U.S. Department
of Transportation
**Research and
Special Programs
Administration**

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

AUG 3 1 2000

Mr. William Reinike
Distribution Representative
Hazardous Materials Coordinator
Shell Chemical Company
P.O. Box 235
Belpre, OH 45714

Ref. No. 00-0009

Dear Mr. Reinike:

This responds to your letter of November 8, 1999, requesting clarification of the attendance requirements for unloading tank cars under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you ask if your tank car unloading procedures meet the requirements of § 174.67(i). I am sorry for the delay in responding to your inquiry and hope it has not caused you any inconvenience.

Section 174.67(i) of the HMR requires a tank car to be continuously attended throughout the entire period of unloading and while the tank car is connected to an unloading device. This requirement can be met by human attendance or by use of signaling systems, such as sensors, alarms, and electronic surveillance equipment. Human monitoring must be performed by the person responsible for the unloading operation. The attendant may monitor unloading from on-site or from a remote location within the plant. In either location, the attendant must be knowledgeable about the product, have the ability to identify conditions requiring action, and have the capability and authority to halt the flow of product immediately.

In your letter, you describe a monitoring arrangement where a technician monitors the unloading process until the product flow is established and then checks the unloading lines at a minimum of once every half-hour. You state that between inspections, the technician is in the immediate vicinity of the unloading racks performing routine tasks. In your letter you also describe the technician's ability to halt the flow of product as follows:

> In the event of a small leak, the technician can halt the flow of the product by immediately closing the unloading valve on the tank without wearing special protective gear. If the leak creates a spray, the technician would "suit up" before closing the valve.

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174.67

In the event of a larger leak, the technician will shut off the nitrogen purge, located outside the control room, "suit up" in personal protective gear, then open the vent on the car to further relieve pressure on the product flow.

Provided the technician has an unobstructed view of the tank car and its unloading connections while performing routine tasks, this arrangement would satisfy the requirements of § 174.67(i).

I hope this information is helpful. This response was coordinated with the Federal Railroad Administration and is consistent with their enforcement policy. If you have further questions, please do not hesitate to contact this office.

Sincerely,

Thomas G. Allan

Thomas G. Allan
Senior Transportation Regulations Specialist
Office of Hazardous Materials Standards

Shell Chemical Company

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November 8, 1999

Mr. Edward Mazzulo
Director,
Office of Hazardous Materials Standards – DHM10
Research and Special Programs Administration
U.S. Department of Transportation
400 Seventh Street, S.W.
Washington, D.C. 20590

FAX: 740 4232386

Dear Mr. Mazzulo,

We are asking for you help in clarifying the attendance requirements, as stated in 49CFR 174.67, for unloading hazardous materials from tank cars. This regulation focuses primary on the mechanics of safe unloading. The human aspect of the regulation states that unloading must be performed by a reliable and responsible individual who is properly instructed in unloading hazardous materials. It also mentions "attendance" by the unloader.

Over the years, we have received various interpretations of 174.67 from several reputable sources, including RSPA. Each interpretation includes the terms "attendance", and in some cases "constant surveillance", but invariably the reader is not given a definition of either term. The latest interpretation came in the form of HM212, and as far as we know, that ruling has not been incorporated in the regulations.

As a responsible facility and business, we take pride in our efforts to conduct our operations in a prudent, reasonable, and safe manner. And that includes striving to meet the spirit of Federal and State regulations. I would like to present an outline of our tank car unloading procedures, as well as our training and inspection processes for your review. Will you please do so and tell us if you agree that we are meeting the regulatory requirements for human monitoring. I have included a few questions at the end of this letter.

1.) To save time, I will state that our operating procedures do include the requirements as stated in 174.67. Again, we do not have a clear definition of "attendance", and that is one of our questions.

2.) The tank farm unloading facility consists of three unloading racks, each with the capability of handling 3 tank cars. The tank farm control room is in full view of the nearest unloading spot, which is approximately 50 feet away.

3.) The tank farm technician, who is DOT trained and certified, follows all procedures for safe unloading. Once the car is relieved of interior pressure and hoses are securely connected, the technician monitors the unloading process until product flow is established.

4.) During the unloading process, the technician checks the unloading lines at a minimum of once every half-hour. Between inspections, the technician is in the immediate vicinity of the unloading racks performing routine tasks. no obstructed view, can see some, not all.

5.) In the event of a small leak, the technician can halt the flow of product by immediately closing the unloading valve on the tank car without wearing special protective gear. If the leak creates a spray, the technician would "suit up" before closing the valve.

6.) In the event of a larger leak, the technician will shut off the nitrogen purge, located outside the control room, "suit up" in personal protective gear, then open the vent on the car to further relieve pressure on the product flow.

Training and Prevention Activities

a.) We have an ongoing leak detection and repair (LDAR) program that includes all flanges and valve packing glands. This program is voluntary, not mandatory.

b.) We experienced just one unloading hose failure about 15 years ago. The root cause was a flex point caused by the piping design on the tank car. We changed the piping configuration, which eliminated the flex point, and improved our hose inspection procedures. There have been no failures since then.

c.) All hoses are pressure tested every six months at 150% of the maximum pressure rating of 150 psi. The actual pressure testing at 250 psi is four times our operating rate of 60 psi or less. All hoses must be tested and tagged prior to use. Hoses are not used if the tag is missing or the test date exceeds 6 months. Any hose that fails the pressure test is discarded, not repaired.

d.) Tank farm technicians perform pre-unloading and pre-trip inspections of all rail cars. All nonconformances are noted and handled prior to releasing the cars.

e.) All technicians, who work in the tank farm, including those providing relief coverage, are required to be DOT trained and certified. Training includes general awareness & familiarization and function specific. Refresher training must be completed every 3 years as required by 49CFR 172.704. Additional training requirements include annual HAZWOPPER, which consists of hazardous materials identification, marking, labeling, and placarding requirements, tank car inspection, and emergency response and cleanup.

f.) At our request, a Bureau of Explosives inspector audits various aspects of our management of hazardous materials and wastes. The audit includes tank car unloading procedures.

Questions:

- Will you please provide a clear definition of "attendance" as it is intended in 174.67(i)?
- Has the Department of Transportation finalized HM-212, specifically the portion devoted to unloading of tank cars? If it has been finalized, when will it be incorporated in the regulations? Is the FRA using HM212 or 174.67 for inspection and enforcement?
- Last, but most important, do our tank car unloading procedures and process meet the provisions and requirements as defined by RSPA and stated in the regulations? Will you please tell us if there is something more we must (or should) do to ensure compliance? Your answers and suggestions are very welcomed and appreciated.

Sincerely,

William Reinike
Distribution Representative –
Hazardous Materials Coordinator
Shell Chemical Company