carrier and the consignor.

Q1) Would the markings (i.e., “RADIOACTIVE-LSA” or “RADIOACTIVE-SCO”) and Class 7 (radioactive) material placards on the freight containers described above satisfy the communication requirements for the shipment in accordance with § 173.427?

A1) Yes. Section 172.504 (Table 1, Footnote 1) requires placards to be applied to bulk packages and rail cars containing LSA/SCO transported as “exclusive use” in accordance with §§ 173.427(b)(4) and (5) or (c). Placards displayed on the freight container may be used to satisfy the requirement to placard the railcar provided the placards are clearly visible from the direction they face, except from the direction of another railcar to which the railcar is coupled (see § 172.516).

Scenario 2

Eight packages (containers with a capacity of approximately 96 ft³ each) used to transport LSA and SCO materials in a van trailer (i.e., a closed transport vehicle):

- Each container contains less than an A₂ quantity.
- The containers are transported exclusive use.
- The shipment is excepted from the marking and labeling requirements under § 173.427(a)(6)(vi).
- The containers are marked “RADIOACTIVE-LSA” or “RADIOACTIVE-SCO” in accordance with § 173.427(a)(6)(vi).
- The van trailer (i.e., transport vehicle) is placarded on 4 opposing sides with Class 7 radioactive placards.
- The containers are loaded on the trailer by the consignor and remain on the trailer until they are removed by the consignee.
- There is no intermediate loading or unloading associated with the containers or transport vehicle.
- There are no subsidiary hazards requiring additional communication.
- A shipping paper (in this case a Uniform Low Level Radioactive Waste Manifest) is properly completed and delivered to the carrier and the consignor.

Q2) Would the markings (i.e., “RADIOACTIVE-LSA” or “RADIOACTIVE-SCO”) and Class 7 (radioactive) material placards on the transport vehicle described above satisfy the communication requirements for the shipment in accordance with § 173.427?

A2) No. Section 172.504(e) (Table 1, Footnote 1) requires placards to be applied to bulk packages and transport vehicles containing LSA/SCO transported as “exclusive use” in accordance with §§ 173.427(b)(4) and (5) or (c). Thus, placards are required on the packages for such shipments. Placards must also be affixed to the transport vehicle, however, § 172.516 provides that the requirement to placard a motor vehicle may be met by the placards displayed on a freight container or portable tank loaded on a motor vehicle. For other types of bulk packages, placards must also be displayed on the motor vehicle.

Scenario 3

A shipment of various size radioactive packages meeting the requirements in § 173.24 and § 173.410 in metal boxes (e.g., B-25 box) used to transport radioactive LSA and SCO material:

- Each container contains less than an A₂ quantity.
- The containers are transported exclusive use.
- The shipment is excepted from the marking and labeling requirements under § 173.427(a)(6)(vi).
- The containers are marked “RADIOACTIVE-LSA” or “RADIOACTIVE-SCO” in accordance with § 173.427(a)(6)(vi).
- The packages are shipped on an open flat bed trailer.
- The open flat bed trailer (i.e., transport vehicle) is placarded on four opposing sides with Class 7 placards.
- The trailer is loaded by the consignor and unloaded by the consignee.

Q3) Would the marking (i.e., “RADIOACTIVE-LSA” or “RADIOACTIVE-SCO”) and Class 7 (radioactive) material placards on the transport vehicle described above satisfy the communication requirements for the shipment in accordance with § 173.427?

A3) No. Section 172.504 (Table 1, Footnote 1) requires placards to be applied to bulk packages and transport vehicles containing LSA/SCO transported as “exclusive use” in accordance with §§ 173.427(b)(4) and (5) or (c). Therefore, if the packages are bulk packages, they must be placarded in addition to the transport vehicle.

