



United States

Department of Transportation

**Hazardous Material Transportation Inspector / Investigator Uniform Training Performance Standards**

Federal Aviation Administration

Federal Motor Carrier Safety Administration

Federal Railroad Administration

Pipeline and Hazardous Materials Safety Administration

## SECTION 1 – INTRODUCTION

**Section 1.1 – Background.** The Federal hazardous materials transportation law (Federal Hazmat Law) and the Hazardous Materials Regulations (HMR) provide for the safe and secure transportation of hazardous materials (hazmat) in commerce. Enforcement of the Federal Hazmat Law and HMR has been delegated to designated Department of Transportation (DOT or Department) officials within four Operating Administrations (OAs): Federal Aviation Administration (FAA), Federal Motor Carrier Safety Administration (FMCSA), Federal Railroad Administration (FRA) and Pipeline and Hazardous Materials Safety Administration (PHMSA).

Recognizing the need to continually improve hazardous material transportation safety, Congress enacted the “Moving Ahead for Progress in the 21st Century Act” or “MAP-21”. This Act directs the Secretary to establish uniform training performance standards for hazardous material inspectors and investigators (HMI<sup>2</sup>). Specifically, MAP-21 directs the Secretary to establish standards for HMI<sup>2</sup> training in the following areas:

1. The identification of noncompliance with the provisions of Chapter 51 of Title 49, United States Code;
2. The collection, analysis and publication of findings related to hazardous material transportation accidents and incidents; and
3. The implementation of appropriate enforcement action.

**Section 1.2 – Purpose.** To address the complexities of the hazardous material transportation system, the training standards outlined in this document have been subdivided into six competencies. The standards described within each of the competencies are intended to identify specific skill sets for HMI<sup>2</sup> and assist in the establishment of training curriculum for all agents of the Secretary. The specific competencies for HMI<sup>2</sup> training are:

1. Core Competencies for Hazardous Material Transportation Inspectors and Investigators
2. Advanced Competencies for Hazardous Material Inspectors and Investigators
3. Competencies for Supervisory Hazardous Material Inspectors and Investigators
4. Competencies for Hazard Class Specialists
5. Competencies for Hazardous Material Packaging Specialists
6. Competencies for Modal Hazardous Material Specialists

The “Core Competencies” listed in this document are minimum training standards for all HMI<sup>2</sup> conducting enforcement activities as authorized in 49 CFR, part 107, subpart D. The additional competencies listed are designed to address unique training requirements associated with complex accident or incident investigations, HMI<sup>2</sup> supervisory responsibilities, specific classes or hazardous materials and hazardous material packagings. All are intended to support the safe and secure transportation of hazardous materials in commerce.

## **SECTION 2 – APPLICABILITY**

The standards, described in this document, apply to all DOT personnel, State employees or contractor employees who conduct federally funded hazardous material transportation inspections, investigations or compliance reviews on behalf of the Secretary. In order to meet these standards, HMI<sup>2</sup> must demonstrate the ability to meet each of the elements within the specific competency in accordance with the policies and procedures of the OA overseeing the activities of the HMI<sup>2</sup>. The Core Competency standards are minimum standards for all HMI<sup>2</sup> conducting HM transportation inspections, investigations or enforcement activities on behalf of the Secretary. HMI<sup>2</sup> may pursue one or more of the advanced competencies described in Section 5 through Section 9 at the discretion of their agency, in accordance with its policies, authorities and jurisdiction. The standards described within a particular competency are minimum standards and must be met for an HMI<sup>2</sup> to hold that competency. An OA may supplement the standards associated with a competency to address program needs.

The enhanced enforcement authority granted under the statute and detailed in 49 CFR, part 109, is granted only to Federal agents. Training standards associated with this authority apply only to Federal agents and do not apply to other HMI<sup>2</sup>.

## **SECTION 3 – DEFINITIONS**

Terms found in this document are defined as found in 49 CFR §§ 109.1 and 171.8. Specific terms found herein and not defined in §§ 109.1 or 171.8 are defined below. These definitions are limited to this document and are intended for clarification only.

*Competency* – a set of knowledge, skills or abilities necessary to be considered qualified to accomplish a specific job task.

*Core Competencies* – a set of primary knowledge, skills or abilities upon which more advanced job task skill sets are based.

*Emergency Response Information (ERI)* - information that can be used in the mitigation of an incident involving hazardous materials in transportation.

