



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, DC 20590

**MAY 17 2018**

Steven Geneva  
Director of Quality Assurance and Regulatory Compliance  
TMC Engineering Services, Inc.  
2335 Wadsworth Street  
Houston, TX 77015

Reference No. 18-0021

Dear Mr. Geneva:

This letter is in response to your February 20, 2018 email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to function-specific training. Specifically, you provide a list of functions your employees perform and seek confirmation of your understanding of the function-specific training requirements in the HMR.

In accordance with § 172.702 of the HMR, it is the hazmat employer's responsibility to ensure that each of its hazmat employees is trained. This training must include general awareness, function-specific, safety, and security awareness training as specified in § 172.704(a). Generally, this Office does not review individual training plans for compliance; however, the training program as described in your email appears to conform to the requirements of the HMR.

Function-specific training is specific to the function(s) for which the hazmat employee is responsible. Please note that function-specific training includes training concerning the requirements of special permits that are specifically applicable to the functions the employee performs. See § 172.704(a)(2)(i). Training conducted to comply with the hazard communication programs required by the Occupational Safety and Health Administration (29 CFR 1910.120) or the Environmental Protection Agency (40 CFR 311.1) or training that complies with security training programs required by other Federal or international agencies may be used to satisfy the training requirements set forth in § 172.704 to the extent that such training addressed the training components specified in § 172.704(a).

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

Sincerely,

A handwritten signature in blue ink that reads "T. Glenn Foster". The signature is fluid and cursive, with a long horizontal flourish extending to the left.

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

Stevens  
§ 172.704(2)  
Training  
18-0021

**Dodd, Alice (PHMSA)**

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**From:** INFOCNTR (PHMSA)  
**Sent:** Tuesday, February 20, 2018 4:53 PM  
**To:** Hazmat Interps  
**Subject:** FW: §172.704 (2) Function-specific training Interpretation Request

Hello all,

Please see below LOI request.

Regards,

-Breanna

**From:** Steven Geneva [mailto:genevas@tmces.com]  
**Sent:** Tuesday, February 20, 2018 2:18 PM  
**To:** INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>  
**Cc:** Andy Shoop <ashoop@tmces.com>; Mark Blissett <mblissett@tmces.com>  
**Subject:** §172.704 (2) Function-specific training Interpretation Request

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

**From:** Steven Geneva, Director of Quality Assurance and Regulatory Compliance  
TMC Engineering Services, Inc.  
2335 Wadsworth Street, Houston, Texas 77015

**Subject:** HAZMAT Function-Specific Training Request for Interpretation

Title 49: Transportation  
Subtitle B—Other Regulations Relating to Transportation  
Chapter I—Pipeline and Hazardous Materials Safety Administration, Department of Transportation  
Subchapter C—Hazardous Materials Regulations  
Part 172—Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, Training Requirements, and Security Plans  
Subpart H—Training - §172.704 Training requirements

§172.704 (2) Function-specific training

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## Background

TMC is an active railroad tank car repair facility, the company is certified to the AAR M-1002 and M-1003 standards and has a program compliant with federal regulations as identified within 49 CFR. TMC receives tank cars in two states: 1) the car arrives in a "clean" state (no hazardous materials Present), with a certificate attesting to the fact the car was cleaned by a certified company prior to be delivered to TMC and 2) the car arrives with a hazardous material still in the tank, most of the time the car has been emptied leaving a hazardous material residue. The first stage of operation for the 1<sup>st</sup> state is for TMC to verify cleanliness and the physical preference of the cleaning certificate; The first stage of

operation for the 2<sup>nd</sup> state is for the car to go through our cleaning process. Once the cleaning process has finished, the car no longer contains any residue of a hazardous material and is serviced in accordance with car owner, AAR, and federal requirements.

This request is not in response to a known deficiency within our program or based upon a potential deficiency identified during an external audit. This interpretation request is being sought as part of the company’s continual quality improvement (CQI) efforts. One of the key focus areas of our CQI program, is to ensure that we have “source definitions” clearly defined, and through analysis of those definitions, identify potential improvement opportunities. As part of our continuous improvement efforts, we are seeking a clear definition/interpretation of the term “function-specific training”, Please note, that the term is not specifically defined within 49CFR §171.8 Definitions and abbreviations.

**Our Current Understanding of the Federal Requirements**

We have drawn our current understanding of “function-specific training” based on the requirements as defined within 49CFR §172.704 (2) where “each hazmat employee must be provided function-specific training concerning requirements of this subchapter” or more specifically Subchapter C—Hazardous Materials Regulations—Parts 171 through 180.

In addition, we have also drawn upon information provided in PHMSA’s “What You Should Know: A Guide to Developing a Hazardous Materials Training Program where it states on page 16, “FUNCTION SPECIFIC: Provides hazmat employees a detailed study of the requirements of the regulations applicable to the function(s) for which the person is responsible. Training needs will depend on the company operations and the hazmat employee’s responsibilities. Your responsibility is to identify the specific topics and extent to which topics are covered to meet your employees’ needs. Examples of function specific topics are included in the Function Specific Training Checklist in the “Understanding Status of Training Efforts”.

The sample checklist is broken down into several sections that directly correlate with requirements as defined in Subchapter C and provides an excellent example for organization involved in the packaging, marking, shipping, and transportation of hazardous materials. For those types of organizations, the checklist is clear, easily understood and simple to apply.