Scenario 4

A shipment of Class 7 (radioactive) material utilizing a radioactive materials cask that is less than 18 m³ used to transport radioactive LSA and SCO material:

- The cask contains less than an A₂ quantity.
- The cask is certified to meet DOT 7A, IP-1 and IP-2 package.
- The shipment is excepted from the marking and labeling requirements under § 173.427(a)(6)(vi).
- The cask is marked “RADIOACTIVE-LSA” or “RADIOACTIVE-SCO” in accordance with § 173.427(a)(6)(vi).
- The cask is transported as an exclusive use shipment.
- The shipment is made by motor vehicle.
- The transport vehicle (i.e., cask trailer) is placarded on 4 opposing sides with Class 7 (radioactive) material placards and the front of the tractor is also placarded.

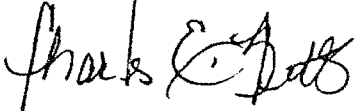
Q4) Would the markings (i.e., “RADIOACTIVE-LSA” or “RADIOACTIVE-SCO”) and five placards on the transport vehicle satisfy the communications requirements for this shipment in accordance with § 173.427?

A4) Yes. Note that placards are only required to be displayed for bulk packages and transport vehicles containing LSA/SCO transported as “exclusive use” in accordance with §§ 173.427(b)(4) and (5) or (c) (see § 172.504(e)(Table 1, Footnote 1).

The package you describe in Scenario 4 is not considered to be a bulk package. Thus, placards are not required to be displayed on either the transport vehicle or the cask.

I hope this answers your inquiry. If you need further assistance, please contact this office at 202-366-8553.

Sincerely,

A handwritten signature in black ink, appearing to read "Charles E. Betts". The signature is written in a cursive style with a large initial "C" and "B".

Charles E. Betts
Chief, Standards Development
Office of Hazardous Materials Standards



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\$173.427
RAM
10-0032

February 2, 2010

FS-NW-LT-5318

Mr. Charles Betts
Mr. Michael Conroy
U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration
East Building, 2nd Floor
Mail Stop: E21-317
1200 New Jersey Ave., SE
Washington, DC 20590

Subject: Clarification of Letter of Interpretation

Dear Mr. Betts and Mr. Conroy,

I would like to ask for a formal clarification on a recent letter of interpretation (Ref. Number: 09-0231) dated November 24, 2009 regarding the need to placard radioactive material in a bulk packaging. The purpose of this correspondence is to obtain further clarification from the U.S. Department of Transportation (DOT) on marking; labeling and placarding requirements for shipments of radioactive materials, such as Low Specific Activity (LSA) shipments as well as Surface Contaminated Objects (SCO) normally shipped exclusive use.

To assist in the clarification of this placarding requirement, I would like to ask your interpretation on the following shipment scenarios which are regularly shipped by our company by motor vehicle and rail.

Scenario # 1

Four Cargo Containers (large freight containers with capacity of approximately 1280 ft³ each) used to transport LSA and SCO material on an Articulated Bulk Container (ABC) Railcar:

- Each container contains less than an A₂ quantity.
- The containers are transported exclusive use.
- The shipment is excepted from the marking and labeling requirements under 49 CFR 173.427(a) (6) (vi).
- The containers are marked "RADIOACTIVE-LSA" or "RADIOACTIVE-SCO" in accordance with 49 CFR 173.427(a) (6) (vi).

Mr. Charles Betts
Mr. Michael Conroy
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February 2, 2010

FS-NW-LT-5318

- Each freight container is placarded on four opposing sides with Class 7 radioactive placards before being loaded on the ABC car.
- The freight containers are loaded on the ABC car by the consignor and remain on the ABC car until they are removed by the consignee.
- There is no intermediate loading or unloading associated with the freight containers or transport vehicle.
- There are no subsidiary hazards requiring additional communication.
- The appropriate container testing certifications (e.g., AAR compliance statement) are appropriately affixed.
- A shipping paper (in this case a Uniform Low Level Radioactive Waste Manifest) is properly completed and delivered to the first rail carrier and the consignor.

