

# **Hazardous Materials Compliance Manual**

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**Office of Railroad Safety**



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**Federal Railroad Administration**

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## Chapter 1 – About This Manual

The goal of the Federal Railroad Administration's (FRA) hazardous materials (HM, also referred to as hazmat) safety program is to minimize, and where possible eliminate, the risks inherent to the transportation of HM by rail. Achievement of this goal requires identifying and managing risk in order to protect the public and ensure the continuing economic viability of the Nation. This goal is accomplished through a variety of compliance tools including education, inspections, audits, and enforcement. The goal is the direct responsibility of the field and headquarters staff of FRA's Office of Railroad Safety (RRS) HM Division and the Office of Chief Counsel's (RCC) Safety Law Division.

This discipline-specific manual provides guidance for Federal and State HM inspectors regarding inspection and investigative activities when evaluating regulated entities' compliance with Federal laws and regulations pertaining to the transportation of HM. The information in this manual is intended to provide internal guidance, and does not provide any basis for a private party to challenge FRA's exercise of enforcement discretion in a particular case. The guidance provided in this manual may be revoked or modified without prior notice at any time by FRA. This manual supersedes all previous hazardous materials enforcement and/or compliance manuals.

Specialists and inspectors should use this manual as an aid in understanding their role and responsibilities in the implementation of the HM safety program. Inspectors' good judgement and sound strategies in reviewing the regulated industry will enable a successful and effective FRA HM safety program in achieving regulatory compliance. In carrying out their responsibilities, inspectors have considerable discretion. This manual should be used to guide inspectors on how to exercise that discretion. If the manual does not provide adequate guidance for a particular situation or factual scenario, or if there is any doubt as to the meaning of any of the information provided in this manual, inspectors should seek assistance from their respective regional supervisory specialist, or if there regional supervisory specialist is unavailable then contact the appropriate RRS headquarters HM staff, or RCC if assistance has not been provided by the regional or headquarters staff.

This manual is a complement to RRS' General Manual (General Manual). The General Manual provides detailed information regarding FRA's overall operations, history, and statutory authority; rulemaking process; and inspection and investigation procedures. Both manuals are specifically intended for use by HM safety inspectors and technical specialists throughout the country who monitor compliance with Federal law and safety regulations that apply to the transportation of HM by rail. Using both this discipline-specific manual and the General Manual will aid FRA inspectors in the uniform application and enforcement of the Federal HM transportation safety laws and implementing regulations, including laws and regulations affecting the security of HM in transportation.

## 1.1 Introduction

Within the U.S. Department of Transportation (DOT), implementation of the Federal HM transportation safety laws is coordinated through the Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA is the DOT operating administration responsible for promulgating regulations implementing Federal HM transportation laws. Each of the modes (rail, water,<sup>1</sup> highway, and air) is delegated responsibility to enforce DOT regulations within its area of expertise and familiarity.<sup>2</sup> Under the guidance of PHMSA, groups spanning all of DOT's modes work to achieve consistency, equity, and fairness in these enforcement activities with the goal of improved safety in the transportation of dangerous commodities, regardless of how they move.

The policies, directives, procedures, and guidelines contained in this manual are designed to ensure effective use of available resources. This manual will aid inspectors in the application and enforcement of Federal HM laws and implementing regulations. This uniformity is necessary for effective program management and execution.

Inspectors should refer to this manual as often as necessary to obtain a clear understanding of their role in carrying out FRA's mission. Inspectors are encouraged to review this manual thoroughly, and promptly report any errors or unclear statements to their supervisor and the Staff Director, HM Division. This manual is the property of FRA and is intended for use by FRA and participating State HM personnel only. Comments and suggestions for future changes and additions to this manual are invited and should be forwarded to the Staff Director, HM Division, through the relevant regional specialist.

In this manual, the rules of language construction established in the Hazardous Materials Regulations (HMR) at 49 C.F.R. § 171.9, *Rules of construction*, apply unless otherwise indicated.

## 1.2 Comments from Interested Persons

As required by the Freedom of Information Act (5 U.S.C. § 552), this manual is available for public review. Interested persons are invited to submit constructive comments regarding the content of this manual and to make recommendations regarding any material they believe should be added.

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<sup>1</sup> The U.S. Coast Guard, under the U.S. Department of Homeland Security, has the authority to enforce the HM transportation laws and regulations pertaining to water transportation.

<sup>2</sup> See the Memorandum of Understanding (MOU) in Appendix B for inspection procedures between modes.



### **1.3 Updating the Manual**

As changes, revisions, or deletions occur in the manual, revised pages will be sent to FRA HM enforcement personnel, along with a notice identifying and describing the revisions being made.

The page numbers of this manual are identified at the bottom of each page. At appropriate intervals, a checklist of revised pages will be issued to show each page number that has been changed and the effective date of that change. When a checklist is received, manual holders should replace the affected pages in their manual and file the checklist at the front of the manual.

## Chapter 2 – Basis for Regulation Inspection

### 2.1 Statutory Authority

The Federal HM transportation law<sup>3</sup> directs the U.S. Secretary of Transportation (Secretary) to issue regulations “for the safe transportation, including security, of hazardous material in ... commerce.”<sup>4</sup> The Law specifically provides that such regulations apply to persons who:

1. Transport HM in commerce.
2. Cause HM to be transported in commerce.
3. Design, manufacture, fabricate, inspect, mark, maintain, recondition, repair, or test a package, container, or packaging component that is represented, marked, certified, or sold as qualified for use in transporting HM in commerce.
4. Prepare or accept HM for transportation in commerce.
5. Are responsible for the safety of transporting HM in commerce.
6. Certify compliance with any requirement of Federal HM transportation law (or its implementing regulations).<sup>5</sup>

The law further provides that such regulations govern all “safety aspects, including security, of the transportation of hazardous material the Secretary considers appropriate.”<sup>6</sup>

### 2.2 Scope of Regulatory Authority

The HMR are found in 49 C.F.R. Parts 171–180. A central premise of the HMR is that the offering for transportation, acceptance for transportation, or transportation of a hazardous material is prohibited unless certain standards are met.<sup>7</sup> A hazardous material shipment that is not prepared in accordance with the requirements of the HMR may not be offered for transportation, or transported by air, highway, railroad, or water. As such, the HMR impose regulatory requirements on persons who (1) perform functions in advance of transportation to prepare HM for transportation (“pre-transportation functions”); (2) perform “transportation” (i.e.,

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<sup>3</sup> In this manual, “Federal hazardous materials transportation law” (Federal HM law) or “Law” refers to the basic statute regulating hazardous materials transportation in the United States, codified at 49 U.S.C. § 5101 *et seq.*

<sup>4</sup> 49 U.S.C. § 5103(b)(1).

<sup>5</sup> 49 U.S.C. § 5103(b)(1)(A). “Commerce” means trade or transportation in the jurisdiction of the United States or that affects trade or transportation in the United States. 49 U.S.C. § 5102(1).

<sup>6</sup> 49 U.S.C. § 5103(b)(1)(B).

<sup>7</sup> See 49 C.F.R. § 171.2.

movement and incidental loading, unloading, and storage functions); or (3) design, manufacture, inspect, or maintain packages that are represented or sold as qualified for use in the transportation of HM in commerce. Functions that are not “pre-transportation functions” or “transportation functions,” and otherwise not subject to the HMR’s packaging requirements, are generally not regulated by the HMR (e.g., storage of a package containing HM at a shipper’s facility prior to the package being offered for transportation, unloading HM from a packaging following the delivery of the HM to their destination, or storage of a railcar containing HM on private track).<sup>8</sup>

### 2.2.1 Pre-transportation Functions

“Pre-transportation functions” are activities necessary to assure the safe transportation of the HM and are required to be performed prior to the transportation of any HM in commerce. Pre-transportation functions include, but are not limited to:

1. Determining the hazard class of HM.
2. Selecting HM packaging.
3. Filling HM packaging.
4. Securing a closures on HM packaging.
5. Marking, labeling, or placarding a package to indicate that it contains HM.
6. Preparing a shipping paper.
7. Certifying a shipment as safe for transportation and in compliance with the HMR.
8. Providing and maintaining emergency response information.
9. Loading, blocking and bracing a HM package in a freight container or other conveyance.
10. Segregating a HM package from incompatible cargo.<sup>9</sup>

Pre-transportation functions must be performed in accordance with the requirements of the HMR and any person who performs a pre-transportation function (i.e., an offeror function) related to a hazmat shipment is considered a “person who offers.” An “offeror” is: (1) a person who performs, or is responsible for performing, any pre-transportation function required by the HMR, or (2) tenders or makes hazmat available to a carrier for transportation in commerce. Carriers who perform functions required by the HMR as a condition of acceptance of hazmat for transportation in commerce or who transfer hazmat to another carrier for continued transportation in commerce without performing a pre-transportation function, are specifically

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<sup>8</sup> 49 C.F.R. § 171.1(c)–(d).

<sup>9</sup> 49 C.F.R. § 171.8.

excluded from the definition of offeror.<sup>10</sup> Accordingly, they are responsible for performing that function in accordance with the HMR.<sup>11</sup>

## 2.2.2 Transportation Functions

The HMR define “transportation” generally as the “movement of property and loading, unloading, or storage incidental to that movement.”<sup>12</sup> The HMR provide that transportation in commerce begins when a carrier takes physical possession of HM for the purpose of transporting it, and continues until the HM are delivered to the destination indicated on a shipping paper.<sup>13</sup> One exception to this general rule applies to rail transportation. Specifically, a railcar transporting HM is considered “in transportation” for purposes of the HMR until it is delivered to a “private track or siding<sup>14</sup>.” This is true, even if the railcar is delivered to its final destination indicated on its shipping paper. When a railcar containing HM is “in transportation” and subject to the requirements of the HMR.

For the purpose of the HMR, a “carrier” is a person who transports passengers or property in commerce by railcar, aircraft, motor vehicle, or vessel.<sup>15</sup> Common, contract, and private carriers are specifically included in this definition. FRA’s jurisdictional reach is as broad under the HMR as it is under the other railroad safety statutes.<sup>16</sup>

## 2.2.3 Other Regulated Functions and Standards

The HMR contain standards applicable to packages in which HM is transported (e.g., 49 C.F.R. Part 178, Specifications for Packagings; Part 179, Specifications for Tank Cars; and Part 180, Continuing Qualification and Maintenance of Packagings).

The HMR require persons who directly affect HM transportation safety (referred to as “hazmat employees”) to be trained in the requirements of the HMR. It is the responsibility of persons employing individuals preparing HM for transportation or transporting HM to ensure that those individuals are properly trained in accordance with the HMR.<sup>17</sup>

The HMR also contain requirements aimed at ensuring the security of HM in transportation (e.g., 49 CFR Part 172, Subpart I, Safety and Security Plans). Sections 172.800–172.802 require certain offerors and carriers of HM to develop and maintain safety and security plans addressing, at a minimum, personnel security, unauthorized access, and en route security of HM in

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<sup>10</sup> 49 C.F.R. § 171.8 (defining “person who offers” or “offeror”).

<sup>11</sup> 49 C.F.R. § 171.2(a).

<sup>12</sup> 49 C.F.R. § 171.8; 49 U.S.C. § 5102(13). See also 49 C.F.R. § 171.8 for definitions of “storage incidental to movement” and “unloading incidental to movement.”

<sup>13</sup> 49 C.F.R. § 171.1(c).

<sup>14</sup> See 49 C.F.R. § 171.8 for definition of “private track” or “private siding.”

<sup>15</sup> 49 C.F.R. § 171.8.

<sup>16</sup> In *CSX Transportation, Inc. v. Public Utilities Commission of Ohio*, 901 F.2d 497 (6th Cir. 1990), *cert. denied*, 498 U.S. 1066 (1991), the court said that, when enforced against a railroad, the Federal hazardous materials transportation law is one of the Federal railroad safety laws.

<sup>17</sup> See 49 C.F.R. § 171.8 for definition of “hazmat employee” and “hazmat employer” and 172.700–172.704 for specific training requirements.

transportation. Section 172.820, *Additional planning requirements for transportation by rail* requires carriers of certain “security sensitive materials” and high-hazard flammable trains made up of at least 20 cars of a Class 3 flammable liquid, to annually review the safety and security risks of the routes over which the carriers transport the materials and choose the routes that pose the least overall safety and security risks for such transportation. RRS headquarters staff is responsible for review of the route analysis and any enforcement action in most cases.

#### **2.2.4 Structure of the HMR**

FRA’s HM rail safety program is primarily responsible for monitoring compliance with the following parts of the HMR:

Part 171 – General Information, Regulations, and Definitions

Part 172 – Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, Training Requirements, and Security Plans

Part 173 – Shippers—General Requirements for Shipments and Packagings

Part 174 – Carriage by Rail

Part 178 – Specifications for Packagings

Part 179 – Specifications for Tank Cars

Part 180 – Continuing Qualification and Maintenance of Packagings

### **2.3 Inspection Authority**

The Federal HM transportation law provides the authority for the Secretary to inspect facilities and records related to HM transportation. Specifically, 49 U.S.C. § 5121 provides designated agents of the Secretary (including FRA and certified State HM inspectors) the authority to “inspect and investigate, at a reasonable time and in a reasonable manner, records and property relating” to the regulated HM functions described in Section 2.1 of this manual.<sup>18</sup>

The Secretary has delegated enforcement authority under the Federal HM transportation law to the modal administrations. Specifically, the FRA Administrator is delegated the authority to:

carry out the functions vested in the Secretary by 49 U.S.C. 5121(a), (b), (c) and (d), 5122, 5123, and 5124, with particular emphasis on the transportation or shipment of hazardous materials by railroad.<sup>19</sup>

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<sup>18</sup> 49 U.S.C. § 5121(a).

<sup>19</sup> 49 C.F.R. § 1.49(s). 49 U.S.C. § 5122 authorizes the Secretary to seek enforcement action in court through the U.S. Attorney General in certain circumstances; § 5123 authorizes the Secretary to assess civil penalties for certain

Accordingly, FRA has the authority to enter the property of railroads, offerors, and other entities performing functions subject to the HMR for the purpose of inspecting and monitoring compliance with the HMR, an authority supplemented by the power to subpoena persons and documents and to hold hearings and conduct investigations.<sup>20</sup>

Offerors are authorized to introduce HM into transportation only in compliance with the Federal HM law and its implementing regulations. Therefore, FRA has an obligation to investigate possible violations at points where shipments originate and to monitor compliance on a regular basis. The legal standard is clear: by engaging in the shipment of dangerous commodities, companies (and individuals) constructively accept the necessity of proper unannounced inspections.<sup>21</sup>

In order to ensure that all HM shipments are designated as such and comply with all applicable statutes and regulations, DOT has interpreted the statutory authority to inspect to include (1) HM shipments and HM shipping documentation and (2) undeclared HM shipments and associated documentation. The Hazardous Materials Transportation Safety and Security Reauthorization Act of 2005 revised 49 U.S.C. § 5121 to authorize agents of the Secretary to: (1) open packages to identify undeclared or noncompliant HM shipments; (2) inspect and temporarily detain suspicious packages; and (3) issue emergency orders (e.g., restrictions, prohibitions, and out-of-service orders) to address unsafe conditions or practices. These requirements were codified in two final rules on March 2, 2011 (76 Fed. Reg. 11570) and October 2, 2013 (78 Fed. Reg. 60755). A joint operations manual for 49 C.F.R. Part 109 was developed with the input of all modal agencies, and is available on PHMSA's website at: <http://www.phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/Joint%20Operations%20Manual.pdf>.

### 2.3.1 Summary

FRA inspectors are authorized to inspect railroad, offeror, or other facilities and all pertinent documents whenever doing so would reasonably be expected to serve the purpose of ascertaining or encouraging compliance with the HMR. Neither a warrant nor any other prior approval is necessary. FRA personnel should be courteous, inspect in a manner to disrupt the facility's business as little as possible, and display credentials when asked.

Simply stated any person affecting the transportation of a hazardous material in commerce is subject to inspection and may be cited for a noncomplying condition under the Federal HM transportation law or the HMR.<sup>22</sup> Moreover, any activity affecting the transportation of a HM in

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violations of the Federal HM transportation law and/or HMR; and § 5124 provides for criminal penalties for certain violations committed willfully or recklessly.

<sup>20</sup> See 49 U.S.C. § 5121(a) (detailing FRA's general administrative authority to investigate, issue subpoenas, and hold hearings).

<sup>21</sup> See *United States v. Biswell*, 406 U.S. 311 (1972), *United States v. V-1 Oil Co.*, 63 F.3d 909, (9<sup>th</sup> Cir. 1995), *cert. denied*, 517 U.S. 1208 (1996).

<sup>22</sup> For example, shippers, shippers' agents, consignees, brokers, freight forwarders, contractors, and unloaders may be cited.

commerce is subject to investigation and inspection to determine compliance with the Federal HM transportation law and the HMR.<sup>23</sup>

## **2.4 Coordination with DOT Modal Administrations and Other Federal Agencies**

In 2012, the Federal Aviation Administration (FAA), Federal Motor Carrier Safety Administration (FMCSA), FRA and PHMSA signed the Interagency Memorandum of Agreement (MOA) on Cross-Modal Hazardous Materials Inspection and Enforcement. The purpose of the MOA is to establish specific coordination guidelines for the Department's Operating Administrations (OA) with hazmat civil enforcement authority. The document outlines each OA's specific responsibilities with a focus on increasing efficiency of the Department's hazmat inspection and enforcement programs. Further, the MOA is intended to define and separate enforcement activities for the various modes of transportation. The MOA should serve as guidance for inspectors and other FRA technical representatives when interacting with DOT's other operating administrations during inspection and enforcement activities. In addition, DOT and the U.S. Coast Guard have entered into a MOU providing guidelines for coordination between the two agencies.

## **2.5 Hazardous Materials Regulatory Development**

The HMR are promulgated by PHMSA in cooperation with representatives of DOT operating administrations (FAA, FRA, FMCSA) and the U.S. Coast Guard (U.S. Department of Homeland Security) under the authority of 49 U.S.C. § 5103. FRA staff, responsible for managing the development of recent railroad regulations, engages PHMSA to ensure modal consistency in the final regulations.