*Hazardous Material Inspector / Investigator (HMI<sup>2</sup>)* - person who as a part of their routine duties inspects or investigates the transportation of hazardous materials in

commerce in order to verify compliance with the Federal Hazmat Law or the HMR (49 CFR, Parts 105 to 180) on behalf of the Secretary of Transportation.

*Independent Inspection Agency (IIA)* - A person who provides services as an independent inspector performing the cylinder inspections and verifications required by Parts 178 and 180 of 49 CFR for an entity that manufactures cylinders for use in the transportation of hazardous materials. An IIA may not be engaged in the manufacture of such cylinders or be directly or indirectly controlled by the manufacturer and is not a PHMSA agent or representative.

*Tank Car* – A rail car with tanks mounted on or forming part of it used for the transportation of a hazardous material and subject to the requirements of the HMR.

*UN Third-Party Packaging Certification Agency* – A person authorized by PHMSA to issue certificates and certifications for types of packagings designed, manufactured, tested, or maintained in conformance with the requirements of 49 CFR, subchapter C, and the standards set forth in the United Nations (U.N.) Recommendations (Transport of Dangerous Goods).

## **SECTION 4 – CORE COMPETENCIES FOR HAZARDOUS MATERIAL TRANSPORTATION INSPECTORS AND INVESTIGATORS:**

The competencies described in this section are core competencies for all hazardous material transportation inspectors and investigators. They represent the minimum standard for all HMI<sup>2</sup>. The objective of these core competencies is to provide a baseline level of training for all HMI<sup>2</sup>. All HMI<sup>2</sup> will be trained to accurately interpret and apply regulations issued under chapter 51, of title 49 as described in this section.

### **Section 4.1 – Regulatory Knowledge**

4.1.1. Acquire and maintain an appropriate level of knowledge of the Federal Hazmat Law and HMR (49 CFR, Parts 105 to 180), relevant regulations, policies, standards and procedures.

4.1.2. Interpret and apply laws, regulations, policies, standards, procedures and interpretations associated with the Federal Hazmat Law and HMR to ensure compliance and enhance public safety. Specifically HMI<sup>2</sup> will be trained to:

4.1.2.1. Serve documents in accordance with 49 CFR, §105.35.

4.1.2.2. Serve a subpoena as authorized in 49 CFR, §105.50.

4.1.2.3. Confirm the compliance of any person with the provision of 49 CFR, subchapters A or C, or a special permit, approval, or order issued thereunder, or any court decree relating thereto.

4.1.2.4 Enforce compliance orders issued as a result of violations of the HMR.

4.1.3. Accurately communicate and disseminate information relating to the Federal Hazmat Law, HMR and associated interpretations to regulated entities and government agency representatives.

4.1.4. Understand the classification process and significance of packing group assignment for hazardous materials transported in commerce.

## **Section 4.2 – Hazardous Material Transportation Registration Requirements**

4.2.1. Confirm that persons, who offer, cause to be transported or transport hazardous materials in commerce and who are required to register in accordance with 49 CFR, part 107, subpart G, have registered with PHMSA.

4.2.2. Verify that registrations issued by PHMSA are valid at the time of the activity requiring registration.

4.2.3. Determine that any change in principle place of business by a hazardous material offeror or transporter is reported to PHMSA within 30 days after the change.

4.2.4. Document the extent and duration of any hazardous material transportation conducted without a required registration.

## **Section 4.3 – Use of the Hazardous Material Table (HMT) and Special Provisions**

4.3.1. Accurately interpret and apply the information presented in the HMT.

4.3.2. Identify hazardous substances regulated as hazardous materials during transportation.

4.3.3. Identify marine pollutants or severe marine pollutants regulated as hazardous materials during transportation as indicated in Appendix B to §172.101.

## **Section 4.4 – Hazard Communication**

4.4.1. Verify that shipping documents conform to the provisions of 49 CFR, part 172 subpart C, or the applicable international standard.

4.4.2. Confirm that hazardous material package markings conform to 49 CFR, part 172 subpart D, or the applicable international standard.

4.4.3. Confirm that hazardous material package labeling conforms to 49 CFR, part 172 subpart E, or the applicable international standard.

4.4.4. Verify that hazardous material placarding conforms to 49 CFR, part 172 subpart F, or the applicable international standard.

#### **Section 4.5 – Emergency Response Information (ERI)**

4.5.1. Verify that ERI provided during transportation can be used in the mitigation of an incident involving hazardous materials and contains the minimum information required by 49 CFR, part 172, subpart G, or the applicable international standard.