Unfortunately for our organization, except for the inbound cleaning activity, no examples are provided within the guidance materials that identifies the extent of how function-specific training relates to the other functions we perform such as: repair, maintenance, inspection, test and qualification of a packaging which are included in the HAZMAT employee definition. The table below defines TMC functions that correlate with the HAZMAT Employee definition – lime item (ii).

**Function-Specific Training Applicable to Functions Performed**

Function	Package	Packaging Component	Function Performed
Design	N/A *	N/A **	No function(s) performed
Manufactures	N/A *	N/A **	No function(s) performed
Fabricates	N/A *	N/A **	No function(s) performed
Inspects	N/A *	Applicable	NDT Inspections associated with Part 180—Continuing Qualification and Maintenance of Packagings
Tests	N/A *	Applicable	NDT Tests associated with Part 180—Continuing Qualification and Maintenance of Packagings
Marks	N/A *	Applicable ***	Marking or Label Replacement *** and the function where the Qualification Decal and other Markings are changed/revised per §180.515
Maintains	N/A *	Applicable	Maintenance activities include upkeep, preservation, and repair functions performed in support of a tank car maintenance and qualification activities as defined within Subpart F—Qualification and Maintenance of Tank Cars.
Repairs	N/A *	Applicable	
Reconditions	N/A *	Applicable	

\* Not applicable based on package definition as defined in 49CFR §171.8 where the “Package” means a packaging plus its contents (hazardous material) whereas “Packaging” means a receptacle and any other components or materials necessary for the receptacle to perform its containment function in conformance with the minimum “packing” requirements of this subchapter.

\*\* Not applicable as TMC does not design, manufacture, or fabricate a “Packaging” receptacle and any other components or materials necessary for the receptacle to perform its containment function.

\*\*\* Applicable but limited to existing marking on a car detected during an inbound inspection where the marking or label would have to be removed and replaced to perform a maintenance operation like painting a car. An example of this would be a Chemtrec Label that provides contact information in the event of a chemical emergency.

As functions like “inspection, test, repair, etc.” are extremely broad in nature, we want to ensure we have an accurate definition and interpretation of the HMR to establish the extent of what function-specific training as needed. For instance, if we single out “repair” there are multiple activities or functions that are performed which include but are not limited to the transportation of a part by a forklift, replacing a corroded bolt on a railing, painting over graffiti, inspecting a wheel, replacing an air brake hose, or performing an ultra-sonic thickness test on a tank car tank. Some of these activities are covered under a formal training program, like forklift driver training, while others are not, like painting over graffiti.

In the case of performing an ultrasonic thickness test on a tank car as part of a qualification activity defined in 49CFR §180.507 Qualification of tank cars, one might assume that because you are actually qualifying a packaging for use in rail service that extended function-specific training definition as defined in Subpart H—Training would apply, however NDT (Nondestructive Testing) has a set of specific requirements for training and certification that are defined within the AAR’s Specifications for Tank Cars in Appendix T as well as requirements defined by the American Society for Nondestructive Testing. Both programs require training to be conducted and approved by a certified NDT Level III with re-certification requirements different than the requirements as defined within HMR. With the ASNT training program in place relevant training specific to the HMR that would not be redundant, or conflicting would appear to include training only the requirements of the HMR specific to function being performed. The following is a list of the primary functions the facility performs:

1. Exposed to Hazardous Residue – function-specific training on how the cleaning operation is performed would be part of the HMR training program.
  - 1.1. Railcar Cleaner – cleans and removes residue from railcar, can be hazardous and non-hazardous materials
2. Not Exposed to a hazardous Material or residue due to operations being performed post cleaning,
  - 2.1. Railcar Blaster – removes the interior and exterior coatings of railcars.
  - 2.2. Railcar Painter/Stencil/Lining - repaint interior and exterior of railcars, includes interior lining covered under NACE and SPSS industry requirements
  - 2.3. Railcar Repairperson – performs mechanical and weld repairs on railcars, weld repairs are covered under AAR MSRP CIII Appendix W and The American Welding Society’s AWS D15.1
  - 2.4. Valve repairperson - removes and repairs Valves, Pressure Relief Valves and other tank car fittings and service equipment, OEM procedures are used for installation and refurbishment.
  - 2.5. NDT Inspection and Test Personnel – performs NDT activities on railcars, previously specified.
  - 2.6. QC Inspection Personnel – performs incoming, in-process, and final inspection of railcars, in accordance with AAR and Customer Requirements and procedures.

All these personnel are trained through a variety of means, some very specific as in an NDT Inspector (previously detailed), some functions are trained by external consultant and agencies and some training is accomplished through an internal apprenticeship type programs. This is not intended to be an exhaustive list but is intended to provide examples that we have multiple training programs dependent upon the function being performed where requirements differ. It is also important to note that we obviously have required training as it pertains to OSHA, EPA, state regulations, etc, that pertains to specific operations such as painting or lining a railcar.

As in the NDT Inspector example above, the functions listed below as listed in number 2, where any applicable requirements as defined in the HMR would be part of the employees training but the specific on “how” an activity would be performed would be covered under a separate training program with individual specific requirements.

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### **Specific Interpretation Request**

Please confirm our assumptions and provide any additional definitions, clarification or interpretation(s) of the federal requirements as it pertains to the HMR requirements regarding function-specific training. We appreciate your time and assistance in helping our company with its continuous improvement efforts.

Best Regards,

Steven Geneva | Director  
Quality Assurance and Regulatory Compliance  
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