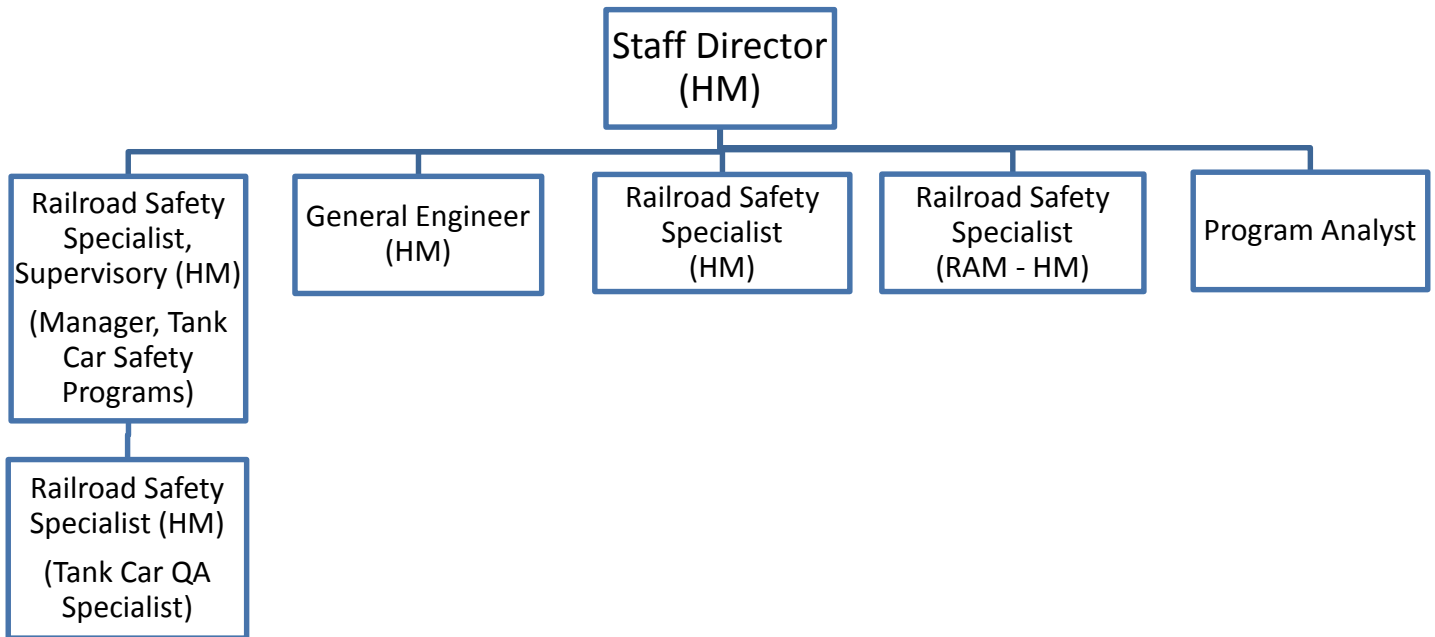
PHMSA, with input from the affected modal administration(s), makes a final determination on all applications for HMR Special Permits (SP). PHMSA's rulemaking procedures are set forth at 49 C.F.R. Part 106. FRA's headquarters HM Division staff provide technical, chemical, engineering, and operating expertise to PHMSA. The staff work with RCC to communicate FRA's advice and concerns related to the transportation of hazardous material by rail. Inspectors are encouraged to make suggestions for additions or amendments to the HMR to improve safety. Inspectors should submit their suggestions to the relevant regional specialist for forwarding to the Staff Director, HM Division.

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<sup>23</sup> For example, FRA and State inspectors may investigate and inspect loading activities, certification, documentation, handling of HM shipments, unloading, and placarding.

## Chapter 3 – Roles and Responsibilities

### 3.0 Organization



### 3.1 Responsibilities of Hazardous Materials Division Personnel

#### 3.1.1 Staff Director

- Provides overall policy guidance.
- Provides evaluation, direction, and technical advice for rail safety programs for FRA and State safety programs.
- Coordinates programs with the FMCSA, FAA, PHMSA, U.S. Coast Guard, and other concerned agencies and organizations.
- Administers the Safety Compliance Oversight Plan (SCOP) for transportation of spent nuclear fuel safety programs.
- Ensures timely response to correspondence external to DOT that is addressed to DOT and/or FRA.
- Assigns priorities to maximize the efficient use of resources.
- Supervises HQ HM Staff.



### **3.1.2 Railroad Safety Specialist, Supervisory (HM) – Manager, Tank Car Safety Programs**

- Provides evaluation, direction, and technical advice for railroad tank cars safety programs for FRA.
- Advance the progress of quality assurance in the tank car Manufacturing and repair industry.
- Analyze proposals for alternative inspection intervals and/or procedures under 49 C.F.R. § 180.509(k).
- Provide expert assistance to regulatory development projects dealing with tank car design, qualification and tank car facility regulations.
- Assist RCC with HM-related enforcement issues when requested (e.g., evaluating violation reports, providing technical assistance at claims conferences and in court proceedings).
- Serve as a resource for the field force regarding tank cars and tank car facility quality assurance.
- Represents FRA at industry meetings as tank car and tank car facility subject matter expert. And provides oversight of the AAR Tank Car Committee.
- Assist with the development and execution of FRA HM training programs as needed.
- Supervises HQ Tank Car Quality Assurance Specialist.

### **3.1.3 Railroad Safety Specialist (HM) – Tank Car Quality Assurance Specialist**

- Advance the progress of quality assurance in the tank car manufacturing and repair industry.
- Performs tank car facility compliance audits.
- Conducts investigations of tank cars involved with OTMA defects and in service failures.
- Provide FRA training assistance as tank car and tank car facility subject matter expert as needed.
- Represents FRA at AAR Tank Car Committee and task force meetings as subject matter expert in the area of tank car design, maintenance and facility quality assurance.

- Serve as a resource for the field force regarding tank cars and tank car facility quality assurance.
- Leads tank car damage assessments teams at time of major derailments involving multiple tank cars.

#### **3.1.4 General Engineer (HM)**

- Collect and analyze data on releases of HM during rail transportation.
- Identifies research needs and provides technical expertise to RRD and recommends changes to improve HM rules, regulations and procedures to ensure effectiveness of tank car safety with emphasis on tank car design, manufacturing, maintenance and quality assurance.
- Serve as a resource for industry and field forces regarding the use and application of current and potential nondestructive testing methods and techniques including leak, liquid penetrant, magnetic particle, radiographic, ultrasonic, thermographic and visual for use on tank cars and components.
- Analyze proposals for alternative inspection intervals and/or procedures under 49 C.F.R. § 180.509(k) using FRA field inspection and accident reports, along with carrier and manufacturer reports, to determine the effectiveness of FRA tank car safety programs and enforcement activities.
- Apply quality assurance principles to situations involving the design, manufacturing, and repair of specification containers, including accident/incident investigations, to determine root cause of a tank car or component defect or failure and recommend necessary steps to prevent recurrence.
- Analyze requests for SPs, coordinate with regional HM personnel, as appropriate, and advise PHMSA of FRA's findings.
- Serve as a resource for the industry and field forces regarding design, manufacture, maintenance, qualification and quality assurance of tank cars.
- Instructs FRA HM personnel in matters of specification packaging and tank car design to foster the effectiveness of the FRA Tank Car Safety program.

#### **3.1.5 Railroad Safety Specialist (HM)**

- Liaise with industry groups and associations.
- Lead specialized projects.

- Respond to information and interpretation requests from FRA’s external customers (including Congress) in consultation with RCC, as appropriate.
- Analyze and issue One-Time Movement Approvals (OTMA) affecting cars not in compliance with the regulations, and coordinate such analysis and approvals with regional HM personnel as appropriate.
- Analyze requests for SPs, coordinate with regional HM personnel, as appropriate, and advise PHMSA of FRA’s findings.
- Serve as the technical representatives on HM investigations where the National Transportation Safety Board (NTSB) is involved.
- Provide expert assistance to regulatory development projects dealing with HM.
- Assist RCC with HM-related enforcement issues when requested (e.g., evaluating violation reports, providing technical assistance at claims conferences and in court proceedings).
- Serve as a resource for the field force regarding the transportation of HM and RAM.

### **3.1.6 Railroad Safety Specialist (RAM – HM)**

- Coordinates planning and implementation of shipments of High-Level and Spent Nuclear Fuel with the DOE, NRC, State Representatives, Tribes and other stakeholders.
- Reviews and administers the Safety Compliance Oversight Plan (SCOP) for transportation of spent nuclear fuel safety programs.
- Partners with the DOE on the Preliminary Evaluation of Removing Used Nuclear Fuel from Shutdown Sites.
- Provides oversight to the rail carriers concerning the EDI of additional information required for shipping papers for radioactive materials.
- Serve as a resource for the field force regarding shipping papers and package requirements for the transportation of radioactive materials.

### **3.1.7 Program Analyst (HM)**

- Performs project management to assist Staff Director for the division in tracking due dates of assignments and responsible staff person, such as comments to reports, interpretation letters, National Safety Program Plan updates, and other documents. Also

maintains grants tracking spreadsheet and Freedom of Information Act tracking spreadsheet.

- Creates and maintains a centralized briefing documents control system for staff. Ensures documents are gathered, compiled and stored appropriately. This document control index ensures that staff has efficient retrieval access to the current documents.
- Conducts searches of Pipeline and Hazardous Materials Safety Administration's (PHMSA) Incident Reports Database to gather incident data as requested.
- Performs audits of new enforcement actions or support existing auditing programs. This involves obtaining the necessary documentation, attention to detail, organizing voluminous amounts of data, and recording the data in a matrix for analysis.
- Conducts compliance audit of DOT's Emergency Restriction/Prohibition Order to determine whether the Class I railroads who transport Bakken crude oil provided notification to the State Emergency Response Commission (SERC) and notification documents contained required elements. And Assists HM Specialist in conducting a spot audit for the Emergency Restriction/Prohibition Order and documenting the audit results in a spreadsheet.
- Assists HM Specialists in updating and maintaining the approval records relating to 49 Code of Federal Regulations, Section 174.63 to transport intermodal (IM) portable tank container in trailer-on-flatcar (TOFC) and container-on-flatcar (COFC). The update is needed to establish a baseline on outstanding items from previously received requests for either new approvals, renewals or modifications to existing approvals so accurate records are maintained.
- Assists HM Specialists and Engineers in data collection and analysis for calculating Hazardous Materials Shipper Risk Index. Responsible for data preparation, creating a matrix to input data, ensuring data displays appropriate values, scanning for invalid values, and locating oddities in the data such as unexpected gaps.
- Assists in final rulemakings. Developing a work plan with time-line, standard operating policies and procedures, bench marking database systems, drafting primary review questions and creating a matrix of all requirements of the Notice of Proposed Rulemaking to ensure completeness of oil spill response plan acceptance criteria.
- Serves as liaison between the Information Technology (IT) Division and Knowledge Management Division to handle IT needs of the division and to ensure request are met.

### **3.1.8 Regional Hazardous Materials Supervisory Specialists**

Each regional HM supervisory specialist is responsible for the technical guidance of all HM activities within their region. In this capacity, the regional specialist:

- Is the access point for HM activities within the region.

- Works to ensure uniformity of program implementation.
- Is the liaison between the regional field inspectors, the headquarters HM Staff Director, and specialists.
- Assists the Regional Administrator in planning and managing programs.
- Advises the Regional Administrator on unique problem areas, operating practices, chemicals, research and development, and safety and health needs.
- Provides technical guidance on the HM activities within the region.
- Evaluates the allocation of HM inspection resources within the region, commensurable with the risks of the materials offered for transportation in the region and transported through the region.
- Evaluates and critiques all HM inspector reports for technical and legal sufficiency.
- Evaluates and critiques HM inspectors' field reports concerning railroad accidents, incidents, and derailments to determine if the causal factors are appropriately identified.
- Analyzes safety data and other relevant information to identify trends, and makes recommendations.
- Works with the HM inspector(s) to provide technical guidance and uniform understanding of the laws, orders, rules, and regulations concerning the transportation of HM by railroad.
- Leads and coordinates special assessments, assignments, inspections and investigations, and focused enforcement activities.
- Provides technical knowledge of the typical reactions of a wide variety of HM to various environmental conditions (e.g., temperature and pressure changes, contact with other materials) and considerations for containing or controlling fires, explosions, or leaks of these materials.
- Provides technical guidance to Federal and State agencies, local governments, railroads, chemical and container manufacturers, offerors, labor organizations, and employees of these entities.
- Conducts conferences and seminars for Federal and State agencies, local governments, railroads, chemical and container manufacturers, offerors, labor organizations, and employees of these entities.
- Assists RCC with HM-related enforcement issues when requested (e.g., evaluating violation reports, and technical assistance at claims conferences and in court proceedings).

- Monitors completion and updating of the regional inspection points list

### 3.1.9 Hazardous Materials Inspectors

Each region has a cadre of HM inspectors who serve as the front line of the FRA HM program, ensuring the uniform application of the laws, rules, regulations, orders, and directives associated with HM transportation in an assigned territory. HM inspectors are also a resource within the territory to help each entity involved with dangerous chemicals be aware of both the responsibilities and the resources available to meet Federal requirements. In these vital capacities, the inspector:

- Represents FRA in an assigned territory communicating and enforcing the requirements of FRA directives and the HMR.
- Informs the regional HM specialist of all practices he or she observes, and whether the practices are governed by regulation. Noting those practices that could endanger the safety of the regulated community, railroad personnel, and the public.
- Performs inspections and investigations, initiating corrective action when warranted.
- Inspects containers (e.g., boxes, barrels, drums, tank cars, railcars, intermodal (IM) portable tanks, and IM bulk containers) used in the transportation of HM to determine compliance with regulations concerning their construction, testing, maintenance, and qualification requirements.
- Inspects the procedures of offerors of HM by rail concerning classification, packaging, marking, labeling, placarding, loading, and documentation of shipments of HM.<sup>24</sup>
- Inspects the loading, unloading, switching, and transportation of railcars of HM, and the carriers' documentation.
- Participates, as appropriate, in team efforts with other Federal, State, and local agencies to improve the safety of a particular area or entity.
- Participates, as appropriate, with multiregional teams, usually including headquarters personnel, in the audit of tank car facilities.
- Inspects for compliance with HM registration and training requirements.
- Provides training and advises industry, interested parties, and State and local authorities on the requirements of the HMR.
- Alleged violations of the HMR.

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<sup>24</sup> Examples include, but are not limited to, refineries, chemical and explosives' manufacturers, freight forwarders, and import/export agents.

- Maintains an accurate and up-to-date list of inspection points.
- Drafts violation reports, as appropriate, and gathers evidence supporting alleged violations.
- Performs other duties as assigned.

## Chapter 4 – Inspection and Investigation Procedures

### 4.1 Inspections and Investigations

This chapter outlines the inspection and investigation process. Depending on the circumstances, inspectors will perform different types of inspections. The specific circumstances will dictate the types of documentation that will be reviewed and the different aspects of HM transportation to be analyzed. Inspections, investigations, and analyses address the strategic goals of the DOT and FRA—reducing the release of HM from shipments, whether in accidents or in normal transportation.

The inspector should follow a hierarchy when planning and performing inspection activities. The inspector may be asked at any time to respond to an accident or incident scene. Accident investigations, largely due to their time-sensitive nature, will take priority over routine inspection activities, and may remain the inspector’s number one priority for several days or weeks depending on the severity and complexity of the accident or incident.

In accordance with 49 C.F.R. § 171.16, detailed hazardous materials incident reports for releases of HM in transportation are reported on DOT Incident Report Form 5800.1 by the entity in physical possession of the shipment. One of FRA’s top priorities is decreasing the frequency of non-accident releases (NAR). The HM specialists receive reports regarding NARs originating in their region. If assigned responsibility for a NAR investigation, the inspector should handle the inspection as expeditiously as possible. NAR investigations are an important tool for FRA to use in identifying and resolving significant safety concerns. Note, however, that an FRA 6180.39i (Accident/Incident Form) should not be submitted for a NAR (per the General Manual, Chapter 4, Accident Investigations).

#### **Regulatory Risk-Based Audits**

The FRA HM Division uses a “risk-based” methodology to evaluate and prioritize HM shipper and tank car facility audits.

Shipper “risk-based” inspections audits is a program under development by FRA that uses historical data already maintained by the DOT to create an objective, site specific, data based calculations to create analytical metrics that scores a shipper facility’s regulatory fitness including time since last inspection/audit. The risk model will incorporate five basic things: (1) Inspection History; (2) Compliance History; (3) Citation History; (4) Safety History; and (5) Time since last inspection, to calculate a comprehensive risk index in order to prioritize inspections/ audits. (See Appendix F)

Tank car facility “risk-based” audits use data to create an objective, facility specific index of a tank car facility’s regulatory compliance. The data include “time since last audit”, compliance history, level of tank car facility certification, and type of service for equipment processed at the facility. (See Appendix F).



Currently, the FRA National Inspection Plan (NIP), by design, measures the inspection activity that is directly focused on the number of tank cars carrying HM that originate or travel through a specific rail yard. The NIP uses data as a baseline to allocate resources. These data include findings from Federal inspections (not inspections conducted by FRA's state partners) conducted as a routine inspection (Source code A) found in the Railroad Inspection System for Personal Computers (RISPC). A five-year average closing September 30 each FY is used to establish an annual plan. In developing the plan, inspections of railcars provide the needed data. Presently, the NIP addresses railroad inspection time for HM in detail on a per carrier basis. Shipper allocations are currently not provided in the NIP, but a shipper based NIP is under development.

The NIP is a model using a three-pronged approach. First, an initial baseline plan is established for each of the eight regions. The plan for the HM discipline sets numeric goals derived from models based on trend analyses and other data that allocate inspection activity for each railroad by county and State. Second, regional leadership adjusts the respective regional plans to reflect emerging issues. These adjustments are made before the beginning of each new fiscal year and at the midyear point to respond to changing trends. Lastly, the NIP is implemented through a Web-based interface, allowing both regions and headquarters to monitor the progress of field inspections during the fiscal year

FRA plans its enforcement initiatives based upon many considerations, including statutory requirements and congressional directions, review of relevant safety statistics, results of prior inspections and investigations, and recommendations from the NTSB and the Office of the Inspector General. This National Safety Program Plan (NSPP) is a work plan that describes programs and projects that are expected to have significant impacts on the resources of the headquarters staff and the regions. The annual plan seeks to integrate the strategic activities of headquarters and field staffs based on careful analyses of data. It also seeks to provide for the consistent presentation of regional activities aligned with the Government Performance and Results Act goals, NIP, National Rail Safety Action Plan (NRSAP), Risk Reduction Program strategies, and the Secretary's Highway-Rail Grade Crossing Safety Action Plan.

## **4.2 Types of Hazardous Materials Inspections or Investigations**

Generally, there are seven reasons for conducting hazmat related activities: (1) regular inspections; (2) complaint investigations; (3) accident/incident investigations; (4) special inspections or investigations; (5) waiver investigations; (6) nuclear route inspections; and (7) re-inspections.<sup>25</sup> Each of these activities has an assigned source code. Source codes are included on the inspection report and help to identify the underlying reason for conducting inspection/investigation activities. Information about the use of source codes in completing inspection reports can be found in Chapter 5.

### **4.2.1 Regular Inspections (Source Code A)**

Source Code A is used to indicate that the activity reported was part of an inspector's normal and routine inspection program. Regular inspections require inspectors to periodically inspect

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<sup>25</sup> Source codes are listed in Chapter 3 of the General Manual and Section 5.1.1 of this manual.

various types of facilities (e.g., railroads, offerors, contractors, or manufacturing facilities) and HM packagings within their assigned territories to determine compliance with Federal safety regulations. This requires inspectors to have a thorough knowledge of railroad operations in their assigned territory and use available data to drive decisions as to where to inspect. To accomplish this task in a systematic manner, inspectors must maintain an accurate, up-to-date list of regional inspection points (RIP), and should advise their regional specialists of any changes in inspection points or safety trends within their territories. As required, inspectors should review the records of railroads, shippers, and other regulated entities, as appropriate, to monitor their compliance with Federal requirements pertaining to the transportation of HM in commerce (e.g., accidents and incidents, fatalities, injuries, etc.).