4.5.2. Confirm that ERI is printed legibly in English and is available for use away from the package containing the hazardous material.

4.5.3. Ensure that ERI is available on shipping papers or as authorized in 49 CFR, § 172.602(b).

4.5.4. Confirm that carriers and facility operators maintain ERI as specified in 49 CFR, § 172.602(c).

4.5.5. Ensure that shipping documents include emergency response telephone numbers as required in 49 CFR, § 172.604.

#### **Section – 4.6 Hazardous Material Employee Training**

4.6.1 Verify that hazardous material employees subject to the training requirements of 49 CFR have been trained and evaluated by an appropriate means as required by 49 CFR, part 172, subpart H.

4.6.2. Confirm that hazardous material employee training is current.

4.6.3. Verify that all records of hazardous material training contain the required information and are retained for 90 days after employment or change of job function.

#### **Section 4.7 – Hazardous Material Security**

4.7.1. Verify that persons required to develop a transportation security plan as detailed in 49 CFR, part 172, subpart I, develop and adhere to a security plan.

4.7.2. Ensure that security plans include a written transportation security risk assessment.

4.7.3. Confirm that security plans are available through a principal place of business and are available upon request.

#### **Section 4.8 – Identify Authorized Hazardous Material Packagings**

4.8.1. Confirm that packagings intended for use in hazardous material service and packages containing hazardous material:

4.8.1.1. Are packagings authorized in the HMT.

4.8.1.2. Comply with any applicable special provision(s).

4.8.1.3. Conform to all applicable general requirements for packagings and packages specified in 49 CFR, § 173.24.

#### **Section 4.9 – Collecting Evidence**

4.9.1. Collect and retain information necessary to support or refute alleged violations of 49 CFR or an authorized international standard in accordance with applicable OA and parent organization procedures.

#### **Section 4.10 – Taking Appropriate Enforcement Action**

4.10.1. Document and record alleged violations of the HMR in sufficient detail to clearly identify deviations from applicable regulatory requirement(s). Documentation should be sufficient to facilitate enforcement and/or corrective action in accordance with applicable OA or organization policies.

### **SECTION 5 – ADVANCED COMPETENCIES FOR HAZARDOUS MATERIAL INSPECTORS AND INVESTIGATORS:**

Advanced Competencies for hazardous material inspectors and investigators are the knowledge, skills and abilities which enable an inspector or investigator to determine the extent, duration and cause of non-compliance with 49 CFR or an international standard. HMI<sup>2</sup> who possess Advanced Competencies investigate known or suspected noncompliance that poses a significant risk to public safety or the transportation infrastructure. An HMI<sup>2</sup> who is considered to hold Advanced Competencies must demonstrate and maintain proficiency in all Core Competencies and be trained to:

#### **Section 5.1 – Detecting Unauthorized Hazardous Material Packages and Packagings**

5.1.1. Stop the movement of package(s) in transportation as authorized in 49 CFR, part 109, and in accordance with the DOT Joint Operations Manual for 49 CFR Part 109 Enforcement and Administrative Authorities. (Federal Agents Only)

5.1.2. Open hazardous material packages (overpacks, outer packagings or other component which are not immediately adjacent to the hazardous materials contained in a package) as authorized in 49 CFR, part 109. (Federal Agents Only)

5.1.3. Determine if the contents of a package or packages are regulated and the circumstances surrounding their transportation in commerce.

5.1.4. Collect all evidence necessary to support or refute a violation of the HMR.

5.1.5. Close and coordinate the disposition of packages opened in accordance with the provision of 49 CFR § 109.5 as specified in § 109.13. (Federal Agents Only)

5.1.6. Determine whether packages offered for transportation as a limited quantity comply with the limited quantity provisions, for the appropriate class of hazardous material.

5.1.7. Confirm that packages offered under the terms of a valid Approval or Special Permit, issued by the Associate Administrator for Hazardous Material Safety, comply with all provisions of the Approval or Special Permit.

5.1.8. Identify hazardous material packagings and packages which are unauthorized in transportation due to:

5.1.8.1. Failure to test, certify, requalify, recondition or re-test the packaging in accordance with the applicable specification, UN standard, Special Permit or Approval issued by the Associate Administrator for Hazardous Material Safety.