Would the markings (i.e. "RADIOACTIVE-LSA" or "RADIOACTIVE-SCO") and Class 7 radioactive placards on the freight containers described above satisfy the communication requirements for the shipment in accordance with 173.427?

Scenario # 2

Eight packages (containers with capacity of approximately 96 ft³ each) used to transport LSA and SCO materials in a van trailer (i.e., a closed transport vehicle):

- Each container contains less than an A₂ quantity.
- The containers are transported exclusive use.
- The shipment is excepted from the marking and labeling requirements under 49 CFR 173.427(a) (6) (vi).
- The containers are marked "RADIOACTIVE-LSA" or "RADIOACTIVE-SCO" in accordance with 49 CFR 173.427(a) (6) (VI).
- The van trailer (i.e., transport vehicle) is placarded on 4 opposing sides with Class 7 radioactive placards.
- The containers are loaded on the trailer by the consignor and remain on the trailer until they are removed by the consignee.
- There is no intermediate loading or unloading associated with the containers or transport vehicle.
- There are no subsidiary hazards requiring additional communication.
- A shipping paper (in this case a Uniform Low Level Radioactive Waste Manifest) is properly completed and delivered to the carrier and the consignor.

Would the markings (i.e., "RADIOACTIVE-LSA" or "RADIOACTIVE-SCO") and Class 7 radioactive placards on the transport vehicle described above satisfy the communication requirements for the shipment in accordance with 173.427?

Mr. Charles Betts
Mr. Michael Conroy
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February 2, 2010

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Scenario # 3

A shipment of various size radioactive packages meeting the requirements in 173.24 and 173.410 in metal boxes (e.g., B-25 box) used to transport radioactive LSA and SCO material

- Each container contains less than an A₂ quantity of material.
- The containers are marked either “RADIOACTIVE-LSA” or “RADIOACTIVE-SCO”.
- The radioactive material is being shipped under 49 CFR 173.427(a) (6) (vi) and are excepted from the marking and labeling requirements.
- The various sized containers are shipped on an open flat bed trailer.
- The open flat bed trailer (i.e., transport vehicle) is placarded on four opposing sides with Class 7 radioactive placards.
- The shipment is loaded by the consignor and unloaded by the consignee.
- The shipment is shipped as exclusive use.

Would the marking (i.e., “RADIOACTIVE-LSA” or “RADIOACTIVE-SCO”) and Class 7 radioactive placards on the transport vehicle described above satisfy the communications requirements for the shipment in accordance with 173.427?

Scenario # 4:

A shipment of a radioactive material utilizing a radioactive materials cask that is less than 18 m³ (640 ft³) used to transport radioactive LSA and SCO material.

- The cask contains less than an A₂ quantity.
- The cask is certified to meet DOT 7A, IP-1 and IP-2 package.
- The shipment is excepted from the marking and labeling requirements under 49 CFR 173.427(a) (6) (vi).
- The cask is marked “RADIOACTIVE-LSA” or “RADIOACTIVE-SCO” in accordance with 49 CFR 173.427.
- The cask is transported as an exclusive use shipment.
- The shipment is made by motor vehicle.
- The transport vehicle (i.e. cask trailer) is placarded on 4 opposing sides with Class 7 radioactive placards and the front of the tractor is also placarded.

Would the markings (i.e. “RADIOACTIVE-LSA” or “RADIOACTIVE-SCO”) and five placards on the transport vehicle satisfy the communications requirements for this shipment 173.427?

49 CFR 173.427 (a) (6) (v) states that the vehicle must be placarded in accordance with subpart F of part 172. Therefore, we want to either placard the vehicle or else placard the packages in such a way as to satisfy the requirement to placard the vehicle.



Mr. Charles Betts
Mr. Michael Conroy
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Thank you for your time and consideration of these questions. I look forward to your response.

Sincerely,

A handwritten signature in cursive script that reads "James H. Portsmouth".

James H. Portsmouth
Director of Transportation and Logistics
Federal Services Group

jmr