In-depth accident analyses are conducted through the use of the FRA's safety data. Additional sources such as PHMSA's Hazardous Materials Intelligence Portal, which combines data from numerous government data sources, may provide additional indicators of areas for concern. In reaching decisions on inspection priorities, inspectors should not limit their data sources to the traditional accident or incident sources. Other sources of information, such as information received from complaints or industry trade publications, may highlight areas where attention is needed. As the availability of precursor data becomes more prevalent, the information will guide inspectors in areas where activities will ensure the greatest return on time expended. Regardless of the source, inspectors should always be prepared to explain their use of data and reasons, when asked.

Inspectors should determine if any laws, rules, or orders within FRA's jurisdiction have been violated. In addition, inspectors should study accident trends in their inspection territory attributable to the transportation of HM by rail. For example, if the data indicates that recent accidents were related to a specific cause, concentrated inspections in that particular regulatory area should be conducted. This process should be applied to all inspection activity for better utilization of inspector resources.

Within the realm of regular inspections, site-specific inspections should be performed in part on the basis of each inspector's knowledge of enforcement areas requiring more attention to ensure safety coupled with indicators from the data analysis and information provided by regional supervision that point to problem areas.

#### **4.2.2 Complaint Investigations (Source Code B)**

Source Code B is used to indicate that the reported activity is related to complaint investigations. There are two types of complaints in this category, congressional complaints and those filed by railroad employees, labor organizations, other government agencies, or the general public. The principal difference is the involvement of headquarters staff in congressional complaints. The following guidelines are consistent with the current General Manual.

#### ***4.2.2.1 Complaints filed by railroad employees, labor organizations, other government agencies, or the general public***

A complaint may be submitted in writing (e.g., formal letter, email message) or verbally (e.g., telephone conversation, in person). A complaint investigation must be conducted without revealing to anybody other than FRA personnel that a complaint is or was under investigation. Although the inspector assigned to a complaint investigation normally knows the identity of the complainant, in no event should the inspector reveal the identity of the complainant to anyone other than FRA employees, unless:

- The complainant authorizes such disclosures in writing on the current FRA statement of witness form (FRA-6180.80).
- FRA refers the matter to the Attorney General (AG) for enforcement, discussion limited to persons within the AG's Office. See 49 U.S.C. § 20109.

Each region is responsible for handling respective complaints from start to finish. This includes logging in, assigning numbers, acknowledging, investigating, closing out, and keeping the file. The region will assign the complaint to an inspector, who will complete the investigation within the prescribed timeframe consistent with the current General Manual.

If a complaint investigation cannot be completed within the prescribed timeframe, the inspector will write a memorandum or email to the regional office explaining the reason(s) for the delay. The HM Division (headquarters staff) should be relied upon for technical interpretations as the need arises.

#### ***4.2.2.2 Congressional complaints***

As noted in the current General Manual, Chapter 5, spells out a time frame for completing and submitting a congressional complaint. Although each region is responsible for handling all aspects of congressional complaint investigations, headquarters staff often plays a larger role responding to congressional complaints. Once a congressional complaint is received, the region will assign the complaint to an inspector, who should complete the investigation within the prescribed time frame of ten days as per the current General Manual standards. If a congressional complaint investigation cannot be completed within the prescribed timeframe, the inspector must inform the headquarters HM Staff Director, in writing, of the reason(s) for the delay. After completing the investigation, the inspector should promptly forward a report of his or her findings and the relevant file to the headquarters HM Staff Director (or his or her designee) for completion of a closeout letter for the Administrator or Associate Administrator for Railroad Safety/Chief Safety Officer's signature, as appropriate.

#### **4.2.3 Accident or Incident Investigations (Source Code C)**

Source Code C is used to indicate that the inspection/investigation activity is directly related to the investigation of an accident. There are two occasions where this source code will be used—onsite investigations of accidents/incidents, and inspections at remote shipper facilities where

involved shipments occurred. In both instances, the use of the source code will be directed by the inspector's regional specialist.

#### ***4.2.3.1 Onsite activities.***

Upon arrival at an accident scene, inspectors should immediately identify themselves to the Incident Commander (IC), the Federal or State on-scene coordinator (if on-scene), the other FRA inspectors already on the scene, and the other on-scene coordinator or incident commander, State and local emergency response teams, State and local authorities and/or representatives, representatives from other Federal agencies (e.g., the NTSB, U.S. Environmental Protection Agency, etc.), and railroad representatives. If the on-scene coordinator or incident commander is unaware of technical resources available to assess damage and environmental hazards or to clear wreckage, inspectors should provide the following contacts:

Immediate Emergency Assistance:

- Chemtrec: 24 hours, (800) 424-9300
- National Response Center: 24 hours, (800) 424-8802. If, during an accident investigation, an NTSB investigator arrives on the scene, FRA inspectors should introduce themselves, offer full cooperation, and promptly contact the regional office to advise them of NTSB's presence. Unless instructed otherwise, FRA investigation activities should continue independently. In those instances where NTSB and FRA jointly investigate an accident, NTSB generally assumes control of the activities, including statements to the media.

On these occasions, HM inspectors will typically be assigned to the HM team. As a member of this team, HM inspectors' role will include:

- Packaging survivability or behavior at NTSB-run accidents,
- Factual conditions regarding compliance with Federal HM transportation law and the HMR.

#### ***4.2.3.2 Remote activities***

At times it will be necessary to conduct inspection/investigation activities at remote locations in support of an accident/incident investigation. Often, other inspectors will perform these activities. When the assistance of remote personnel is needed to complete an investigation or collect information, the inspector should contact their regional supervisor and request assistance.

When this occurs, the regional supervisor where the activity is taking place will direct the inspector to use Source Code C. If an accident number is assigned, that number should be reflected on the inspection report in the reference section (see Chapter 5).

#### 4.2.4 Special Inspections or Investigations (Source Code D)

Source Code D is used to identify activities undertaken because of regional and national goals outlined in the National Safety Program Plan or identified by the regions. In general, this code is used for inspections initiated for a specific reason or purpose not otherwise identified and not involving routine inspections. A file number must be assigned and indicated on the inspection report when Source Code D is used. The example file numbers should correlate to NSPP activities.

- Regional NSPP Example for the file number box: **R2-HM-01-15**
- Headquarters NSPP example for file number box: **HQ-HM-01-15**

This code should only be used when directed by the regional specialist who will provide the reference file number.

#### 4.2.5 Waiver Investigations (Source Code E)

Waiver activities within the hazardous materials discipline, and the use of Source Code E, take the form of SPs and OTMAs.

SPs are issued by PHMSA whereas OTMA's are issued by the FRA Associate Administrator for Railroad Safety/Chief Safety Officer. Source Code E will only be performed under routine inspection unless the activity was performed as part of a special investigation as directed by the Regional Specialist.

##### 4.2.5.1 *One-time movement approval and Special Permit investigations*

The effective oversight of SPs and approvals to move noncomplying bulk packaging requires a coordinated approach between headquarters and the field. In specific instances, the coordinated effort begins before the approval or permit is issued. However, in all cases, surveillance is required to ensure that the terms of the approval or permit is adhered to by the grantee. A file number must be assigned and indicated on the inspection report when Source Code E is used.

##### 4.2.5.1.1 *One-time movement approval investigation*

During the evaluation of an OTMA document, HM specialists may request an inspection of the bulk packaging to provide additional information related to the condition of the shipment and evaluation of the vehicle's rail worthiness. As outlined in Chapter 9 of this manual, tank cars with structural integrity issues will require a review to ensure that the tank car can be moved safely. Field inspectors should consider the packaging condition, the route anticipated, and any other safety consideration when making recommendations.

Once issued, regional oversight may be required to validate that the grantee complies with the terms of the approval. This oversight includes notification to regional personnel, notification of train crews, and root cause reporting as mandated in the approval. Inspectors report this

oversight activity under routine inspection actions unless the activity is part of a special inspection and directed by the regional specialist. A file number must be assigned and indicated on the inspection report when Source Code D is used.

- Example: **FRA - 15010001**

#### **4.2.5.1.2 Special Permit investigation**

Inspections related to SPs are grouped in two general categories: current holders (renewals and parties to) and applications (both new and modifications). Within each of these there are a number of subcategories. As the name suggests, current SPs are those under which the holder is currently operating or where another entity wishes to become a party to an existing SP with no change to the permit itself. Inspections related to these SPs are intended to identify any of the following concerns.

- Is the SP still needed?
  - If not needed, FRA will recommend that PHMSA request a “Show Cause” letter to explain the need for the SP.
- Is the SP issued to a corporation, but specific to a particular location?
  - If so, FRA will recommend that PHMSA request a “Show Cause” letter to explain why all locations should be included in the SP.
- Is the permit holder “fit” to perform duties associated with the SP?

The results of the inspections and any recommendations will be sent to the responsible headquarters specialist. A file number must be assigned and indicated on the inspection report when Source Code E is used.

- Example: SP14436

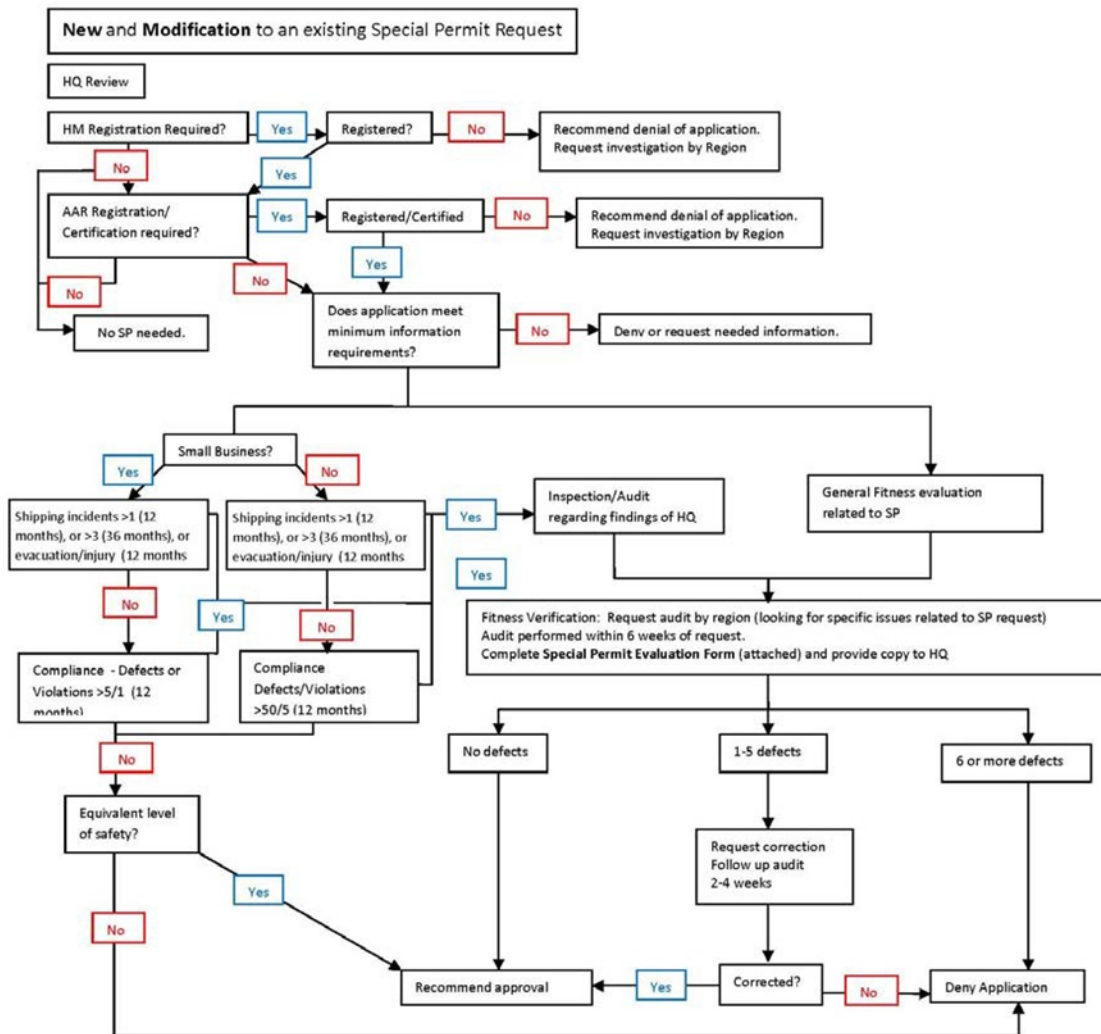
The other category is applications for SPs. The permits are further grouped by the requirement for proof of equivalent level of safety. Applications for new and modified SPs must demonstrate that the proposed equipment or process provides an equivalent level of safety as that provided by adherence to the regulations. Applications for renewal or party-to status do not require demonstration of an equivalent level of safety. A file number must be assigned and indicated on the inspection report when Source Code E is used.

- Example: SP14436

#### **4.2.5.1.3 Applications for new and modified special permits**

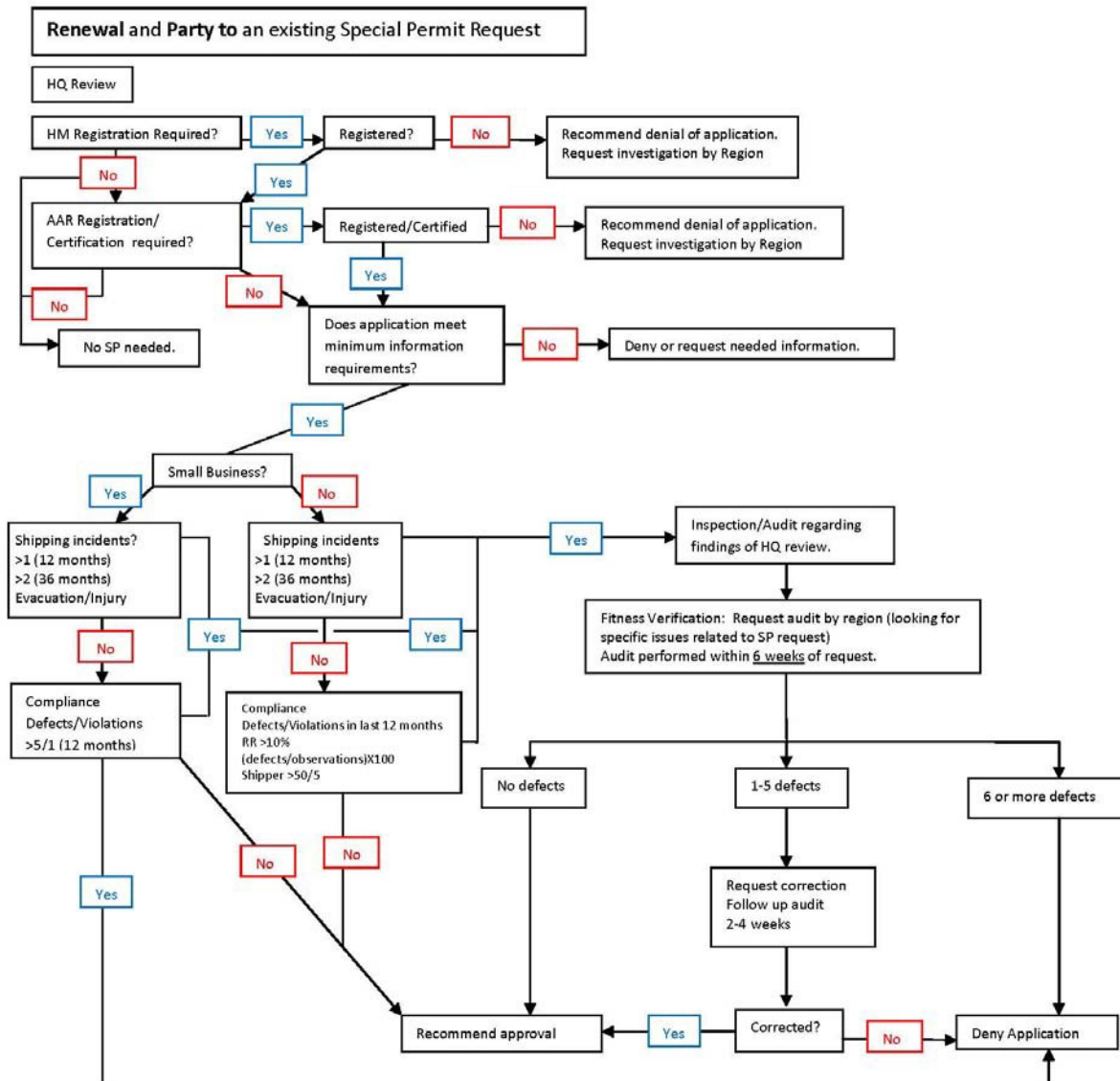
There are four levels of evaluation of applications for new or modified SPs. The first and broadest level is the determination if the information provided is complete and accurate and if the applicant meets the minimum requirements for the provisions of the SP. This will be performed

by the headquarters specialist to whom the SP is assigned. The next level of evaluation is the compliance and incident history of the applicant. This will also include an evaluation of the stated equivalent level of safety. This will be performed by the headquarters specialist as well. If the all of the minimum criteria (indicated on the flowchart below) are not met, an inspection of the applicant will be performed. This is the third level of evaluation. The inspection, performed by regional personnel, will be focused on the compliance issues or incident investigations. The inspector will report their findings to the assigned headquarters specialist and their regional specialist. The final level of evaluation will be an audit by regional personnel of the applicant to determine fitness relative to the SP. The results of the audit will be submitted to the headquarters specialist on the Facility Fitness document. See chart below.



#### 4.2.5.1.4 Application for renewal or party-to status for existing Special Permits

The evaluation of applications for renewal or party-to status for existing SPs can be found in the flowchart below. Due to the fact that equivalent safety evaluation has previously been completed, the flowchart does not contain these criteria, nor are inspectors expected to consider this in developing their evaluation unless specific conditions have changed. If needed, inspectors should acquire a copy of the evaluation, either through the DOT Docket System or from the assigned headquarters specialist. Aside from this and slight differences in the evaluation criteria, the flowchart is very similar. Both flowcharts provide the timeframe in which the inspections/audits are to be performed. See Chart below.





#### 4.2.6 Nuclear Route Inspections (Source Code H)

Source Code H is used to indicate that the activity reported was conducted in support of FRA's radioactive Safety Compliance and Oversight Plan (SCOP). Prior to the shipment of high-level radioactive waste and spent nuclear fuel via rail from Three-mile Island in the late 1980's, a comprehensive inspection policy was written by FRA. During subsequent shipment campaigns, the plan was revised and expanded to address all critical areas of rail transportation. The plan addresses operational integrity, emergency response, route infrastructure integrity, highway-rail grade crossing safety, security, and other miscellaneous components of these high profile shipments.

When performing inspections associated with the components of the SCOP or high-level radioactive waste and spent nuclear fuel shipments the inspector will report their findings to the headquarters Radioactive Materials Specialist who will take the lead on collecting this information.