5.1.8.2. Failure to close the UN standard package in accordance with closure instructions.

5.1.8.3. Overfilling or underfilling a package so that its effectiveness is substantially reduced.

5.1.8.4. The package leaks under conditions normally incident to transportation.

## **Section 5.2 – Collecting and Analyzing Findings of HM Accidents or Incidents**

5.2.1. Investigate reportable hazardous material accidents or incidents as defined in § 171.15(b) using appropriate investigative or research and analytical methods and techniques.

- 5.2.2. Verify compliance with all pre-transportation functions as defined in § 171.8.
- 5.2.3. Consolidate information from multiple sources.
- 5.2.4. Determine the relevance of information gathered during the course of an inspection or investigation.
- 5.2.5. Resolve discrepancies between conflicting elements of information.
- 5.2.6. Analyze and interpret facts, circumstances and complex technical data obtained during an inspection or investigation to substantiate or refute claims, determine causes, and recommend action where appropriate.
- 5.2.7. Determine the extent of non-compliance with 49 CFR or the applicable international standard present or contributing to a hazardous material accident or incident.
- 5.2.8. Demonstrate an understanding of the rules of evidence and evidentiary sufficiency.
- 5.2.9. Collaborate with federal, state and local government partners to investigate complaints, accidents, or incidents and enhance public safety.

### **Section 5.3 – Analyzing Corrective Actions Following HM Inspections, Accidents or Incidents**

- 5.3.1. Determine what corrective actions, if any, have been implemented following a hazardous material inspection, accident or incident.
- 5.3.2. Analyze corrective actions to determine if they correct violations of 49 CFR, are likely to prevent a recurrence of the noncompliance, and mitigate any ongoing safety risks created as a result of the noncompliance.

### **Section 5.4 – Taking Appropriate Enforcement Action**

- 5.4.1. Prepare comprehensive and well documented reports of investigations or inspections.
- 5.4.2. Review processes and identify deficiencies and enhancements as appropriate.
- 5.4.2. Brief supervisors on the results of inspections or investigations.
- 5.4.3. Recommend enforcement options consistent with the level of non-compliance and risk to the transportation infrastructure.

5.4.4. Provide subject matter expertise to law enforcement organizations conducting criminal investigations into noncompliance of the HMR in accordance with DOT, OA and organizational policy and procedures.

5.4.5. Testify during hearings or judicial proceedings as required.

## **SECTION 6 – COMPETENCIES FOR SUPERVISORY HAZARDOUS MATERIAL INSPECTORS AND INVESTIGATORS:**

Supervisory hazardous material inspectors and investigators are those supervisors who exercise authority over HMI<sup>2</sup> holding any of the competencies in hazardous material transportation inspection and investigation described in Sections 4, 5, 7, 8 or 9 of this document. These supervisors review findings of hazardous material inspections and accident or incident investigations. They evaluate corrective actions, publish findings of hazardous material transportation inspections and investigations and initiate or take appropriate enforcement action. Supervisory HMI<sup>2</sup> have demonstrated proficiency in HMI<sup>2</sup> Core and Advanced Competencies as well as those described within this section.

### **Section 6.1 – Reviewing the findings of HM Transportations Inspections, Compliance Reviews and Investigations**

6.1.1. Determine that reports of HM accidents or incidents are accurate and complete.

6.1.2. Confirm that evidence alleging non-compliance with the HMR or an international standard is legally sufficient and well documented.

6.1.3. Ensure that any mitigating or aggravating factors are supported by documented evidence.

### **Section 6.2 – Evaluating Corrective Action**

6.2.1. Evaluate corrective actions implemented following a hazardous material transportation inspection, investigation, accident or incident to determine:

6.2.1.1. if corrective actions taken mitigate or eliminate the risk to public safety.

6.2.1.2. if corrective actions are likely to prevent a reoccurrence of the non-compliance.

6.2.1.3. if mitigation of proposed sanctions in accordance with established Administration policy or procedures is appropriate.

6.2.1.4. if additional corrective actions are necessary to ensure the safety and security of the transportation system.

6.2.2. Recommend corrective actions as necessary to mitigate ongoing or emerging risks to the safe transportation of hazardous materials in commerce.

### **Section 6.3 – Taking Appropriate Enforcement Action**

6.3.1. Evaluate the extent of non-compliance with the HMR or applicable modal standard.

6.3.2. Consider the gravity of documented noncompliance, the resulting risk to public safety and compliance history of the entities involved.

6.3.2.1. Recommend or take administrative action in accordance with OA policies or procedures as necessary to ensure the public safety.

6.3.2.2. Recommend or issue civil penalties which reflect factors in aggravation or mitigation in accordance with applicable OA or organization guidelines.

