



U.S. Department
of Transportation

**Research and
Special Programs
Administration**

400 Seventh Street, S.W.
Washington, D.C. 20590

FEB 23 2000

Mr. Darwin D. Garvin
Transportation Safety
Compliance Service
1805 Westminster Court
Lakeland, Florida 33809

Ref. No: 00-0035

Dear Mr. Garvin:

This is in response to your letter of December 13, 1999, requesting clarification on the requirements for transporting molten sulfur under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically you ask whether a cargo tank containing only the residue of molten sulfur which is no longer at an elevated temperature is still subject to the HMR. You state the cargo tank would contain only a small thin solid coating of sulfur.

The answer is no. As provided by special provision 30 (§ 172.102), sulfur is not subject to the HMR if formed to a specific shape. It is the opinion of this Office that because the solid sulfur residue in a cargo tank is formed into a shape (the shape of the shell of the cargo tank) it is not subject to the HMR. We are unable to respond to your question regarding vehicles stopping at railroad crossings. You may contact Mr. Larry Minor of the Federal Motor Carrier Safety Association at (202) 366-1790 for information on this issue.

I hope this information is helpful.

Sincerely,

Delmer F. Billings
Chief, Standards Development
Office of Hazardous Materials Standards



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172.101 (S)



DARWIN D. GARVIN, INC.
TRANSPORTATION SAFETY
COMPLIANCE SERVICE

1805 WESTMINISTER COURT
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December 13, 1999

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§ 172.101(S)

sulfur, molten
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*Ms. Eileen Mack, Hazardous Materials Specialist
U. S. Department of Transportation
Research and Special Programs Administration
Hazardous Materials Enforcement
400 Seventh Street, S. W.
Washington, D. C. 20590*

Dear Ms. Mack:

Please review and provide guidance re: the following situation:

Commodity: Sulfur Molten, Elevated Temperature Liquid

A carrier transports an elevated temperature material, molten sulfur, in a non-specification cargo tank. This is a class 9 materials and placards are not required. The cargo tank is marked with an ID number and the words "Molten Sulfur" per section 172.325.

Neither the elevated temperature or molten sulfur material would be present after the product was unloaded.

Section 173.29(g) states:

"(g) A package which contains a residue of an elevated temperature material may remain marked in the same manner as when it contained a greater quantity of the material even though it no longer meets the definition in Section 171.8 of the subchapter for an elevated temperature material."

This indicates that the markings may be removed from the cargo tank when it is empty.

Question: Is the cargo tank subject to the hazardous materials regulations after the cargo has been unloaded?

It is the opinion of Debbie Booth and John Gale of RSPA that the cargo tank would not be subject to the regulations after being unloaded as the elevated temperature and molten sulfur hazards have been eliminated. I concur with their opinion.

However, the question of residue in the cargo tank has been raised. Section 173.29(a) states:

"Section 173.29 Empty packagings.

(a) General. Except as otherwise provided in this section, an empty packaging containing only the residue of a hazardous material shall be offered for transportation and transported in the same manner as when it previously contained a greater quantity of that hazardous material.-----

There is no residue of "molten sulfur" as the product will immediately solidify into sulfur when cooled. Note that the cargo tank never contained a greater quantity of "Sulfur" as stated in 173.23(a) above since the previous product was "molten sulfur" which is listed separately in the hazardous materials table.

Regardless, "Sulfur" in the table has a special provision number 30 which states:

30 Sulfur is not subject to the requirements of this subchapter if transported in a non-bulk packaging or if formed to specific shape (e.g., prills, granules, pellets, pastilles, or flakes).

It appears that "Sulfur," if shipped in any form except powder, would not be subject to the hazardous materials regulations.

Any minuscule amount of sulfur remaining in the cargo tank would be solidified onto the tank. Any other pieces, if they existed at all, would most likely meet special provision 30.

Question: Does the small thin coating of sulfur which has solidified onto the cargo tank make its operation subject to the regulations?

There is no dangerous vapors or other hazards associated with the empty tank. Further, the amount of sulfur, if any, in the cargo tank is de minimis. Withstanding all other decisions, it appears that the De Minimis theory rule should be applied.

We are presently transporting loads of this product over State Route 60 in central Florida which has a posted speed limit of 65 MPH. Rear-end collisions have always been a concern. Based on information received from RSPA in 1996, our drivers have not been stopping, when empty, at the numerous spur or industrial lines that cross S.R. 60. We have even equipped the rear of our trailers with strobe lamps to reduce the accidents. So far in 1999, we have 16 rear-end collisions at these railroad grade crossings. It certainly will be counter productive from a safety point to require these empty trailers to stop at crossings when the potential for a hazardous materials incident does not exist.

In conclusion, it is our position that the operation of these empty cargo tanks are not or should not be subject to the hazardous materials regulations. Any assistance you can provide in this matter would be appreciated.

Sincerely

Darwin D. Garvin

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