#### 4.2.7 Re-inspections (Source Code R)

As noted in the General Manual, follow-up activities (or re-inspections), recorded using Source Code R, are mandatory in some instances, while they are only recommended in others. In case of less egregious violations or deficiencies, inspectors and specialists may exercise discretion in scheduling follow-up inspections to balance with other inspection priorities. These inspections should be conducted within a reasonable time after the violation or deficiency was discovered.

Two findings require mandatory re-inspection for hazardous materials issues. The first relates to train consist problems. When inspectors find train crews operating with train consists that lack complete information about one or more hazardous materials shipments or that improperly identify the location of hazardous materials shipments, they must conduct a re-inspection of trains in that same location within the required timeframes. Additionally, in those rare instances when remedial action report is checked off as being required by the inspector in accordance with 49 C.F.R. Part 209, Railroad Safety Enforcement Procedures, and the required action is not reported to FRA within 60 days<sup>26</sup>, a follow-up inspection is mandatory.

#### 4.2.8 Tank Car Facility Audits (Source Code T)

Source Code T is used to indicate that the reported activity is related to quality assurance program (QAP) audits of tank car facilities including new car construction, repairs, component manufacture and repair, and tank car owners or lessees. This code will only be used while conducting in-depth assessments of the facilities' QAPs and the implementation of these procedures. A file number from the list below must be assigned and indicated on the inspection report when Source Code T is used:

- Component Facility

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<sup>26</sup> Remedial action reporting is only required for railroads, and not shipper or other hazardous materials-related entities.

- Confined Space Entry
- New Car Construction
- Owner Lessee Audit
- Inspection/Repair Facility

### 4.3 Locations of Hazmat Inspections and Common Components of Inspections

Because of the extensive nature of hazmat transportation, inspectors conduct activities at a wide range of facilities and operations. Realizing that the list is not complete, the following examples are illustrative. The list is designed to highlight the majority of activities and location-specific components inspectors may experience.

#### 4.3.1 Railroad Customer Service Centers

Where customer service centers exist, inspections are performed to determine the carrier's compliance with the documentation requirements of the HMR.

The initial contact is usually the customer service center manager. Depending on the particular circumstances, an inspector should review the following documentation, as appropriate;

- *Bills of Lading* - Paper or electronic documents created by persons offering HM for transportation, containing information required by Subpart C of 49 C.F.R. Part 172 (*Subpart C, Shipping Papers*) and § 174.24, (*Shipping Papers*).
- *Waybills* - Carrier-created documents reflecting the information received from the shipper or other carriers.
  - ✓ Also remember, *Electronic Shipping Papers*. Examining the carrier and offeror conformance to the requirements of Subpart C of 49 C.F.R. Part 172 and § 172.201(a)(5) including “verification procedures.”
- *Registration*- Title 49 C.F.R. § 107.601, *Applicability*, applies to any person who offers or transports certain types and quantities of HM. There are some exceptions found in 49 C.F.R. § 107.606, *Exceptions*.
- *Carrier Training Program and Records*- The training program mandated by 49 C.F.R. Part 172, Subpart H, *Training*, and records demonstrating that employees have been properly trained including attending carrier training classes in addition to trainer training.
- *Safety and Security Plans* - Review the applicability of the requirements prescribed in 49 C.F.R. § 172.800, *Purpose and applicability*, for the development and implementation

of plans to address security risks related to the transportation of hazardous materials via rail.

### 4.3.2 Railroad Yards and Other Inspection Points

The purpose of an HM inspection at a railroad yard is to determine compliance with the operation of trains, handling of placarded cars, and the inspection of HM shipments. The initial contact is usually the yardmaster or trainmaster, or other designated official who is responsible for yard operations. Depending on the particular circumstances, an inspector should look at the following:

- *Regulatory Exceptions*- Shipments made under DOT Special Permits, special approvals, FRA approvals (49 C.F.R. § 174.50, *Nonconforming or leaking packages*), or a U.S. Department of Defense “Certification of Equivalency,” must comply with the terms contained therein.
- *Train Consists*- Consists or notices issued in compliance with the regulations for train placement and notices to train crews of placarded cars (Note: A violation of 49 C.F.R. § 174.26 cannot be substantiated solely by review of the train consists or other movement documents obtained from a customer service center. A violation can only be substantiated when it can be proven that the movement documents the crew actually used to move the train did not comply with 49 C.F.R. § 174.26).
- *Train Riding*- This element should be focused on Local Crew assignments in order to familiarize inspectors with the hazardous materials shippers in their territories in addition to assessing HM compliance for shipments offered by the carriers’ customers and to observe train crew Safety and Security Inspection compliance with 49 C.F.R. § 174.9, *Safety and security inspection and acceptance*.
- *Transloading Operation*- Must be conducted in accordance with 49 C.F.R. § 174.67.  
*Packagings:*
  - ✓ Packages of HM are marked as required (49 C.F.R. Part 172, Subpart D).
  - ✓ Packagings must be labeled or placarded as required (49 C.F.R. Part 172, Subparts E or F).
  - ✓ Packages are manufactured as required (49 C.F.R. Parts 178 or 179, and maintained in accordance with Part 180).
  - ✓ Function Specific Training pertaining to package preparation, particularly package securement training, procedures and implementation.
  - ✓ See the inspection guidelines outlined in 4.3.3, “Components of Shipper Inspections.
- *Securement*- Closures and closures of openings on packagings are secured as required (49 C.F.R. §§ 173.29, 173.31, and 174.67).

- *Inspection of Railcars Carrying Hazmat*- Railroad cars are inspected as required (49 C.F.R. § 174.9). Defects found under 49 C.F.R. Parts 215, 231, and 232 shall be reported on DOT Form F6180.96.
- *Train Placement*- Railroad cars are handled and placed in trains as required (49 C.F.R. Part 174, Subpart D).
- *Carrier Training Program and Records*- The training program mandated by 49 C.F.R. Part 172, Subpart H, and records demonstrating that employees have been properly trained.
- *Incident Reporting*- Releases of HM are properly reported (49 C.F.R. §§ 171.15 and 171.16).
- *Security Plans*. If applicable, carrier has a security plan in place as required by 49 C.F.R. Part 172, Subpart I.

### 4.3.3 Intermodal Facilities (Marketers and Actual Facilities)

Intermodal inspections are performed to determine whether shipments offered to rail carriers from other modes of transport comply with the rail transportation requirements. The inspection requirements for intermodal shipments are generally the same as railroad customer service centers and yard inspections. Follow-up inspections may take place at a non-railroad entity, such as a freight forwarder, broker, or an agent's place of business.

Intermodal shipments exported or imported into the United States are generally controlled by an agent or broker. Although the agent or broker may appear as the offeror and as such may be responsible for performing certain functions in accordance with the HMR, this does not change the original offeror's duty to comply with the HMR.

### 4.3.4 Offeror Facilities

The purpose of this type of inspection is to determine if persons<sup>27</sup> who offer HM for transportation by railroad do so in compliance with the HMR. Inspections of this type are conducted at facilities that offer or receive HM by rail including intermodal offerors who do not have direct rail access<sup>28</sup>.

The initial contact is usually the plant manager or an official responsible for the handling of HM. Depending on the particular circumstances, an inspector may look to verify shipments made under a DOT Special Permit (exemption), special approval, FRA One-Time Movement Approval

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<sup>27</sup> Under the HMR, the term "person" is broadly defined, and includes companies and corporations as well as individuals. For the purposes of the regulations, offerors and carriers are considered persons.

<sup>28</sup> Consistent with 49 C.F.R. § 171.8's definition of "offeror," an Ocean Transportation Intermediary (Non-Vessel Operating Common Carrier) is considered an offeror when the intermediary performs any offeror function. When inspecting such entities, inspectors should concentrate on the specific functions that the intermediary performs.

(OTMA) (49 C.F.R. § 174.50), or U.S. Department of Defense “Certification of Equivalency” to see if they comply with the terms contained therein.

*Shipping Papers-* Shipping papers comply with the regulations found in 49 C.F.R. Part 172, Subpart C. See also 49 C.F.R. §§ 171.12 and 171.22 (for shipments from Canada and Mexico and other international shipments).

*Training-* The offeror’s training program mandated by 49 C.F.R. Part 172, Subpart H, and records demonstrating that HM employees have been properly trained. (49 C.F.R. Part 172, Subpart H).

*Security Plans-* If applicable, the offeror has a security plan in place as required by 49 C.F.R. Part 172, Subpart I.

*Packagings:*

- Packages of HM are marked as required (49 C.F.R. Part 172, Subpart D).
- Packages are labeled or placarded as required (49 C.F.R. Part 172, Subparts E or F).
- Packages are filled to the correct outages specified for the material as required (the applicable outage requirements in 49 C.F.R. Part 173).
- Packages are manufactured and maintained as required (49 C.F.R. Parts 178, 179, and 180).

*Classification-* Materials are properly classified (the applicable classification section in 49 C.F.R. Part 173).

*Loading and unloading:*

- Tank cars are loaded or unloaded as required (49 C.F.R. §§ 173.31 and 174.67 - *transloading*). Note: that 49 C.F.R. 173.31(g) applies even if the tank car is not in transportation at the time of loading or unloading.
- Packages of HM are loaded into a transport vehicle as required by 49 C.F.R. §§ 173.30, and Part 174, Subparts, C, E–G, H–K.

#### **4.3.5 Shipper Facilities and the Components of Shipper Inspections/Audits:**

Comprehensive shipper inspections are critical to eliminating NARs. Through effective shipper audits, FRA can verify compliance with the regulation and alignment with industry best practices. Our audits must cover the full range of pre-transportation functions (e.g. classification, training, OTMA implementation, package securement). Moreover, FRA audits provide an opportunity to educate shippers and provide a clear and consistent message regarding

all pre-transportation functions. Shipper inspections will be comprised of four general regulatory elements: Special Permits, registration, training, as well as safety and security.

#### Special Permits – 107 Subpart B

- Is the facility using a Special Permit?
- Is the entity a grantee of a Special Permit?
- Is the Special Permit current?
- Is the facility operating within the parameters required by the Special Permit?

#### Shipping Papers – 172 Subpart C

- Review for compliance.

#### Registration – 107 Subpart G

- Is the facility registered?
- Is the registration in date?

#### Training – 172 Subpart H

- Training Requirements
  - General awareness
  - Function-specific training
  - Safety training
  - Security awareness training
  - In-depth security training
- Initial and Recurrent Training
  - Initial training
  - Recurrent training
  - Relevant training
  - Compliance
- Recordkeeping
  - HM employers name
  - Most recent training
  - Description of training
  - Name and address of person providing training

- Certification

### Safety and Security – 172 Subpart I

- Does the facility require Safety and Security Plans?
- Review components of plan.

FRA believes that, of the five general regulatory elements, effective training will result in improved package securement, in particular Function-Specific Training. The content of the Function-Specific training must correspond closely with the securement procedures. As such, we must dedicate time during each shipper audit to Function-Specific Training, coupled with package securement procedures. The most critical part of this audit is the review of the procedures to ensure all elements of the procedure conform to best practices and Original Equipment Manufacturer (OEM) procedures and recommendations. HM Inspectors should also ensure that the loading rack personnel are complying with their facility's procedures. A standard shipper inspection necessitates an in-depth review of Function-Specific Training, Standard Operating Practices (SOPs), and a review of the following:

- Any Special Permit(s), in particular:
  - Purpose and Limitation
  - Regulations from which exempted
  - Hazardous Materials covered by permit
  - Safety and Control measures
  - Special Provisions
- SOPs
  - Pre-loading/unloading inspection procedures
  - Heel identification and calculation procedures
  - Inage/Outage calculation procedures
  - Securement of fasteners and closures
  - Requirements of §§ 173.31 and 174.67
- Gasket and O-Ring Procedures
  - Identification
  - Acceptance criteria
  - Shipper installation procedures
  - Manufacturer installation procedures

Observations of deficiencies in shipper package preparation procedures that will affect package integrity must be noted in a narrative section on Form F6180.96. Deficiencies include but are not limited to:

- Proper Heel Identification Components
- Gasket Acceptance Criteria
  - Dimensional analysis
  - Compatibility
  - Mechanical damage
  - Requirements for reuse
- Torque Procedures
  - Equipment requirements
  - Lubrication requirements
  - OEM’s recommended procedures
    - Allowable shelf life for gaskets
    - Storage of gaskets
    - Intermediate torque values
    - Final torque
    - Re-torque
- Manway Cover Swing bolt Lubrication and Securement (gasket manufacturer torque specifications vs shipper procedures)
- Bottom Outlet Valve and Cap Inspection

Including all inspector observations on Inspection Form F6180.96 reports, combined with discussions of the inspector’s findings at closeout briefings, informs shippers of both regulatory and non-regulatory deficiencies providing the shipper an opportunity to reevaluate portions of their training program to conform with both regulatory and industry standards.

- *Example Observation Comment Entry Code*

| CFR | RULE | SUBRULE | DISCIPLINE | DESCRIPTION  |
|-----|------|---------|------------|--|
| 173 | 0031 | OBSERV  | H          | FACILITY DOES NOT FOLLOW OEM RECOMENDATIONS OR INDUSTRY STANDARDS OR BEST PRACTICES. |



#### 4.3.6 Tank Car Facilities (Owner, Manufacturing, and Repair Facilities)

##### Purpose:

The auditing of a tank car facility is to determine compliance with the HMR concerning the manufacturing, maintenance, repair, qualification, testing, and retesting of specification tank cars and their components.

##### Scope:

This standard is to establish a uniform approach for the selection, planning, and auditing of tank car facilities. This procedure, along with the current version of FRA's risk based Tank Car Facility List, (TCF list) will be used when planning audits.

##### Audit Scheduling:

- Facilities that have not been audited by FRA are considered priority facilities.
- Existing facilities should have audits scheduled based on their current risk rank score.
- A master list of tank car facilities that includes the last audit date, inspector and latest risk rank score will be maintained by the FRA Headquarters Quality Assurance (QA) Team.
- Scheduling of facility audits for the following fiscal year should be made 2 months prior to the end of current fiscal year and reviewed and approved by management.
- Facilities may also be scheduled on an as-needed basis resulting from bad actor performance. This can include but is not limited to recent transportation issues, poor quality assurance compliance issues, cause of recent NAR, etc.

##### Audit Priorities:

Facilities should be prioritized as follows:

- New start-up facilities that have never been audited by FRA.
- Bad actor facilities based on objective poor performance.
- Based on risk rank score assigned by FRA Headquarters QA Team.
- Facilities under new ownership.

##### Audit Approach:

- All audits should be unannounced.

- Distance audits should be considered a priority early in the audit schedule due to budget allocations.
- When conducting an audit of a priority facility, other additional facilities in the immediate area may be considered for audits regardless of risk score.
- Headquarters QA Specialists should audit facilities in areas with a high density of facilities.
- For audits conducted by the Headquarters QA Team, approximately 4 weeks' notice should be given to the FRA regional office where the selected facilities exist. This is in an effort to have regional participation in the audit. Upon completion of these audits, all reports must be made available to the FRA Regional Management.
- Headquarters QA Specialist audits may be conducted with or without the participation of regional resources.
- Audits may be conducted directly after the Association of American Railroads (AAR) has performed an audit.

#### Audit Method:

- Focus areas will be facility-specific and determined by the Headquarters QA Specialist/HM Inspector using known information about the facility.
- Advance disclosure of focus areas is improper and shall be avoided.
- The focus areas for these audits will be selected by the Headquarters QA Specialist/HM Inspector prior to performing the audit. The selected QA element(s) or shop process for these audits will then be recorded on the Tank Car Facility Inspection Report.
- A reverse audit approach may be employed on complete or in-process car(s) to determine if DOT, AAR, and Car/Equipment Owner compliance is being met under the facility's QA Program.

#### Audit Focus Areas:

- The facility provides and uses car/equipment owner procedures for all job functions.
- The facility has a training program on the HMR for their employees that include the QAP, its procedures, and tank car/equipment owner's procedures.
- The facility ensures that only qualified personnel perform nondestructive testing (NDT) for the method employed.
- The NDT program and its Level III Technician are compliant with the requirements of Appendix T of the AAR's Tank Car Manual (M1002).

- The facility ensures that persons engaged in welding on tank cars are performance-qualified in accordance with Appendix W of the AAR's Tank Car Manual (M1002).
- The facility has a training program on the HMR for their employees that includes the QAP, its procedures, and tank car owners/equipment owner's procedures. The training program must also include function-specific training for all employees in their area of operational function as defined by the facility.
- The facility has a Quality Assurance Program (QAP) that meets the requirements of 49 C.F.R. § 179.7.

#### Audit Reporting:

- Only one audit report will be generated for audits. This report will be made using the RISPC system and documented on Form FRA 6180.96 (96 report)
- A supplementary audit report known as a Tank Car Facility Inspection Report must be completed in addition to the standard 96 report.
- Report distribution is limited to the Form FRA F 6180.96. The supplementary Tank Car Facility Inspection Report is for FRA HM internal use only and must not be distributed.
- Audit reporting should be completed after the audit has taken place.
- The Headquarters QA Specialist or HM Inspector that led the audit is responsible for the generation of all reports.
- All audit reports must contain detailed descriptions of defect findings.
- Both completed reports must be provided to the Headquarters QA Team.
- Completed Tank Car Facility Inspection Reports will be uploaded to the QA Team's SharePoint Web site.
- Audit reports must only be distributed to the members of management from where the audit occurred, members of the FRA Headquarters QA Team, FRA Regional Management, and Regional HM Staff.
- FRA Headquarters QA Team will use audit report information to reassign a revised risk rank score based on audit findings. This risk rank score will be recorded on the Tank Car Facility Risk Assignment form. The completed form will be maintained with the completed Tank Car Facility Inspection Reports on the SharePoint Web site.
- FRA Headquarters QA Team will revise the TCF List and provide the revised list quarterly.

### 4.3.7 Tank Car Damage Assessment

- Scope:
  - This standard is to establish a consistent guidance for the investigation and documentation of damage related to tank cars involved in a derailment resulting in the release of hazardous materials.
- Objectives and Overview:
  - Incident site safety.
  - Equipment to be used.
  - Incident site damage assessment.
  - Off-site damage assessment.
  - Office damage assessment.
- Incident site safety: Do not under any circumstances put yourself in a dangerous situation.
  - Arrive on site and inform Incident Commander of your presence and intent.
  - In addition to FRA requirements, always follow incident command requirements for PPE.
  - Always stay clear of active wrecking activities and never impede the process.
  - Visually monitor your surroundings constantly and ensure you are not in danger; the environment will be ever changing with multiple dangers possible.
- Equipment to be used: This list is intended to be a minimum and equipment should be added at the discretion of the inspector or specialist.
  - Camera: Fully charged or large number of batteries.
  - Marking devices: Spray paint, Paint stick, lumber crayon etc.
  - Recording Devices: Tank car damage assessment forms (standard or waterproof).
  - Measuring devices:
    - Tape measure 25-foot and 100-foot reel.
- Incident Site Damage Assessment:
  - Collect Information.
    - Train direction and speed at time of derailment.