6.3.2.3. Prepare enforcement recommendations which correspond to the degree of noncompliance for the appropriate OA or Department officials.

## **SECTION 7 – COMPETENCIES FOR HAZARD CLASS SPECIALISTS:**

### **Section 7.1 – Class 1 (Explosive) Hazardous Material Transportation Specialist**

Explosive hazardous material transportation specialists are hazardous material inspectors and investigators trained to inspect and investigate the transportation in commerce of explosive hazardous materials and their associated requirements as specified in the HMR or applicable international standard. Explosive HM transportation specialists are trained in all Core Competencies and are trained to:

7.1.1. Confirm that all hazard communication requirements unique to Class I hazardous materials have been met in accordance with 49 CFR or the applicable international standard.

7.1.2. Confirm that Class I hazardous materials offered for or transported in commerce have been approved for transportation by the Associate Administrator for Hazardous Material Safety.

7.1.3. Identify Class I hazardous materials forbidden in transportation.

7.1.4. Identify a new explosive as defined 49 CFR, § 173.56.

7.1.5. Confirm that packages containing Class I hazardous materials conform to applicable general packaging requirements specified in 49 CFR or the appropriate international standard.

7.1.6. Confirm that packages containing Class I hazardous materials conform to all specific packaging requirements.

7.1.7. Recognize authorized exceptions to Class I hazardous materials packaging requirements.

7.1.8. Verify compliance by Fireworks Certification Agencies approved by the Associate Administrator for Hazardous Material Safety to examine fireworks in accordance with 49 CFR, part 173.

## **Section 7.2 – Class 7 (Radioactive) Hazardous Material Transportation Specialist**

Radioactive hazardous material transportation specialists are hazardous material inspectors and investigators trained to inspect, evaluate and investigate the operations of persons who offer or transport in commerce packages containing radioactive hazardous materials in accordance with the HMR, the International Atomic Energy Agency (IAEA) regulations or an applicable international standard. These specialists also evaluate radioactive hazardous material packagings to determine if they are authorized packagings for transportation of Class 7 hazardous materials in commerce. Radioactive HM transportation specialists are trained in all Core Competencies and are trained to:

7.2.1. Interpret and apply Table 2 to Appendix A of the Hazardous Material Table.

7.2.2. Confirm compliance with 49 CFR, part 173, subpart I, pertaining to general requirements for shipments, packagings and packages of Class 7 (Radioactive) hazardous materials.

7.2.3. Verify compliance with 49 CFR, part 174, subpart K pertaining to the requirements relating to the carriage of Class 7 HM by rail.

7.2.4. Verify compliance with 49 CFR, part 175, §§175.700 - 706 and the ICAO Technical Instructions for the Transport of Dangerous Goods by Air, pertaining to the requirements relating to the carriage of Class 7 HM by aircraft.

7.2.5. Verify compliance with 49 CFR, part 176, subpart M and the International Maritime Dangerous Goods Code pertaining to the requirements relating to the carriage of Class 7 HM by vessel.

7.2.6. Verify compliance with 49 CFR, part 177, §177.842 pertaining to the requirements relating to the carriage of Class 7 HM by public highway.

## **SECTION 8 – COMPETENCIES FOR HAZARDOUS MATERIAL PACKAGING SPECIALISTS:**

### **Section 8.1 – Broad-Spectrum Packaging Specialist**

A broad-spectrum packaging specialist is a hazardous material transportation inspector or investigator who has been trained to conduct inspections or investigations of non-bulk packagings, intermediate bulk containers, large packagings and flexible bulk containers used in hazardous material transportation. This packaging specialist inspects and investigates persons who: offer, manufacture, fabricate, test, certify, retest, recondition, requalify, repair, mark, maintain, distribute or sell non-bulk, intermediate bulk, flexible bulk or large packagings and packages as a part of their regular duties in order to verify compliance with the HMR. Broad-Spectrum packaging specialists are trained in all Core Competencies and are trained to:

8.1.1. Examine inner packaging(s) or packaging components as necessary to determine whether the package is an authorized package and identify unauthorized variations.

8.1.2. Verify that shippers have performed all functions necessary to bring packages containing hazardous material into compliance with 49 CFR parts 173 and 178 or the appropriate international standard.

8.1.3. Verify that persons who represent, mark, certify, sell, or offer cylinders or non-bulk packages as meeting the requirements of the HMR or an international standard, transfer and retain copies of the manufacturer's notification, including closure instructions as required, unless the instructions are permanently embossed or printed on the package.