- Running order of train.
- Track orientation and topography.
- Straight or curved track.
- Flat or grade (up/down).
- Commodity in cars.
- Emergency responders' "Timeline of events."
- Certificate of Construction for all involved cars.
- Field sketch of car orientation.
- Try to be available when cars are being removed and document damage.
- Take photographs.
  - Overall view (from aerial and ground level).
  - Aerial view (See incident commander).
  - Ground level (multiple angles and multiple shots).
- Look for items of interest.
  - Tank (size, shape, and tank thickness in area).
  - Breaches of tank and possible causes (e.g. coupler, rail).
  - Tank in areas of attachment welds (e.g. Head brace pad, cradle pad).
  - Boiling Liquid Expanding Vapor Explosion (BLEVE).
  - Valves.
  - Type of valve/fittings/manway (when applicable).
  - Damage to valves/fittings/manway (when applicable).
  - Possible cause of damage (e.g. dirt, rocks trees).
  - Did the safety valve discharge or was it plugged with dirt, rocks, etc.?
- Off-site Damage Assessment: Normally occurs somewhere close to derailment site where cars are staged for final disposition.
  - Identify and mark all car numbers on tanks (several locations).
  - Identify, mark, and measure all tank damage (mark on tank for later data transfer to forms).
  - Investigate and document damage that may be hidden from view until item(s) is moved.
  - Document all field notes on "Damage Assessment forms."
  - Specific issues to inspect for:
    - Service Equipment:

- Location of service equipment relative to liquid level. The liquid level will be easily identified on tank cars exposed to a pool fire. Above the liquid level, the paint will be charred off the shell/head. Below the liquid level, the paint will likely still be on the tank.
- Identify the make and model of the PRV.
- Determine, if possible, if the PRV actuated.
- Damage to PRV.
  - Is the PRV clogged with debris?
  - Is the PRV seated on the nozzle?
  - Is the PRV deformed?
- Identify the valves and fittings (arrangement on manway cover, make and model, if possible).
- Damage to protective housing and valves/fittings.
- Damage to manway, bolts, and gasket.
- Bottom Outlet Valve
  - Did extension shear off?
  - Damage to the valve or its fasteners.
  - Did impact to the handle or the extension cause the valve to open?
  - Condition of skid protection and its welds to the tank shell.
- Underframe
  - Draft sill and pad outboard of bolster.
    - Damage to coupler.
    - Damage to striker plate on sill.
    - Deformation (bending, bulging, direction of deformation) of sill.
    - Condition of sill to pad welds and pad to tank welds.
    - Look for fractures at the toe of weld into the tank shell.
  - Tank bolsters
    - Deformation (and direction of deformation).
    - Condition of bolster to pad welds and pad to tank welds.
    - Look for fractures at the toe of weld into the tank shell.
  - Stub sill and pad inboard of body bolster.
    - Deformation of sill web.
    - Condition of sill pad welds and pad to tank welds  
Look for fractures at the toe of the weld into the tank shell

- Tank Shell and Head
  - Punctures
    - Location and dimensions.
    - Direction of impact.
    - Related gouges, scores, dents, etc.
    - Location (ring number #1 at B-end.)
  - Cracks
    - Location, dimensions, and orientation.
    - Orientation (transverse, longitudinal).
    - Fracture surface (ductile, brittle). If brittle, identify the location or origination.
    - Are the cracks across welds.
  - Tears
    - Location dimension and orientation.
    - Thickness of steel at fracture surface.
    - Was the tear thermally or mechanically induced?
    - Location relative to liquid line.
    - Are the tears across welds? Or within welds?
  - Dents\*
    - Location and dimensions (length, width, depth, orientation of major axis.
    - Creases.
  - Scores\*
    - Location, dimensions and orientation.
    - Are the scores across welds?
  - Gouges\*
    - Location, dimensions, and orientation.
    - Are the gouges across welds?
  - Wheel burn\*
    - Location, dimensions and orientation.
    - Are wheel burns across welds?
- Photographs
  - General layout of derailed cars.

- Individual cars in derailment and immediate surroundings (all accessible sides).
- Damage to individual cars (provide perspective/scale).
- Office Damage Assessment:
  - Information organization.
  - Create file for incident.
    - Include sub file for information.
    - Each car number has different file.
  - Create tank car identification overview.
    - Include car number in consist.
    - Include direction of travel.
  - Complete all tank car damage assessment forms.
    - Include photos that identify defect number coinciding with TCDA forms.
  - Create damage summary sheet.
  - Provide entire file to headquarters office by one of the following means:
    - Send file electronically.
    - Upload to SharePoint.



## Chapter 5 – Field Reporting Procedures and Forms

Data is vital at all levels of the organization in order to ensure adequate use of FRA’s limited inspection/investigation resources. Because of this, it is vital that inspectors consistently and accurately report their results and findings related to inspection/investigation activities. Reports should be clear, concise, and factual. FRA’s goal is to have inspectors’ reports completed as uniformly as possible to ensure both the accuracy of the enforcement data and uniform application of the HMR throughout the regulated community.

Hazardous materials inspectors routinely generate five types of reports:

- Inspection reports (FRA Form F6180.96)
- Violation reports (FRA Form F6180.110)
- Notice to individual of alleged violations (FRA Form F6180.80)
- HM incident or complaint investigation reports (via memorandum)
- Report of presentations conducted (FRA Form F6180.86)

Guidance for completing the five types of routine reports is below.

### 5.1 The Inspection Report (FRA Form F6180.96)

#### 5.1.1 Completing the Report

Inspection reports are completed electronically using the Railroad Inspection System for Personal Computers (RISPC). Below is a listing of the fields in the RISPC system applicable to inspection reports and a brief description of what each field represents.

**Note:** The look-up binoculars located at the top of the RISPC program provides a drop-down list of possible choices pertaining to each particular field for most fields. To activate the drop-down list:

1. Place the cursor in the block of the field desired and right click or tap on the cursor pad.
2. Move the cursor to the binoculars and right click or tap on the cursor pad.
3. When the drop-down list appears, choose the correct applicable data and right click or tap on the cursor pad.
4. Move the cursor to the “Select” box at the bottom of the table and right click or tap on the cursor pad to enrich the field.

*Inspector's Name:* The name of the inspector completing the report. RISPC fills it in automatically.

*Inspector's Signature:* The inspector's signature will be electronic.

*Inspector's Identification Number:* The five-digit inspector identification number is automatically filled in.

*Report Number:* Each report will receive a separate sequential number reverting to the number "1" at the beginning of each calendar year. No other report numbers are allowed.

*Date:* The RISPC program will automatically default to the current date that the inspection report is created, unless another date is specified at the time of the report's creation. The report date should accurately reflect the date of the inspection. When preparing a report for an incident investigation initiated by either a National Response Center (NRC) or Hazardous Materials Incident report (DOT Form F5800.1), the inspector will enter the date that the inspector began the investigation.

*R/C:* Enter the entity being inspected (railroad or company). Enter R or C.

*RR/Co. Code:* This field is the alphabetic railroad or company code assigned by RRS (use the look-up binoculars to select the appropriate code). If a company or railroad code does not appear in the drop-down list, contact the RRS Railroad Safety Information Management Division.

*Division:* Click on "division code" and select the default code that appears. This is left blank for companies.

*Subdivision:* This field contains the subdivision of the railroad (use the look-up binoculars to see the drop-down list of subdivisions and select the appropriate code). If the railroad is a short-line or the railroad does not have multiple subdivisions, enter "system." The field is mandatory for railroads. The field is left blank for companies.

*RR/Co. Representative and Report Information:* This field provides two items for the printed report: the "Railroad/Company Name and Address" and the "RR/Co Representative".

*From City (Name):* This field is for the city where the inspection took place. The inspector may use the binocular look-up to select from the list of valid city names in the location reference file key it in manually. If keyed in, the entry *must* match a valid name in the database. When preparing a report for an incident investigation initiated by either an NRC or Hazardous Materials Incident report (DOT Form F5800.1), the inspector will enter the city where the incident was discovered. This field is left blank if the inspection did not occur in a defined city.

*From City Code:* This field contains the General Services Administration (GSA) City Code alpha-numeric digit for the location where the inspection took place or originated, and it is

automatically entered based on the city name entry. If the city name is blank (e.g., the inspection occurred outside of a city), this field is left blank.

*State (Name):* Enter the alphabetic State Postal Code two-letter abbreviation for the location where the inspection occurred. When preparing a report for an incident investigation initiated by either an NRC or Hazardous Materials Incident report (DOT Form F5800.1), the inspector will enter the State where the incident was discovered.

*State Code:* This entry is a two-digit GSA State Code obtained by the program from the location reference file and automatically entered. The code represents the name of the State in which the inspection occurred.

*From County (Name):* This field contains the county name for the location where the inspection took place or originated. When preparing a report for an incident investigation initiated by either an NRC or Hazardous Materials Incident report (DOT Form F5800.1), the inspector will enter the county where the incident was discovered. The software normally generates the county name based on the city name used. Consult the drop-down list in the county name field.

*From County Code:* This field contains the GSA County Code for the location where the inspection took place or originated. It is automatically generated based on the county name.

*Destination City and County (Name):* Enter the destination city and county name whenever the inspection takes the inspector to a location other than the location identified in the “From” field. If the inspection is conducted at a single location, it is not necessary to complete these items.

*Destination City and County Code:* This field contains the GSA city and county codes for the location where the inspection ended. See the “From City Code” and “From County Code” for additional entry instructions.

*Source Code:* This code describes the reason for the inspection. Below are the authorized codes for HM inspector activities:

- A–Regular Inspection
- B–Complaint Investigation
- C–Accident Investigation
- D–Special Investigation
- E–Waiver Investigation (one-time movement approval or special permit investigation)
- H–Nuclear Route Shipment
- R–Re-inspection

- T- Tank Car Facility

*File number:* Entry is dependent on the source code. This field shows a connection to a previous report or can be used for special project designations. It can be up to 20 characters in length.

*Accompanying inspector:* This field contains the five-digit inspector identification number of every accompanying inspector. If none, this field is blank. The identification number will be validated against the inspector database in the software. For reporting requirements, see Section-4.4, Inspections Involving Multiple Inspectors or Days.

*Mile Post From:* Not applicable.

*Mile Post To:* Not applicable.

*Outside Normal Shift:* This field identifies the time spent on railroad property outside the inspectors regular work hours. The “Start Time” begins when the inspector arrives at the railroad’s property, and the “End Time” is the time that the inspector leaves the railroad’s property.

*Inspection Point:* This field contains the name of the specific site where the inspection was conducted (e.g., a repair facility, plant, building, etc.). Inspectors should be specific enough to support any future actions necessary (e.g., “Building A,” “North Platte Yard,” or “Track 3, Departure Yard”). A maximum of 50 characters may be entered into this field.

*Activity Code:* These fields contain the codes describing all activities taking place during the inspection. A list of activity codes and their meanings is located following these instructions in Section 5.1.3.

*Units:* The field indicates the number of units for each activity code. The location code has a maximum value of “1.” A minimum value of “1” for each code entered is mandatory.

*Subunit:* The field indicates the number of elements associated with each unit (e.g., when reviewing shipping papers at a shipper’s facility, the inspector should record one unit for each session and one subunit for each shipping paper reviewed.)

*From latitude/longitude:* Not applicable.

*To latitude/longitude:* Not applicable.

*Line item types:* Because the inspection report is a multidiscipline form, certain blocks are used to record different categories of information. Other blocks are applicable to one discipline but not another. There are three kinds of line items that may be entered: FRA Defects, Non-FRA Defects and Observations, and Inspector Comments.

- **FRA Defects:** Line items that are used to record the defects found during the inspections. When a railcar defect is observed and seals were removed for the inspection, the seal numbers must be recorded as specified in the seal removal procedure (see Chapter 7).
- **Non-FRA Defects:** Line items that are used to record defects that do not amount to FRA defects (e.g., AAR’s condemnable defects).
- **Inspector Comments:** Line items that are used by the inspector to say something to the railroad and/or to record inspections where no exceptions were taken.

(In RISPC, to change the “Line Item Type,” click the radio button next to the line item type selection.)

*Item number:* This is a numeric field, up to three digits, no decimal. (In RISPC, to add a new line item, click on the yellow “plus” sign icon on the toolbar or press F4.) Each report should begin with Item 1 and continue in numerical sequence.

*Initial/milepost:* If a particular tank car, freight car, trailer, etc., is the basis for the inspection, enter the reporting mark initials here. A maximum of four alphabetic characters are allowed for this field.

*Equipment/track:* This field will contain the equipment number of the inspected item. If reporting mark initials are given, the car number must also be shown. A maximum of six numeric characters are allowed for this field.

*Type/kind:* Applicable only with some non-hazmat activity codes.

*49 C.F.R./U.S.C.:* Key in the reference to 49 C.F.R./U.S.C. (or press function key F2 to see a list of all applicable 49 C.F.R./U.S.C. and make a selection). The 49 C.F.R./U.S.C. must be EO (indicating Emergency Order) 107, 171–174, or 176–180.

*Defect code:* Enter the subsection of 49 C.F.R./U.S.C. under which the defect/observation is recorded.

*Subrule:* This field contains the subsection of the “Defect Code” under which the defect/observation is recorded.

*Speed:* Not applicable.

*Class:* Not applicable.

*Train #/site:* This field is optional. It can be used to provide additional description of where the defect is located.

*SNFR (Special Notice for Repairs):* Not applicable

*RCL (Remote Control Locomotive):* Not applicable

*# of Occ. (Number of occurrences):* Often, a single inspection unit has multiple defects of the same type. The inspector can indicate the number of times a specific defect is found on a single unit of inspection. If no entry is made, the default count is one.

*Activity code:* The Activity code must match one of the activity codes reported in the header section of the report, and must correspond with the reported 49 C.F.R./U.S.C./Defect/Subrule combination used in the line item.

*Description:* This field contains a description of the defect, observation, or comment. There is a maximum of 1,000 characters permitted for the narrative description. The description can be keyed in or a system description can be selected from the drop-down list.

*Seal Applied:* Record the Seal Number that was applied to replace the seal removed from the transport package.

*Seal Removed:* Record the Seal Number of the seal removed from the transport package.

*Hazard Class:* Record the hazard class of the material in the transport package. If there is more than one hazard class, record the hazard class with the deficiency.

*UN/NA ID:* Record the UN/NA ID Number of the material recorded in the “Hazard Class” box.

*Violation recommended:* Enter “Yes” or “No.”

*Written notification to FRA of remedial action is:* If the “Violation Recommended” is checked “Yes” and the entity is a railroad, written notification of the remedial action must be “Required,” “Optional,” or left “Blank,” depending upon the circumstances. If the entity is not a railroad (e.g., it is a shipper/consignee), written notification of remedial action may be indicated as “Optional,” but it cannot be specified as “Required.” Shippers, consignees and other non-railroad entities are not required to comply with Part 209.

If the “Violation Recommended” is “No,” then “Required” must not be checked for written notification of remedial action, but “Optional” may be checked. If “Optional” is checked for an entity, an inspector cannot compel the entity to respond. Response is strictly voluntary.

*Latitude/longitude:* Not applicable.

### 5.1.2 Remedial Action Responses

When railroad and company representatives report back to an inspector on remedial actions taken, the inspector should record those actions as follows:

*Railroad action code:* Railroad action codes, the date the action was completed, and an indicator as to whether the railroad comments are included, must be entered and the form returned to the inspector who originated the report. The inspector will then fill in this box(es) with a valid railroad action code. These can be found by pressing the “Table Lookup” button or the F2 key.

*Date (yy/mm/dd):* This field contains the date the remedial action was taken by the railroad. There is a calendar that can be used or the date may be keyed in manually.

*Comments on back? (Y/N) (Completed by the railroad):* The box may contain a “Y” or an “N.” It is a box for the railroad to indicate if comments are included on the back of the form that the railroad is returning to the inspector. If the railroad has comments, the railroad must write the comments on the back side of inspection report.

### 5.1.3 Detailed Activity and Inspection Task Code Information for Hazardous Materials Inspections

Step 1. If performed, enter one or more of the following inspection task codes as applicable:

| Activity           | Discipline      | Definition  |
|--------------------|-----------------|---|
| <b><u>107B</u></b> | <b><u>H</u></b> | <b>Special Permits/Competent Authorities/Approvals</b> - One permit inspection for each rail car, transport vehicle, or facility. Each PHMSA special permit will be reviewed online.  |
| <b><u>107G</u></b> | <b><u>H</u></b> | <b>Registration of Persons Who Offer or Transport Hazardous Materials</b> - One unit for each registration record reviewed. The registration can normally be verified either at the shipper plant, headquarters, or through PHMSA if necessary.   |
| <b><u>171</u></b>  | <b><u>H</u></b> | <p><b>General Requirements for North American Shipments/Requirements for the Use of International Transport Standards and Regulations</b> - One unit for each record inspection session regarding bulk and/or non-bulk package. This activity code may be used when assessing compliance with 49 C.F.R. 171.22 to 171.26 (See Section 4.4 Inspections Involving Multiple Inspectors or Days)</p> <p><b>Note 1:</b> An inspection <b>session</b> is the time spent at a facility performing a compliance inspection. This could be a day or multiple days providing the inspection is in connection with the initial review.</p> <p><b>Note 2:</b> Typically used in conjunction with BP and NB inspections.</p> |
| <b><u>172C</u></b> | <b><u>H</u></b> | <b>Shipping Paper Information</b> - One unit for each record inspection session, and one subunit for each HM Shipping Paper examined. Emergency response information and emergency response numbers are considered part of the shipping paper and not recorded separately. This code does not include train consist inspection activities (see 174B).   |



|                        |                    |  |
|------------------------|--------------------|--|
| <b><u>172H</u></b>     | <b><u>H</u></b>    | <b>Employee Training Documentation</b> – One unit for each record inspection session for both employee tasks and security training. Each employee record examined is a subunit.  |
| <b><u>172I</u></b>     | <b><u>H</u></b>    | <b>Security Plans</b> - One unit for the inspection of each plan. The inspector must examine and review all components of the plan in order to claim this unit. For defects and violations against Class 1 railroads (Source Code D), the inspector must include reference number provided by the regional specialist.   |
| <b><u>174A</u></b>     | <b><u>H, M</u></b> | <b>General Requirements</b> - One unit for inspection of each car transporting hazardous materials. This activity code may only be used when assessing compliance with 49 C.F.R. §§ 174.3, 174.5, 174.9, 174.14,   |
| <b><u>174B</u></b>     | <b><u>H, O</u></b> | <p><b><u>General Operating Requirements</u></b> - One unit for each train consist inspected. The inspection includes reviewing train crew documentation for each rail car containing HM, documentation of any changes in placement of the car containing HM, and determining compliance with the basic HM shipping paper descriptions.</p> <p>Use subunit for each inspection of the basic shipping paper description of each car containing HM. This activity code may only be used when assessing compliance with 49 C.F.R. § 174.26.</p> <p><b>Note 1: Inspectors must use activity code TPLH to record inspections associated with train placement requirements.</b></p> <p><b>Note 2: Inspectors must use activity code TPLH instead of code 172C when inspecting shipping papers specific to a particular train.</b></p> |
| <b><u>BPL, BPT</u></b> | <b><u>H, M</u></b> | <p><b><u>Bulk Packages (Applies to bulk packaging, including Intermodal Portable Tanks and Intermediate Bulk Containers, other than tank car)</u></b></p> <p><b><u>BPL</u></b> -One unit for each ground level inspection that includes an inspection of both sides of the bulk package and <b><u>does not include a top-level inspection.</u></b></p> <p><b><u>BPT</u></b> –One unit count for each ground level inspection that includes an inspection of both sides of the bulk package and <b><u>includes a top-level inspection.</u></b></p> <p>Title 49 C.F.R. §§ 172.302, 172.304, 172.326, 172.502, 172.516, and 174.50.</p>   |

|                        |                    |   |
|------------------------|--------------------|---|
| <b><u>FCL, FCT</u></b> | <b><u>H, M</u></b> | <p><b><u>Inspection of Freight Containers. General Handling and Loading Requirements –</u></b></p> <p>FCL-The unit count is one for each exterior inspection of a container. The inspection includes inspecting for marking, placards, structural integrity, and securement to the rail car.</p> <p>FCT - The unit count is the same as for an FCL plus the addition a comprehensive inspection including the inspection of the interior of the container for blocking, bracing, and loading and segregation requirements. Title 49 C.F.R. §§ 174.55, 174.61, 174.81, 177.834).</p> <p><b>**Use sub-units for each comprehensive inspection of a FCT package.</b></p> |
| <b><u>HMI</u></b>      | <b><u>H</u></b>    | <p><b><u>Incident Reporting by 5800.1. Notification by NRC, or NAR discovered during inspection –</u></b> Use of this activity code requires a comprehensive investigation to determine causal factor(s) associated with an incident. The count is one unit for each investigation.</p>   |
| <b><u>NB</u></b>       | <b><u>H</u></b>    | <p><b><u>Non-Bulk -</u></b> One unit for each package inspected. Use of this activity code requires the inspector to have total <i>access</i> to the entire package, and can determine compliance with all performance packaging requirements, including any associated closures.</p>   |
| <b><u>NFY</u></b>      | <b><u>H</u></b>    | <p><b><u>Notification of Nonconformance –</u></b> This activity code is used when a non-complying package is found on other than the responsible person’s property. The activity code is used to record the activity necessary to report non-compliance to the responsible person. The count is one unit for all related activity.</p> <p>Note: This code is used on a separate inspection report, prepared after the fact, in order to document the non-compliance to the responsible person.</p>  |
| <b><u>OBSERV</u></b>   |                    | <p><b><u>Reporting Non-FRA Defect or Observation-</u></b> This activity code is used when reporting that a shipper facility does not follow OEM recommendations, industry standards, or best practices while loading or unloading tank cars. Use this activity code with 173. 31 (d) and use source code D when discovered during an audit activity.</p>  |

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|--------------------|-----------------------|--|
| <b><u>ORI</u></b>  | <b><u>H</u></b>       | <p><b><u>Owner Records Inspection</u></b> – One unit for each inspection session. A subunit is used when examining records for a particular package whether it is one record or multiple records for a package. Example of Owner Records would include but not limited to maintenance record, car file, qualification record, 4-2, or R-1. The count is one Sub-unit per package regardless of how many records are examined for that package.</p> <p>This activity includes inspecting for changes in specifications for tank cars, any related valves, certificate of construction, reporting, and record retention requirements, etc.</p>   |
| <b><u>OTMA</u></b> | <b><u>H</u></b>       | <p><b><u>One Time Movement Approvals</u></b>– One unit for each Approval Reviewed. No subunits.</p>  |
| <b><u>OAP</u></b>  | <b><u>H</u></b>       | <p><b><u>Quality Assurance Program/Requirements for inspection and test of specification tank cars</u></b> – This activity code is used during audit activities to determine compliance with 49 C.F.R. § 179.7. Count one unit for the inspection or audit session, and one subunit for each element examined in the facility’s QAP manual.</p> <p>(See Section 4.4 Inspections Involving Multiple Inspectors or Days)</p>   |
| <b><u>RADX</u></b> | <b><u>H, O, T</u></b> | <p><b><u>RADAR Speed Monitoring</u></b> - Claim one unit for each radar speed monitoring session, including Coupling Speed Audits, regardless of the number of locomotives, trains, cars, etc., subject to the monitoring. Record each locomotive, train, or car movement monitored as one subunit. 49 C.F.R. § 174.86.</p> <p>Note: FRA and participating state employees must not perform radar monitoring sessions unless they received a certificate of qualification from an FRA employee who holds a current certificate as a stationary radar trainer. See Chapter 3 of the General Manual for a complete discussion of FRA policy.</p> |
| <b><u>RAM</u></b>  | <b><u>H</u></b>       | <p><b><u>Radioactive Materials</u></b> – One unit for each package inspected. This activity code is used for shipments of radioactive materials in Industrial, Type A, and Type B Packages. This activity code may only be used when assessing compliance with §§ 173.410 - 173.477.</p>   |
| <b><u>RBI</u></b>  | <b><u>H</u></b>       | <p><b><u>Roll-by-Inspection</u></b> –The purpose of this inspection is to determine compliance with trains transporting tank cars containing hazardous materials. This activity code is to be used when a TCT or TCL inspection cannot be performed for example as a train passes an inspector and he or she can observe possible non-compliances such as; leaking closures, un-applied manway eyebolts, un-applied bottom outlet caps or plugs, missing placards, etc. Record one unit for each train inspected and one subunit for each tank car observed in the train.</p>  |

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| <b><u>SWT</u></b>      | <b><u>H</u></b>    | <b><u>Handling of Placarded Rail Cars, Transport Vehicles, and Freight Containers</u></b> – The count is one unit for the entire inspection session. Use of this activity code must include an observation of railcars, transport vehicles, or freight containers that are subject to the requirements of §§ 174.82, 174.83, and 174.86.   |
| <b><u>TCT, TCL</u></b> | <b><u>H, M</u></b> | <p><b><u>Tank Car Inspection</u></b><br/> <b><u>(TCL)</u></b> One unit for each ground level inspection and does not include a top level inspection but does include an inspection of the bottom fittings (if so equipped) and the tank cars structural integrity.</p> <p><b><u>(TCT)</u></b>- In addition to the above inspection criteria, a comprehensive inspection includes a ground level inspection of both sides and performing a top level inspection. MP&amp;E inspectors should not report subunits</p> <p>**Use sub-unit for each comprehensive inspection of a tank car for both TCT and TCL.</p> <p>This activity code may only be used when assessing compliance with §§ 172.302(a)(1), 172.304, 172.502(a)(1)(i), 172.516(c)(2) and (6), 173.31, 174.50, 179, &amp; 180.</p> |
| <b><u>TPLH</u></b>     | <b><u>H</u></b>    | <b><u>In-Train Placement of Placarded Rail Cars, Transport Vehicles, and Freight Containers</u></b> - One unit for each train inspected to determine compliance with positioning in-train of placarded cars, 49 C.F.R. §§ 174.84 and 174.85.   |
| <b><u>TRHM</u></b>     |                    | <p><b><u>Train Riding</u></b> – One unit for each train ride. This activity is used to record train rides in conjunction with verifying compliance with the hazardous material regulations that are associated with but not limited to 174.9 inspections. Examples include but are not limited to hazardous material documentation, train crew inspection procedures of HM at points of origin, and general handling of HM.</p> <p><b>Note 1:</b> There are no defects nor violations associated with this activity code</p> <p><b>Note 2:</b> Inspectors will use the applicable activity code for recording defects and or violations.</p>   |
| <b><u>ULT</u></b>      | <b><u>H</u></b>    | <p><b><u>Tank Car Loading, Unloading, or Transloading Operations</u></b> - One unit for inspecting tank car loading, tank car unloading, or transloading operation. 49 C.F.R. §§ 173.31(g) or 174.67.</p> <p>Note 1: Use TC codes for tank car inspections.</p>  |

**Step 2. If a multi-discipline activity is performed, enter the appropriate code.**

**Authorized Multidiscipline Activity Codes**

| <b>Activity</b> | <b>Inspection Task &amp; Definitions</b>  | <b>Units</b>                            | <b>Sub-units</b>   |
|-----------------|---|---|--|
| <b>209</b>      | <b>Remedial Action</b> - Where appropriate, each time an inspector reports "remedial action reported" by a railroad. (See General Manual for guidance).   | One unit taken for each occurrence      |  |
| <b>215 D</b>    | <b>Freight Car Mechanical Inspections -</b> Inspection for freight car safety standards, safety appliance, and power brake compliance, for those conditions listed in Appendix D to 49C.F.R. Part 215.<br><b>Note:</b> If a HM or OP inspector finds Federal defects on a car, they must enter the appropriate defect code(s), and also use the appropriate MP&E activity code for each | One unit for each freight car inspected |  |
| <b>217E</b>     | <b>Emergency Order</b> - The code is used when observing conditions to determine compliance with the emergency order. Inspectors must explain the inspection in their narrative.  | Record one unit for each day            | Record one sub-unit for each associated record reviewed unless instructed differently by FRA HQ regarding a specific Emergency Order |

|                     |  |   |  |
|---------------------|--|---|--|
| <p><b>217 O</b></p> | <p><b>Other Operations Observations</b> - The unit covers those inspections not otherwise specified, such as 217L, 217R, and 217T (if those inspections are within the yard). Inspectors will claim a subunit for each crewmember, yardmaster, etc., continually observed provided the inspector made a conscious effort to determine compliance. The code is used when observing safety-related railroad employees performing duties covered under railroad operating rules or railroad safety rules, or when examining mandatory operating information posted at a facility.</p>   | <p>One count is one for an entire yard or equivalent facility</p> |  |
| <p><b>217T</b></p>  | <p><b>Tampering</b> - Tampering issues, except as provided in § 218.61<br/> <b>Note:</b> Tampering issues found on equipment not operated should not be recorded under 218T, but should be recorded under "comments to the railroad" and the</p>   | <p>One unit is recorded for each locomotive being operated</p>    |  |
| <p><b>229X</b></p>  | <p><b>Locomotive Cab Inspection</b> - Locomotive Cab Inspection – The activity code is to be used by other disciplines whose collateral duties require them to board locomotives, such as onboard inspections, discussing operations with crewmembers, etc. The inspection may include, but is not limited to; determination of locomotive daily inspection, passageway tripping hazards, cab sanitation, cab lighting, speed indicator check, and etc.</p> <p>Note 1: This activity code should be used for all locomotive inspections, including RCL.</p> <p>Note 2: If an inspector other than an MP&amp;E inspector finds Federal defects on a locomotive, they must enter the appropriate defect code(s), and use the appropriate</p> | <p>One unit is claimed for any locomotive assessment</p>          |  |

|                                |  |   |  |
|--------------------------------|--|---|--|
| <p><b>232</b><br/><b>O</b></p> | <p>Freight Train Brake Test Observation - Freight Train Brake Test Observation - Any brake test required by Part 232 observed by HM and OP inspectors. This activity code is used with all associated Part 232 defect codes, including for collateral activities such as examination of Class 1 air brake test records, and for inspection/evaluation of EOT devices. This activity code is used instead of any 217 activity codes.</p> <p>Note 1: This is the only freight train air brake test code HM or OP inspectors are permitted to use.</p> <p>Note 2: If an HM or OP inspector finds Federal defects on a car, they must enter the appropriate defect code(s), using the appropriate MP&amp;E activity code for each car with defective air brakes (232 or 232A).</p> | <p>One unit of inspection claimed for each train observed</p> |  |
|--------------------------------|--|---|--|

|                   |  |  |   |
|-------------------|--|--|---|
| <p><b>LTH</b></p> | <p><b>Life Tips</b> - When using this code, the inspector must write a brief description (two sentences or so) in the “Comments” section of the F6180.96 report.</p> <p><b>Example 1:</b> The Inspector attends a safety meeting to discuss railroad safety issues related to safe handling of hazardous materials in transportation. The meeting consists of one yardmaster and 20 T&amp;E employees. Record this activity as one unit under LTH, and 21 subunits.</p> <p><b>Example 2:</b> The inspector boards a locomotive and makes contact with a three person operating train crew. Work activities by the crew were disrupted by the inspector and the inspector advises the crew that a new job briefing must be performed and the inspector listens. Record this activity as one unit under LTH, and one subunit for each crew member.</p> <p><b>Note 1:</b> This activity code does not include an FRA inspector debriefing a railroad representative(s) in connection with an FRA inspection report (F6180.96).</p> <p><b>Note 2:</b> This activity code does not include attending meetings with short line</p> | <p>One unit for interacting with/briefing railroad or contractor employees regarding Federal regulations or issues regarding railroad safety</p> | <p>Count each member of the work group as a subunit</p> |
|-------------------|--|--|---|





## 5.2 Violation Report

When an inspector discovers a violation, and he or she determines that the best method of gaining compliance with the applicable regulation is a recommendation for a civil penalty, the inspector must complete an FRA Form F6180.110 (violation report) electronically and submit the report to his or her regional specialist.

### 5.2.1 Preparing the Violation Report

The following instructions must be strictly followed in the completion of FRA Form F6180.110:

*Respondent and RR/Co Code:* Name of the entity that the violation is against. This is taken from FRA Form F6180.96, Railroad/Company Name and Code. If needed, the name of the railroad or company can be keyed in manually.

*Name of Inspector:* The inspector's name and identification number are automatically filled in.

*Address of Respondent:* Address of entity is taken from FRA Form F6180.96; this cannot be keyed in manually.

*Violation Report Number:* The report number is entered by the inspector before the violation report is generated. Consecutive numbers are recommended. Duplicate numbers are not allowed and will result in an error.

*F6180.96 Report Number - Date:* The inspection report number and date are taken from the corresponding FRA Form F6180.96 and are automatically filled in. These cannot be changed.

*Location Where Violation was observed:* City, State, and respective GSA codes are taken from corresponding FRA Form F6180.96. These cannot be changed.

*Date Violation Occurred:* By default, the date the inspection report was created will be used, but this can be manually changed. To do so, enter the date of the violation or use the drop-down calendar. The date of the violation is the actual date of the triggering event and not necessarily the day the violation was discovered. For example, a violation for an improperly prepared shipping paper arises on the day the offeror offered the car for transportation.

*Train Designation:* Enter the train number, if applicable.

*Line Item No./Primary Section Violated/Number of Claims:* These are automatically filled in from the corresponding FRA Form F6180.96. To see additional line items, use the control arrows in the lower left-hand corner to scroll up and down.

*Violation Narrative:* This is an editable field and must include a narrative description of the violation, including all relevant facts and analysis sufficient to prove each element of a

violation. The following guidelines should be followed in writing the violation narrative: Do not reproduce or quote the regulation at issue in length, unless quoting a portion of it would assist the reader's understanding of the violation. If more than one page is needed to accurately describe and analyze the violation, attach a continuation sheet. The continuation sheet must be prefaced, "Violation Report Narrative - Continued."<sup>29</sup> Provide the following information, as applicable, in the violation report narrative:

- Car or container number should be clearly identified
- DOT specification of the tank car or general description of other transport vehicle (or if a bulk packaging, DOT specification or description of the packaging)
- Whether the violation involves a leak, injury, death, or evacuation, and if so, a description of the relevant facts surrounding the incident (e.g., extent and nature of leak, extent and nature of injury, extent of evacuation)
- If the retest dates or improper stenciling are involved, a description of what was improper about the stenciling or dates (include photos to support observations where appropriate)
- Car movement history (where applicable)
- Proof of "triggering event," which forms the basis for liability (e.g., party cited performed an offeror function not in compliance with the HMR; party cited transported the HM package at issue, etc.)
- The causal relationship between cited party and the violation<sup>30</sup>
- Citation to the regulation(s) violated and why the defect noted violates that regulation (it is unnecessary to quote the regulation unless quoting a portion of it would assist the reader's understanding)
- The Offeror (if applicable) should be clearly identified, including:
  - Name and address (corporate headquarters if possible).
  - Brief description of organization (size, type of business).
  - Compliance history, including any knowledge of previous inspections, violations, discussions, and quality of procedures for loading/unloading HM (if applicable).

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<sup>29</sup> For identification purposes, the "Detail of Violation(s) Continued" and any other attachment to the report must have the violation report number typed in the upper right-hand corner of each sheet. Example: CEK 175.

<sup>30</sup> This may need to be expanded upon. For example, if considerable time elapsed between shipment and inspection, explain why a loose closure can fairly be attributed to the cited offeror (e.g., by explaining that seals were intact, there was no evidence of post shipment vandalism, and/or the nature of the defect indicated it must have occurred as the result of the offeror's failure to properly close all openings). If several actors played a part in the shipment and transportation of the HM, it is useful to explain why a particular party is being cited.

- The HM being transported should be clearly identified, including:
  - Proper shipping name, hazard class, identification number, placarding, and brief description of the nature and hazard of the product.
  - Description of the gravity of the violation as it relates to the product involved.
- Corrective Handling
  - Report the name, title, and affiliation of any person contacted by the inspector in connection with the violation (except complainants who have not signed a witness statement), and include a summary of all conversations between the inspector and any such person. In particular, report any oral admissions concerning the violation made by any representative of the person committing such violation. Report such conversations in an objective manner without interjecting your opinions on the representative's character or veracity. Obtain signed witness statements when possible, or record verbal admissions of liability in reports of interviews, as appropriate.
  - Report repairs made to cars or packaging (as applicable), plus any emergency response, if applicable.

Inspectors should bear in mind that RCC is required by law to take into account certain factors in determining the amount of civil penalties to be assessed for a particular violation. These factors are as follows:

- The nature, circumstances, extent, and gravity of the violation committed; and, with respect to the person who committed the violation:
  1. The degree of culpability.
  2. Any history of prior offenses.
  3. Ability to pay.
  4. Effect on ability to continue to do business.
  5. Other matters as justice may require.

The violation report should contain as much information as possible bearing on the proper application of these factors.

Inspectors should also bear in mind the distinction between knowledge of the law and knowledge of the facts constituting the violation. Knowledge of the law is presumed in the case of a corporate respondent, but an individual must be shown to have had knowledge of the regulation(s) involved or to have recklessly disregarded the law before enforcement action may be taken (see below). Each violation report must also contain evidence demonstrating that the respondent had knowledge of all the facts that constituted the violation. The Federal HM transportation law's civil penalty provision, 49 U.S.C. § 5123, makes liable only those persons

who have “knowingly” committed an act in violation of the statute or regulations. In this context, “knowingly” means that the respondent (1) had actual knowledge of the facts or (2) had the respondent exercised reasonable care under the circumstances, the respondent would have known of the facts.

Violation reports should be concise and state only those facts that pertain to the violation. All narrative information should be listed in chronological order. A report recommending prosecution should never contain a statement indicating that it resulted from a complaint investigation or refer to a witness as a complainant.

Every violation must be reported to the violator or his/her appropriate representative, by serving that person with a copy of the inspection report at the earliest possible time. Subsequently, in the associated violation report, the inspector should state to whom and when the violation was reported.

Recommendations for prosecution against different respondents must be submitted as separate violation reports.

If a regulated HM function is performed by an agent for another entity, the narrative of the report should explain as fully as possible the relationship between the agent and the other entity, and the violation report should provide sufficient evidence of the agent’s (or principal’s) culpability. If an inspector determines that civil penalties should be recommended against both parties, each violation report should address the culpability of the party cited in the report and why, despite the action (or inaction) of the other party, a civil penalty is justified. In some instances, the culpability of one party may be so low, and that of the other party so high, that seeking a civil penalty against the first party might not serve any deterrent purpose. The “Transmittal from Region” (TFR) sheet should note any related reports in the “Related Violation Report(s),” block in order for readers to be aware of the relationship between the reports.