8.1.4. Confirm that non-bulk DOT Specification or UN performance oriented packagings, intermediate bulk containers, large packagings or flexible bulk containers marked as meeting the requirements of 49 CFR or an international standard have been manufactured, fabricated, tested, marked, maintained, reconditioned, repaired, or retested in accordance with the requirements of the applicable standard or specification to include authorized variations.

8.1.5. Confirm that records of non-bulk packaging, intermediate bulk container, large packaging or flexible bulk container manufacture and testing are complete, accurate and retained as required.

8.1.6. Verify that Independent Inspection Agencies (IIAs) and UN Third-Party Packaging Certification Agencies conduct regulated activities in accordance with the HMR.

## **Section 8.2 – Portable Tank Specialist**

A Portable Tank Specialist is a hazardous material transportation inspector or investigator who has been trained to conduct inspections or investigations of persons who perform functions subject to the HMR involving Portable Tanks or Multi Element Gas Containers (MEGC) and MEGC Certification Agencies. Portable Tank Specialists are trained in all Core Competencies and are trained to:

8.2.1. Verify that persons who offer bulk hazardous material packages for transportation in commerce retain copies of the manufacturer's notification, including closure instructions as required, unless the instructions are permanently embossed or printed on the package.

8.2.2. Confirm that portable tanks marked as meeting the requirements of 49 CFR, subpart H or an international standard for use in hazardous material service have been manufactured, fabricated, tested, marked, maintained, repaired, or retested in accordance with the requirements of the applicable standard or specification to include authorized variations.

8.2.3. Confirm that records of portable tank testing are complete, accurate and retained as specified in 49 CFR or the applicable international standard.

8.2.4. Verify compliance by portable tank or MEGC certification agencies for periodic testing, inspection and repair of portable tanks in accordance with § 180.605(k) and the approval of MEGC's in accordance with § 178.74.

## **Section 8.3 – Cargo Tank Specialist**

A cargo tank specialist is a hazardous material transportation inspector or investigator who has been trained to conduct inspections or investigations of persons who perform functions subject to the HMR involving the fabrication, manufacture, test, inspection, repair, certification and use of cargo tanks and cargo tank motor vehicles as a part of their regular duties. Cargo tank specialists are trained in all Core Competencies and are trained in accordance with Federal Motor Carrier Safety Administration (FMCSA) policy and procedures to:

8.3.1. Confirm that a person who has engaged in the manufacture, assembly, certification, inspection, repair or operation of a cargo tank or cargo tank motor vehicle under the terms of a DOT specification or special permit issued by the DOT is registered with the DOT.

8.3.2. Verify that persons who offer bulk packages retain copies of the manufacturer's notification, including closure instructions as required, unless the instructions are permanently embossed or printed on the package.

8.3.3. Verify that cargo tanks marked as meeting the requirements of 49 CFR for use in hazardous material service have been manufactured, fabricated, tested, inspected, marked, maintained, repaired, or retested in accordance with the requirements of the applicable standard or specification to include authorized variations as prescribed in 49 CFR, part 178, subpart J or part 180, subpart E.

8.3.4. Verify that persons engaged in the continuing qualification and maintenance of cargo tanks and cargo tank motor vehicles adhere to the requirements set forth in 49 CFR, part 180, subpart E.

8.3.5. Confirm that records of required cargo tank data reports, testing, inspection and certificates are complete, accurate and retained as required in 49 CFR, parts 178 and 180.

#### **Section 8.4 – Tank Car Specialist**

A Tank Car Specialist is a hazardous material transportation inspector or investigator who, as a part of their regular duties, conducts inspections or investigations of specification tank cars or tank car owner, manufacturer or repair facilities in accordance with the policies and procedures established by the Federal Railroad Administration (FRA). HMI<sup>2</sup> considered to be Tank Car specialist have been trained in accordance with the FRA's Office of Railroad Safety's *Hazardous Material Compliance Manual* to determine the rail worthiness of tank cars. Tank car specialists are trained in all Core Competencies and are trained to:

8.4.1. Confirm that tank cars marked as meeting the requirements of the HMR for use in hazardous material service have been manufactured, fabricated, marked, maintained, repaired, or retested in accordance with the requirements of the applicable standard or specification to include authorized variations as specified in 49 CFR, part 179.