If all of the elements of the violation cannot be proven by the inspector’s personal observations, documented admission statements by the person to be charged (e.g., a manager’s admission that the violation occurred as alleged), or by documentary or physical evidence, there must be a witness to the violation (i.e., at least one person with knowledge of the violation) who is willing to testify on behalf of the United States concerning the violation and who specifically authorizes the use of his or her signed statement in an enforcement proceeding.

Where one or more elements of a claim are based on a witness statement (which must be on the prescribed form), The transmittal sheet for the violation report must be marked with an “X” on the “Witness Statement” line.

If the violation is the result of a complaint investigation, the report must never disclose that fact. The name of the complainant or a job description must never be referenced in any portion of the report or attachments.

Every violation report should include a “List of Exhibits” identifying what supporting documentation is provided with the report and if it would aid in the reader’s understanding of the report, the violation report narrative should reference specific attachments.

Photographs that actually show the violation are strong evidence and may make the difference between sustaining a violation and having it severely compromised in the claims collection process<sup>31</sup>. In his or her electronic submission an inspector should include the photographs as attachments to the report and include an explanation of what is in the photographs or what the photographs are showing<sup>32</sup>.

The violation report should include the name of the person notified of the violation at the regulated entity. That person’s title and the date of the notification should be included.

*Date Report Prepared:* The date the violation report was prepared. This date can be modified manually.

*Signature of Inspector:* This field is only seen on the printed report. Sign the form when complete.

*Respondent Notification:* Entity representative name and title taken from FRA Form F6180.96, if available. If not present on FRA Form F6180.96, then these can be keyed in manually. The date and time must be filled in. The date cannot occur prior to the inspection date.

## 5.2.2 Submission and Arrangement of the Violation Report

### **Electronic Violations**

January 2013, RRS started transmitting electronic violations (paperless) to RCC for processing to comply with the 2011 Executive Order 13589, Section 5, Promoting Efficient Spending—which required agencies to reduce costs associated with printing and shipping. The electronic submittal process may vary region to region.

Each violation report must be packaged together with the relevant inspection report and all supporting data. The inspector must prepare the violation report and submit it to his or her

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<sup>31</sup> The inspector must never tamper with the evidence, such as removing pipe plugs on tank cars to show that they are loose. The proper evidence for showing loose closures may include the following: a signed witness statement, a railroad repair record, or notes taken by emergency response personnel during a HM emergency.

<sup>32</sup> FRA’s authority to take pictures within areas under inspection is clear. This counters objections from shippers and carriers that their rights of privacy or their proprietary rights within a plant would be violated by photographs taken by an inspector. Even if the equipment to be photographed is protected under trade secret laws, FRA is still authorized to take photographs to carry out its regulatory enforcement objectives. FRA cannot execute a confidentiality agreement, but the agency might be able to treat the photographs as confidential, provided the regulated entity makes a request for confidential treatment. The process by which the private entity can make this request is set out at 49 C.F.R. § 209.11. As with all objections to an inspector’s presence or activities, the inspector should withdraw and contact the regional specialist and Regional Administrator, together with RCC.

Regional Specialist, in electronic format, in accordance with these instructions and any instructions identified with the applicable region's policy. (Depending on the region's policy, individual inspectors may be required to generate a TFR for each report or the regional office itself may do so).

When submitting the violation report, the report and attachments must be assembled together as follows:

1. FRA Form F6180.110 (violation report)
2. List of exhibits in bullet form
3. Detail of violations continued
4. FRA Form F6180.96 (inspection report, Railroad Copy)
5. FRA Form F6180.96 (continuation sheet)
6. Other exhibits in order of relevance (including any witness statements, photographs, etc.) providing evidence and supporting the factual statements in the violation

See Appendix C for step-by-step instructions.

### **5.3 Notice to Individual of Alleged Violation**

“Notice to Individual of Alleged Violation” (FRA Form F6180.80) should be used by all RRS technical staff to provide notice to individuals regarding violations of Federal railroad safety laws or regulations. The form is designed to serve one of two purposes. First, the form provides the individual involved with timely written notice that FRA believes he or she violated a Federal law or regulation and that he or she should consider the notice a warning that any such future violations could lead to FRA enforcement action, but also that further action will not be taken for the specific violation identified.

Secondly, where a regional warning is deemed insufficient, FRA Form F6180.80 provides a timely written notice to individuals of FRA's decision that they have violated a Federal law or regulation, and that formal further enforcement action is being recommended for the specific violation(s) identified.

Issuance of this form does not require headquarters approval unless there is doubt about the proper individual to be charged or whether the facts of the circumstances amount to a violation. FRA does not want a “Notice to Individual of Alleged Violation” issued to an individual whose violation was compelled by a superior. If the inspector has properly determined that a railroad, offeror, or contractor employee has committed a violation and that employee asserts, or facts otherwise indicate, that a violation resulted from compliance with orders from a superior, that employee must be given an opportunity to provide evidence to support such an assertion. If such evidence is provided by the individual or otherwise uncovered, the inspector will investigate

those in the railroad's or other regulated entity's chain of command to properly determine culpability. Such an investigation must be conducted very carefully to ensure that the individual noncompliance is properly determined. Inspectors should consult with their Regional Administrator, RRS headquarters staff, and RCC for guidance prior to finishing this type of investigation.

### 5.3.1 Preparing the Notice to Individual of Alleged Violation

The following instructions shall be strictly followed in the issuance of FRA Form F6180.80:

*Subject:* Enter "Hazardous Materials."

*Violation of 49 C.F.R.:* Enter the applicable part, rule, and subrule.

*F6180 Report Type & No:* Enter the applicable inspection report type and inspector's sequential calendar year number as submitted to the railroad/offeree to document the inspection or investigation during which the violation was established.

Any violation by an individual is also a violation by the employing railroad or offeror, which may be the subject of a separate enforcement action. This corporate noncompliance needs to be properly recorded. Accordingly, inspectors are required to complete an inspection report (e.g., FRA Form F6180.96) concerning the noncompliance, and submit a copy to the railroad or offeror involved. This report will include notation of the fact that a specific individual violated a Federal law or regulation. This notation does not raise Privacy Act concerns because it is not a part of or taken from a system of records concerning individuals, and does not indicate what action, if any, will be taken against the individual.

*Violation recommended:* If a regional level warning is recommended, mark "X" in the "NO" box. If an RCC warning letter or civil penalty is recommended, mark "X" in the "YES" box.

*Name:* Enter the last name, first name, and middle initial of the individual.

*Address:* Enter the individual's street number, street name, apartment number, box number, or any other valid mailing address information.

*Social Security Number:* Enter the individual's Social Security number. As indicated in the Privacy Act notice, disclosure of the Social Security number by the individual is voluntary.

*Date of Birth:* Enter the individual's date of birth, using two digits each for the month, day, and year. For example, January 21, 1960, would be entered as 01/21/60.

*Job Title of Individual:* Enter the individual's job title. The inspector will request that the individual present proof of his or her identity, such as a valid State vehicle operator's license. The individual is required to provide all information; however, disclosure of the individual's



Social Security number is voluntary. If the individual refuses to provide any of the requested information, including the Social Security number, the inspector will secure the information from the individual's employer. If the employer is not cooperative, the inspector will contact RCC, through the Regional Administrator, for guidance.

*Time and Date of Violation:* Enter the time the violation occurred, including "a.m." or "p.m."

Enter the date the violation occurred using two digits each for the month, day, and year as shown in Date of Birth, above.

*Time and Date Individual Notified:* Enter the time and date the individual was orally advised by the inspector of the facts, including the fact that the inspector intended to recommend that a formal notice be issued to the individual. Use the format specified in Date of Birth for these entries.

*Location of Violation:* Enter the city or county, and State where the violation occurred. Enter the city or county, and State GSA location codes.

*Operating RR Code:* Enter the alpha code of the railroad or offeror that is responsible for the operation at the location where the violation occurred.

*OPR Division Code:* Enter the railroad division code of the railroad that is responsible for the operation at the location where the violation occurred.

*Employing RR Code:* Enter the alpha code of the railroad that employs the individual. If the individual is employed by an offeror or contractor, enter "N/A" and enter the employer's name first in the summary of the violation.

*Employing Division Code:* Enter the division code of the employing railroad where the individual's regular reporting location is located. If a railroad is not the employer, enter "N/A."

*Summary of Violation:* Enter a summary of the circumstances of the violation. This summary must contain the facts and why it constituted a violation. If more space is needed, attach a typed continuation sheet. If a continuation sheet is attached, the inspector will note this fact in this section. This section should not be the detailed discussion of facts, culpability, and compliance history required on a violation report. The purpose is merely to summarize what the individual did. In the same manner as in an inspection report or in a violation report, the name of any complainant—or even the fact that a related complaint exists—should not be mentioned.

The remainder of the form is self-explanatory. If two inspectors observed or determined the violation, both must sign the FRA Form F6180.80. The date the report is prepared and mailed will be entered by the regional office, or headquarters, prior to mailing the form to the individual.

### 5.3.2 Guide to Preparation of Violation Reports Against Individuals

In any violation report recommending assessment of a civil penalty, issuance of a warning letter, or disqualification, the FRA inspector should address the following subjects (in memorandum format) under separate headings:

*Factual details* - All factual details of the violation(s) must be explained, with specific references to sources of proof if other than the inspector's own observations. The Violation Report (FRA Form F6180.110) should not be submitted but should provide some assistance as a guide to the basic facts that must be explained.

*Severity of the violation(s)* - The memorandum should describe in detail any harm (e.g., derailment, personal injury, leakage and/or evacuation) that resulted from the violation or was seriously threatened by the violation. Any aggravation of the offense caused by the degree of the violation should be discussed here.

*Culpability of the individual* - Keep in mind that a civil penalty may be assessed against an individual only if that individual has actual knowledge of the law or acts in reckless disregard of legal requirements. This section addresses four factors:

- Knowledge of the facts -The memo should explain whether the individual, with regard to each alleged violation, actually knew or had a duty to know of each fact constituting the violation. If actual knowledge (e.g., insecure closures) is alleged, explain what supports that allegation (e.g., a crewman's conversation with a yardmaster in which the crewman pointed out the defect). An admission of knowledge is not necessary, but there must be sufficient information from which the reasonable inference is that the individual knew of the facts. If the allegation of violation consists of a failure to meet a duty to know the facts, explain the basis for concluding that the person had the duty and failed to meet it (e.g., an offeror's employee assigned to inspect a tank car prior to shipment does not fully complete his/her task and fails to discover obvious defects).
- Knowledge of the law- Explain what the individual knew of the particular law allegedly violated. Had it been discussed with FRA prior to the incident? Had the person been trained on the particular law or corresponding railroad or offeror rules? Is the requirement of the law so fundamental to safe transportation of hazardous materials by railroad that any violation of the law should be seen as reckless disregard of the law?
- Compliance history - Address previous enforcement actions against or warnings (even informal) given to the individual concerning compliance with the particular requirement(s) now violated. Address other railroad safety laws, and any railroad disciplinary record relevant to compliance with safety requirements.
- Mitigating factors (if any) - In some situations certain factors will be present that tend to lessen the severity of the violation or the culpability of the individual (e.g., the

requirement was new and the individual had not been fully trained on it). These factors should be addressed in fairness to the individual.

*Recommendation* - Briefly state the inspector's recommendation of a warning letter, civil penalty, or disqualification from safety-sensitive service, as appropriate.

Note: The inspector should keep in mind that he or she may be called on to testify under oath each allegation in a warning letter or individual liability violation report, either before an administrative law judge or in Federal district court. The inspector should take great care to substantiate all assertions because the individual's livelihood is at stake.

## 5.4 Special Investigations

### 5.4.1 Hazardous Material Incident Investigation (HMII)

Results of HMIIs must be reported on Form FRA F6180.96 along with Activity Code HMII. Inspectors must forward a report for any assigned investigation activity, other than complaint investigations, involving hazardous materials (e.g., NRC reports, 5800.1 reports, state notification reports, or OTMA reports) within 60 days, or as otherwise set forth by regional supervisory railroad safety specialist (HM). At a minimum, the following information must be gathered as part of the investigation:

#### *Incident details*

- Date of Incident: Enter the day, month, and year (DDMMYY) of incident.
- Reporting Marks: Enter the initials and numbers of transport vehicle.
- Location State: Enter the State where incident occurred.
- Location City: Enter the city where incident occurred.
- Railroad: Enter the primary railroad involved.
- Railroad Code: Enter the FRA assigned alpha code.
- Offeror: Enter the actual loader/unloader responsible for noncompliance.
- Company Code: Enter the FRA Office of Railroad Safety assigned alpha code.
- Offeror's Location State: Enter the State where transport vehicle was offered into transportation.
- Offeror's Location City: Enter the city where transport vehicle was offered into transportation.

- Material: Enter the proper shipping name of material released from the transport vehicle or contained in the transport vehicle.
- UN/NA Number: Enter the appropriate UN or NA identification number for the material.
- Transport Vehicle Type: Enter the appropriate information to identify the type of packaging involved. Examples include; DOT, AAR specification, or other applicable type (e.g., IM 101, Trailer/Container, etc.).
- Date of Construction: Enter the date of construction from original certificate of construction or stenciling on the transport vehicle.
  - Copies of the following reports, if available, must be obtained as part of the HMII Investigation:
    - ✓ NRC Report
    - ✓ Form 5800.1 Report
    - ✓ OTM Report
    - ✓ State Notification Report

Note: If material was not hazardous, there is no need to take further action unless directed to do so by the supervisory railroad safety specialists (HM).

*Investigation and findings*

- Date: Enter date investigation was initiated.
- Person Contacted: Enter name and job title of person contacted.
- Company: Enter the name of the company employing the person contacted.
- Location City and State: Enter the city and State of the above-referenced company.
- Narrative: Enter a brief summary of the circumstances of the incident, including the probable root cause(s) of the incident and ensuing discussion about the nature of the incident and measures to prevent future occurrences.
- Enter the date and person contacted along with the contact information (company, city and State) responsible for implementing corrective measures in preventing future occurrences of NARs.

## 5.4.2 Special Permit Recommendations/Fitness Evaluation Recommendations

Assigned fitness evaluation/recommendations must be reported using a memorandum or other suitable regional reporting mechanism. The report must outline the application, the entity seeking a Special Permit, its fitness, regional recommendations, and any other information relevant to the Special Permit sought. Inspectors should submit one copy with all relevant supporting evidence to the regional HM specialist. Regional specialists must forward an electronic copy or a paper copy of the report to headquarters for handling.

## 5.4.3 Complaint Investigation

In accordance with the General Manual, complaint investigations should be reported on a memorandum with the assigned complaint number in the upper right hand corner, and using the source codes recorded on the inspection report form.

*Inspector Responsibility:* The report should describe the circumstances encompassing the report (see “Violation Narrative” under Section 5.2.1 entitled “Preparing the Violation Report” for information requirements).

*Regional Responsibility:* When submitting the completed investigation to the FRA headquarters office, the complaint investigation will include a complaint closeout letter. The closeout letter will indicate if a violation was discovered.

## Chapter 6 – Inspector Safety

### 6.1 Introduction

By the very nature of an inspector's employment, an inspector is frequently exposed to an environment where safety is paramount. Inspectors work with HM that have been found to present some level of inherent risk to the safety of personnel and/or the environment. Further, inspectors are representatives of the agency responsible for the safety of HM in transportation. Therefore, inspectors are required to set a good example.

FRA's Industrial Hygiene Division, under the direction of the Staff Director and regional industrial hygienists, together with the FRA Safety and Health Committee, published "Safe at Work, Federal Railroad Administration Safety Policy, Procedures, and Recommendations." This manual can now be accessed on the FRANET site, Under the FRA Safety and Health Committee.

### 6.2 Basic Safety Practices

Below is a list of mandatory safety practices. The safety practices may not be waived without the permission of the Staff Director, HM Division.

- At no time will inspectors knowingly open HM packaging to the point where HM are exposed. Inspectors may open combination packaging to view the inner packaging. However, the inner packaging may not be breached without advanced permission from the Staff Director, HM Division. The combination packaging can only be opened if it can be restored to its original condition, i.e., closed in a manner consistent with the manufacturer's instructions. If it is necessary for inspectors to confirm the condition of HM, inspectors may request that the owner open the package (if proper facilities are available). Investigators should not force an owner to open the package if the owner states that it is unsafe to open the package.
- At no time are inspectors to open any level of packaging containing explosives, radioactive materials, or infectious substances.
- When opening vans, freight containers (FC), box trailers, and other enclosed transport vehicles that contain HM, inspectors must secure the transport vehicle's door with a safety strap before opening the door. Inspectors must wait several minutes for an air exchange to take place within the vehicle. (Some HM give off vapors that permeate through the package.) Inspectors must ensure loads have not shifted against doors and if load shifting has occurred, inspectors must look for spillage.

Inspectors must visually inspect contents from outside a vehicle's door. If inspectors do not see the HM packages or inspectors suspect a noncompliant issue internally within the container, the inspector should contact the intermodal operator, carrier official, or person/s in possession of the

freight container, box trailer or other closed transport vehicle. As a result of this communication, an inspector should be able to gather required information for the inspection and/or investigation taking place.

- Inspectors should not enter an enclosed FC with HM due to the potential for cross contamination and potential for limited egress in the event of a small release or cargo shift.
- Inspectors should never handle leaking packages of HM.
- Inspectors should never enter a permit-required confined space. A permit-required space has one or more of these characteristics:
  - Contains or has the potential to contain a hazardous atmosphere
  - Contains a material with the potential to engulf someone who enters the space
  - Has an internal configuration that might cause an entrant to be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross section
  - Contains any other recognized serious safety or health hazards

A tank car is, by definition, a permit-required confined space, as it has the potential to contain a hazardous atmosphere. It is the responsibility of the holding facility to properly ventilate and test the atmosphere within the tank car in accordance with its own OSHA-mandated Permit-Required Confined Space Program. If the permit-required confined space can be reclassified for entry or entered under alternate entry procedures, FRA inspectors may enter the confined space.

Inspectors are expected to use the following safety practices while inspecting or working around rail equipment:

- Cautiously climb on top of cargo tanks, tank cars, or portable tanks; surfaces may be slippery from water, oil, ice, or snow. Inspectors must not proceed if inspectors believe the surface is unsafe.
- Specific to tank cars, cautiously open Combination Housing or Protective Housing to inspect top fittings (leaking fittings may cause a build-up of noxious or irritating vapor inside of the housing). Allow 15 to 20 seconds to pass for vapor build-up to escape the housing.
- Wear leather work gloves when handling freight.
- Bend knees and keep backs relatively straight when lifting; inspectors should not bend over at the waist to lift. Inspectors can quickly injure their backs by lifting improperly and they should ask for assistance when moving around freight.

- Use stairs or ramps to go down to ground level from a loading dock; inspectors should never jump down.
- Always wear eye protection in manufacturing and industrial environments, as appropriate.
- Wear ear protection (required in many manufacturing and shipping facilities).
- Be aware of vehicles operating in the area—ports and warehouses area heavily trafficked by vehicles.