8.4.2. Verify that each tank car facility that manufactures, repairs, inspects, tests, qualifies or maintains tank cars subject to requirements of 49 CFR operates in conformance with a quality assurance program and written procedures required by 49 CFR, §179.7.

8.4.3. Confirm that records of tank car manufacture, repair and testing are complete, accurate and maintained as specified in 49 CFR, part 179.

8.4.4. Verify that hazardous material shipments made under the terms of an FRA approval comply with all of the terms of the approval.

8.4.5. Confirm compliance with FRA Rail Worthiness Directives and One-Time Movement Approvals or Emergency Order issued by the FRA.

8.4.6. Verify compliance with the Association of American Railroads, Appendix W.

## **SECTION 9 – COMPETENCIES FOR MODAL HAZARDOUS MATERIAL SPECIALISTS:**

### **Section 9.1 – Air HM Transportation Specialist**

An aviation hazardous material transportation specialist is an inspector or investigator who has been trained to verify compliance with the provisions of 49 CFR, part 175 and the International Civil Aviation Organization's (ICAO) Technical Instructions (TI) for the Transportation of Dangerous Goods by Air. Air HM transportation specialists are trained in all Core Competencies and are trained to:

- 9.1.1. Verify that the preparation and retention shipping documents conform to the requirements specific to air transportation as specified in 49 CFR or the ICAO TI when authorized.
- 9.1.2. Confirm that hazardous material package markings conform to the requirements specific to air transportation as specified in 49 CFR or ICAO TI when authorized.
- 9.1.3. Confirm that hazardous material package labeling conforms to the requirements specific to air transportation as specified in 49 CFR or ICAO TI when authorized.
- 9.1.4. Verify that freight container and unit load device placarding / tagging confirms to the requirements specific to air transportation as specified in 49 CFR or the ICAO TI.
- 9.1.5. Verify that each carrier who transports or accepts for transportation by aircraft a hazardous material, for which a shipping paper is required, instructs the operator of the aircraft to contact the carrier (e.g., by telephone or mobile radio) in the event of an incident involving the hazardous material .
- 9.1.6. Confirm that packages containing hazardous material are packagings authorized in 49 CFR, conform to the requirements of § 173.27 or the ICAO TI when authorized.
- 9.1.7. Confirm that the offering acceptance, and transport of hazardous materials is consistent with the general requirements and exceptions unique to carriage by aircraft as specified in 49 CFR, part 175, subpart A.
- 9.1.8. Determine if loading, stowage, segregation, unloading and handling of hazardous materials intended for transportation by aircraft is consistent with the requirements of 49 CFR, part 175, subpart B.
- 9.1.9. Verify that loading and transport of specific classes of hazardous materials is consistent with the requirements specified in 49 CFR, part 175, subpart C.

### **Section 9.2 – Highway HM Transportation Specialist**

A highway HM transportation specialist is an inspector or investigator trained in the requirements of the HMR applicable to the acceptance and transportation of hazardous materials by private, common, or contract carriers by motor vehicle. Highway HM transportation specialists comply with Federal Motor Carrier Safety Administration (FMCSA) policy and are trained in all Core Competencies. A highway HM transportation specialist is trained to:

- 9.2.1. Confirm that each motor carrier required to register with the DOT carries a current Certificate of Registration or U.S. DOT Hazmat Reg. No. on board each truck or truck tractor.
- 9.2.2. Verify that shipping documents conform to the provisions of the applicable international standard when authorized.
- 9.2.3. Confirm that hazardous material package markings conform to the applicable international standard when authorized.
- 9.2.4. Confirm that hazardous material package labeling conforms to the applicable international standard when authorized.
- 9.2.5. Verify that hazardous material placarding conforms to the applicable international standard when authorized.
- 9.2.6. Ensure that each carrier who transports or accepts for transportation a hazardous material, for which a shipping paper is required, instructs the operator of the motor vehicle to contact the carrier (e.g., by telephone or mobile radio) in the event of an incident involving the hazardous material.
- 9.2.7. Confirm that packages containing hazardous material are packagings authorized in the appropriate international standard when authorized.
- 9.2.8. Verify that the regulations regarding the carriage of hazardous material by public highway and detailed in 49 CFR, part 177, subpart A have been met.
- 9.2.9. Verify that hazardous material loading and unloading is in compliance with 49 CFR, part 177, subpart B.
- 9.2.10. Confirm that during transportation by public highway hazardous materials segregation and separation is as specified in 49 CFR, part 177, subpart C.
- 9.2.11. Verify that operators of commercial motor vehicles are properly licensed as specified in 49 CFR, part 383 and hold the appropriate hazardous material and/or tank endorsements when needed.

9.2.12. Ensure that motor carriers transporting hazardous materials in commerce are in compliance with the hazardous materials safety permit requirements specified in 49 CFR, part 385, subpart E.

9.2.13. Confirm that persons transporting hazardous materials are in compliance with 49 CFR, parts 392 and 397 regarding the driving and parking of motor vehicles.

9.2.14. Confirm that stowage and segregation requirements of 49 CFR, and applicable to highway transportation have been met.

9.2.15. Confirm minimum levels of public liability insurance are met pursuant to 49 CFR, part 387.

### **Section 9.3 – Maritime HM Transportation Specialist**

A maritime HM transportation specialist is an inspector or investigator trained in the requirements of the HMR applicable to the acceptance and transportation of hazardous materials by vessel and the International Maritime Dangerous Goods Code (IMDG). Maritime HM transportation specialists are trained in all Core Competencies and are trained to:

9.3.1. Verify that shipping documents conform to the provisions of the applicable international standard when authorized.

9.3.2. Confirm that hazardous material package markings conform to the applicable international standard when authorized.

9.3.3. Ensure that hazardous material package labeling conforms to the applicable international standard when authorized.

9.3.4. Verify that hazardous material placarding conforms to the applicable international standard when authorized.

9.3.5. Verify that each carrier who transports or accepts for transportation by vessel a hazardous material, for which a shipping paper is required, instructs the operator of the vessel to contact the carrier (e.g., by telephone or mobile radio) in the event of an incident involving the hazardous material.

9.3.6. Confirm that packages containing hazardous material are packaged authorized in 49 CFR or the appropriate international standard when authorized.

9.3.7. Confirm that all stowage and segregation requirements applicable to maritime transportation have been met.

## Section 9.4 – Rail HM Transportation Specialist

A rail HM transportation specialist is an inspector or investigator trained in the requirements of the HMR applicable to the acceptance and transportation of hazardous materials by rail and has been trained in accordance with the FRA's Office of Railroad Safety's *Hazardous Material Compliance Manual*. Rail HM transportation specialists are trained in all Core Competencies and are trained to:

- 9.4.1. Verify that shipping documents conform to the provisions of the applicable international standard when authorized.
- 9.4.2. Confirm that hazardous material package markings conform to the applicable international standard when authorized.
- 9.4.3. Ensure that hazardous material package labeling conforms to the applicable international standard when authorized.
- 9.4.4. Verify that hazardous material placarding conforms to the applicable international standard when authorized.
- 9.4.5. Ensure that each carrier who transports or accepts for transportation by rail a hazardous material, for which a shipping paper is required, has instructed the operator of the train to contact the carrier (e.g., by telephone or mobile radio) in the event of an incident involving the hazardous material.
- 9.4.6. Determine if carriers responsible for transport vehicles which contain hazardous material for which a shipping paper is required and are separated from their motive power and are parked at a location other than a facility operated by the consignor or consignee have complied with § 172.606(b).
- 9.4.7. Ensure that transportation security plans meet the requirements of § 172.820 for transportation by rail.
- 9.4.8. Determine if all general requirements unique to carriage by rail and specified in 49 CFR, part 174, subpart A have been met.
- 9.4.9. Confirm that shipping papers, the notice to train crews and actions relating to leaking packages are in accordance with 49 CFR, part 174, subpart B.
- 9.4.10. Verify that all "General Handling and Loading Requirements" of 49 CFR, part 174, subpart C have been met.

9.4.11. Confirm that the handling of placarded rail cars, freight containers and transport vehicles are in accordance with 49 CFR, part 174, subpart D when carriage is by rail.

9.4.12. Specific requirements for hazardous materials in Classes I, 2, 3, 7 and Division 6.1 are as specified in 49 CFR, part 174, subparts E-K.

9.4.13. Confirm that stowage and segregation requirements applicable to rail transportation have been met.

**SECTION 10 – AVAILABILITY:**

The standards established in this document are available to Federal, State, and local hazardous material transportation safety and enforcement personnel through the PHMSA web site <http://phmsa.dot.gov/hazmat> . They may be obtained through:

U.S. Department of Transportation / PHMSA/ Field Operations,  
Attn: National Field Training Officer (E24-433)  
1200 New Jersey Ave S.E,  
Washington, DC 20590  
(202) 366-4700