Inspectors should remain aware of all safety practices in the course of their daily activities. Inspectors should always be aware of their surroundings and use good judgment. Inspectors should check with their supervisor when they are unsure about a safety practice.

### **6.3 Accident/Injury Reporting**

Inspectors must report all injuries (including small injuries such as cuts and scrapes) to their supervisor immediately. In a chemical environment, small cuts can easily become infected. Reporting injuries will preserve inspectors' right to workers' compensation and other employee benefits they may be entitled to receive.

### **6.4 Personal Safety**

During the course of an inspector's work, which is often in the area of enforcement, people are not always happy to see inspectors. This is especially true if people have not been conducting business in accordance with the HMR or if they have been cited for violations of the HMR in the past. Most people under investigation are professional. However, some people under investigation are overly emotional.

If an inspector encounters a situation where someone becomes overly aggressive or threatens an inspector with violence, the inspector should depart the area, go to a safe place and contact his or her supervisor. Supervisors will consult with RCC and RRS to determine how to proceed.

If an inspector is struck or assaulted in any way, he or she should contact the local law enforcement agency and his or her supervisor immediately. Supervisors will contact the HM Staff Director and RCC.

Inspectors should maintain vigilance regarding their surroundings and the environment.

Inspectors should also monitor personal interaction with the individual under investigation, including that person's bearing toward the inspector's profession, gender, and/or race.

Inspectors should be prepared to react appropriately and never engage with persons acting aggressively.



## 6.5 Operating Nongovernment Equipment

An inspector will not operate any piece of railroad, contractor, or company equipment. This prohibition specifically includes railroad operating and/or maintenance equipment, switches, bridges, etc. ***There is no exception to this rule.*** An inspector may, however, request that a railroad, contractor, or company move a piece of equipment to facilitate an inspection or investigation. Note also that this prohibition does not apply to handling office equipment used exclusively to perform administrative functions; handling or opening of packagings authorized under the DOT's enhanced authority; or opening and closing doors in the course of an inspector's normal duties.

## 6.6 Offering Advice on Handling Damaged Cars

An inspector will not offer advice or instructions, become involved in any advisory capacity, or direct the handling of damaged railcars. However, during emergency response and recovery operations, an inspector may warn the incident commander/on-scene coordinator if, in the inspector's judgment, an imminent hazard exists and the inspector may refer responders to published DOT guidance outlined in Technical Bulletin G-08-01, "Policy Regarding Intervention When FRA Personnel Observe Railroad Employees Performing Unsafe Acts."

## Chapter 7 – Removal, Replacement, and Recording of Car Seals<sup>35</sup>

### 7.1 Authority

Federal law permits FRA inspectors to inspect records and property related to railroad safety, including HM transportation safety. The Federal HM statutes authorize inspection, “at a reasonable time and in a reasonable way,” of records and property related to the transportation of HM in commerce; the Federal railroad safety law authorizes, “at a reasonable time and in a reasonable way,” inspection of “railroad equipment rolling stock, operations, and relevant records.”<sup>33</sup> Conducting inspections in a reasonable way requires, among other things, that seals be replaced in kind to maintain equivalent security.

FRA orders Customs-Trade Partnership Against Terrorism (C-TPAT) compliant seals for use by its inspectors. Below is a photograph of seals currently used by FRA personnel. Seals purchased prior to 2011 by FRA are not C-TPAT compliant and are not to be used by inspectors.



FRA exercises its HM authority over any facility, package, or document where there is reasonable, articulable belief that HM is present. When an inspector makes a determination that a car seal must be removed, the inspector must follow the procedures listed below.

### 7.2 Security

FRA seals issued to inspectors must be kept in a secure location and each inspector must maintain control of his or her seals at all times. Inspectors may use seals from other agencies (e.g., the Federal Highway Administration) when conducting joint inspection activities with those agencies.

<sup>33</sup> 49 U.S.C. §§ 5121(c)(1) and 20107(b).

Inspectors must provide positive control of a shipment after a seal has been removed and until the shipment is resealed. Positive control means remaining with the item of inspection until it is resealed.

When accompanied by railroad personnel, inspectors should, of course, offer the railroad employee the opportunity to remove and replace any seals necessary to be broken for inspection. This process allows carriers to maintain seal control for their security purposes. If the railroad employee cannot or will not remove and replace seals, the inspector should do so consistent with the needs of his or her inspection.

### 7.3 Records

Office of Technical Oversight headquarters staff must maintain a record of seals issued to the regions. Each regional specialist must maintain a record of seals issued to individual inspectors. Transfer of seals by one inspector to another inspector must be reported to the regional specialist for inventory control.

Inspectors must record seal usage on carrier and/or shipper reports in the report blocks dedicated for such purposes. In addition, the seal number must be recorded on the relevant resulting inspection reports, including reports notifying an entity of a recommended violation.

For seals removed on non-defective cars, the inspector must also record seal usage in the appropriate blocks along with the applicable tank car number on their inspection report/s. Inspectors should be sure to checkmark the “Comments to Railroad/Company,” box on the line description.

### 7.4 Replacement Standards

When removing seals, inspectors must ensure that the replacement seal provides an equivalent level of security. For example, a high-level cable seal must not be replaced with a low-level tin seal. If the inspector is unable to provide this level of security, **the seal must not be removed**. The carrier, facility representative/agent, or another government agency may provide and apply the seal.

### 7.5 Notification

Shippers are notified of the removal of a seal or seals in one of two ways: (1) if a defect is reported on an FRA Form F6180.96, the report must include the identifying mark (letters or numbers) of the removed and replacement seals or (2) if no defect is found, the presence of an agency-issued FRA seal will be deemed adequate notice that an FRA inspector has removed a shipper seal to inspect for compliance. Note, for traceability purposes, inspectors must follow the guidelines in Section 7.3 for all seal removal and replacement on both defective and non-defective seal replacements.

The railroad and shipper must be given written or verbal notification at an early and convenient time that a seal on one of the cars in its possession has been replaced. The details to be furnished are described in Section 7.3.

## **7.6 Procurement**

Seals will be procured by headquarters staff and issued to the regional staff. FRA seals will be marked with lettering to indicate the agency, followed by a serial number, e.g., USDOT FRA 0001.

## **7.7 Removal Safety**

Seals may be removed by an inspector using government equipment, or by the accompanying person using his own or her own equipment. Inspectors must not use carrier/facility equipment to remove seals.

When removing seals, inspectors must, at a minimum, wear safety glasses and work gloves.

## **7.8 Accountability**

Seal supplies stored by headquarters, regions, and inspectors must be kept secured and inaccessible to non-agency personnel.

## **7.9 International Shipments (in Bond)**

Seal removal from international shipments must be informally coordinated with the regional office of the U.S. Department of Homeland Security's Border and Transport Security Directorate (BTSD). Inspectors must contact the Bureau of Alcohol, Tobacco, Firearms, and Explosives before breaking an "in-bond" seal on an alcoholic beverage shipment; and inspectors must follow instructions provided by the Bureau of Alcohol, Tobacco, Firearms, and Explosives.

## **7.10 Discovery of Contraband**

If an inspector discovers evidence of possible contraband, the inspector must immediately contact the BTSD, local law enforcement agencies, and the FRA regional office.

## **Chapter 8 – Enforcement and Compliance Program and Tools**

RRS emphasizes use of data-driven safety analyses. For example, the NIP is a tool that provides information regarding the most serious railroad safety concerns. Accordingly, the NIP promotes effective use of RRS resources. Use of RRS data analyses facilitates a successful, results-oriented, FRA enforcement and compliance program.

### **8.1 Railroad System Oversight**

Railroad System Oversight is one of FRA’s tools to achieve regulatory compliance, encourage railroad labor and management participation in developing measures to enhance safety, and foster an environment that improves the safety of railroad operations. Safety issues and concerns addressed by this process include those that may result from a lack of systemic control, whether manifested across an entire system, or regional or local in nature. The FRA Railroad System Oversight Manager (RSOM) acts as FRA’s safety advocate with senior-level railroad managers and labor organizations. Liaising and collaboration with labor and senior railroad managers facilitates resolution of nonregulated safety problems. Noncompliance with established regulations is generally addressed through standard FRA regulatory enforcement.

### **8.2 Focused Enforcement**

“Focused enforcement” means using FRA’s limited enforcement resources to address the most serious and persistent compliance problems. FRA accomplishes this by using information from regional based inspections (RBI) indicating consistent and recurring compliance issues. To be effective, RBI data must be accurate (include the correct name and address of the appropriate company).

FRA inspectors should also use FRA’s accident, injury, and inspection data (available on FRA’s secure site), as well as data available from other sources (e.g., PHMSA) to gain insight into the types of violations that cause large numbers of accidents, incidents, and/or injuries. The data equips inspectors to weigh the discretion criteria concerning the inherent seriousness of violations and the level of risk posed in specific circumstances. At the same time, an inspector’s direct observations and experience are part of enforcement decisions. Activities conducted in this area are recorded as Source Code D (“Special Inspections or Investigations”).

Appendix F, “Risk-based Shipper Facility Inspection Protocol: Development of a Model and Results of its Application to FRA Regions,” details a risk-based model for prioritizing the inspection of shippers’ facilities in each FRA region.

### **8.3 Unusual Problems, Occurrences, or Emerging Issues**

An inspector should notify his or her supervisor of any unusual problems or occurrences related to an inspection, and as appropriate, the supervisor should consult with the HM Division Staff Director. Unusual occurrences should be documented using email, the inspection report, or memorandum.

Emerging issues are significant events or developments that, in the opinion of an inspector or the Specialist, may affect the safety of an operation. Examples include, management changes at a facility, increases in production, and new product lines (especially at chemical facilities). Emerging issues should be conveyed to the Staff Director and discussed at the quarterly Specialist Meeting.

#### 8.4 Imminent Hazard/Potential Violations

The term “imminent hazard” means the existence of a condition relating to HM that presents a substantial likelihood that death, serious illness, severe personal injury, or a substantial endangerment to health, property, or the environment may occur before the reasonably foreseeable completion date of a formal proceeding begins to lessen the risk of that death, illness or endangerment. (See 49 U.S.C. § 5102(5)). Occasionally, an inspector may encounter a situation involving an imminent hazard or the possibility that someone intends to violate, or continue to violate, the HMR. In such situations, an inspector needs to take appropriate action to promote safety, but be careful to not act outside of the scope of his or her governmental duties. If an inspector believes an imminent hazard related to the transportation of HM exists, the inspector should follow these general principles:

**\*DO:** Advise parties of the potential imminent hazard, the applicable regulatory requirements and penalty consequences of noncompliance. Advise an emergency response agency of an imminent danger if no one else has done so.

**\*DO NOT:** Order or direct a party to take (or not to take) a specific action if that party’s actions are clearly contrary to the HMR and could reasonably result in severe consequences including death or injury.

If, due to the gravity of the immediate situation, an inspector orders or directs a party, the inspector should immediately notify his or her supervisor of the circumstances, the inspector’s analysis of the situation and resulting decision, as well as the potential consequences if the inspector had not interceded.

Inspectors should advise involved parties of applicable regulatory requirements and prohibitions, but inspectors must be careful not to order, direct, instruct, or mandate that particular actions be taken. **Ordering, directing, instructing, or mandating that an action be taken is beyond the scope of an inspector’s authority and could result in the imposition of personal legal liability.**

An inspector may advise a party that failure to comply with the regulations could result in the imposition of civil penalties.

When a party requests additional reasons for the party to comply with the regulations, an inspector may explain that, because the party has now been advised about what the regulations require or prohibit, the party’s subsequent violation of those regulations could be considered “willful” and thus subject to possible criminal prosecution. There is a significant difference

between (1) telling someone what the regulations require or prohibit and (2) ordering someone to do something or prohibiting someone from doing something. The latter actions carry the risk of a legal action against an individual inspector for acting outside the scope of his or her official government duties.

The difference between telling someone what regulations require and ordering someone is illustrated in this example. Assume that an inspector discovers HM on a company's shipping dock in non-approved or non-conforming packaging. The shipment does not comply with the regulations and it appears that further transportation of the packaging is likely. You should advise the company (1) of the shipping requirements for the HM involved, (2) that failure to comply with those regulations could result in a substantial civil penalty for the offeror and carrier, and (3) if necessary that the company and its individual employees may be held personally liable or subject to criminal prosecution if they proceed to willfully violate the regulations. Inspectors should not prohibit the company from shipping the HM until they are properly packaged. The distinction between advising and ordering is so critical that an inspector should also explicitly state that the inspector is not ordering or prohibiting a specific action.

In the example, the inspector might say:

The regulations, specifically 49 C.F.R.\_\_\_\_\_, require these hazardous materials to be shipped and transported in UN standard packaging, specifically \_\_\_\_\_. If they are shipped or offered for transportation in packaging that does not meet those requirements, the company, you, and others involved may be subject to a civil penalty of up to \$50,000 per violation, \$100,000 if someone is injured or killed. Also, the carrier is likely to be subject to similar civil penalties. In addition, because I have now told you what the regulations require, if you go ahead and ship these hazardous materials in this packaging, you, personally, and the company, may be subject to criminal penalties involving up to 5 years imprisonment and fines of a quarter- to half-million dollars. I am not telling you what to do or ordering you; I am simply telling you what the regulations require and what the penalties, prescribed by law, could be for violating them. Do you understand.

Any listener should clearly understand that the inspector is not ordering anything to be done.

Because of the importance of what inspectors say, inspectors should write down their statement just before or just after making it. Also, inspectors should attempt to make these statements in front of another inspector, a law enforcement official, or a neutral party, because a witness, other than affected parties, may be able to provide consistent information at a later time.

As discussed in Chapter 2 of this manual, the Department's statutory authority at 49 U.S.C. § 5121 was amended by the Hazardous Materials Transportation Safety and Security Reauthorization Act of 2005 to specifically authorize agents of the Secretary to take certain actions to address unsafe conditions or practices. Such authority is directly applicable to situations in which an inspector believes an imminent hazard related to the transportation of HM

exists. In 2011, PHMSA issued a final rule under Docket Number PHMSA–2005–22356 (PHM–7), “Hazardous Materials: Enhanced Enforcement Procedures.” 76 Fed. Reg. 11570. The final rule became effective May, 2011. The rule established procedures for issuance of emergency orders (restrictions, prohibitions, recalls, and out-of-service orders) to address unsafe conditions or practices posing an imminent hazard; opening of packages to identify undeclared or noncompliant shipments when the person in possession of the package refuses a request to open it; and the temporary detention and inspection of potentially noncompliant packages. Along with the final rule, DOT developed an internal operations manual for training and use by its inspectors and inspectors (collectively known as “agents”). The operations manual is a joint document created by the operating administrations that enforce the HMR, 49 C.F.R. Parts 171–180, to provide guidance to agents who, in the course of conducting inspections, determine that they need to open a package, remove a package from transportation, or perform any other function authorized in 49 C.F.R. Part 109. However, until FRA has issued specific guidance to its field enforcement personnel, inspectors are not authorized to open hazmat packages.

## **8.5 Determining When and What Enforcement Action Is Necessary**

FRA does not have to take a formal enforcement action every time it discovers or learns of a deviation from the Federal railroad safety laws. FRA has enforcement discretion: it can choose which violations to pursue based on its resources and on what it believes to be the best method of promoting compliance. Inspectors and regional and headquarters personnel periodically analyze relevant inspection data to determine patterns of noncompliance or other problem areas that necessitate more stringent or broad-based enforcement actions. Conversely, data indicating that a railroad or shipper has an overall good safety record, particularly regarding the specific regulation in question, might dictate less stringent enforcement measures, such as informal warnings.

The civil penalty enforcement system, while only one aspect of FRA’s safety enforcement scheme, is absolutely vital to FRA’s safety mission.

When FRA decides that enforcement action is called for, it has a range of enforcement tools (discussed below) and has the authority to choose those best suited to the circumstances. One of the tools (the emergency order) can be used to address an immediate hazard even if no existing law has been violated.

The existence of this broad enforcement discretion, concerning when and what enforcement action is necessary, calls for general guidelines to ensure effectiveness, fairness, and an acceptable level of consistency in the exercise of that discretion. The purpose of these guidelines is to control subjective elements as much as possible. Requiring persons making enforcement decisions to weigh the same factors and make full use of objective information bearing on those factors should result in application of the appropriate enforcement tool.<sup>34</sup>

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<sup>34</sup> Application of these factors should preclude abuses of discretion, such as basing an enforcement decision on personal bias, or failure to enforce the law because of a personal aversion to the extra work required.



## 8.6 Factors to Consider When Enforcing the Hazardous Materials Regulations

Title 49 C.F.R. Part 209, Appendix A, explains how FRA exercises its enforcement discretion, and lists various factors that an inspector considers in determining which instances of regulatory or statutory noncompliance merit a recommendation of assessment of a civil penalty. Those factors are:

- The inherent seriousness of the condition or action.
- The kind and degree of potential safety hazard the condition or action poses in light of the immediate factual situation.
- Any actual harm to persons or property already caused by the condition or action.
- The offending person's (i.e., railroad's or individual's) general level of current compliance as revealed by the inspection as a whole.
- The person's recent history of compliance with the relevant set of regulations, especially at the specific location or division of the railroad involved.
- Whether a remedy, other than a civil penalty (ranging from a warning to an emergency order), is more appropriate under all of the facts.
- Such other factors as the immediate circumstances make relevant.

The following discussion describes the thought process that should go into weighing the seven factors.

### 8.6.1 The Inherent Seriousness of the Condition or Action

In the abstract (i.e., when the immediate circumstances are not considered), every violation is more or less severe than others. For example, when comparing incomplete HM shipping papers, the paper that contains enough information to identify the HM is less serious than a shipping paper that does not have enough information to identify the HM.

Sources of information that can help determine the inherent seriousness of a condition or action are FRA's safety database and the historical incident reports maintained by PHMSA (FRA Form 5800.1). Relevant data points are national accidents, incidents, and HM releases over time (e.g., the most recent 2 or 3 years). Note that the data have some limitations in determining the inherent seriousness of a condition or action (e.g., an inaccurate shipping paper that could interfere greatly with emergency response).

Inherent seriousness can be difficult to apply between disciplines because it is a relative matter within each discipline. Regional and headquarters specialists are available to explain the relative

severity of different violations. Together, inspectors and specialists should be aware of types of violations that are related to an increase in accidents. Knowing this information should lead to inspectors focusing on those types of violations as possible enforcement actions.

Less serious violations should not be automatically excluded from candidacy for enforcement. A decision should be made only after all of the criteria have been considered. Consideration of the inherent seriousness of a violation is a good place to begin when writing a violation. However, if other factors do not point toward enforcement action, a less serious violation may be a poor candidate for enforcement action because it would have a small effect on safety relative to the resources FRA would be required to use for enforcement.

### **8.6.2 The Kind and Degree of the Potential Safety Hazard the Condition or Action Poses in Light of the Immediate Factual Situation**

While inherent seriousness considers outside circumstances, this factor focuses on the potential for injury or property damage posed by the violation based on the actual facts. For example, a hazardous material defect (e.g., failure to secure all openings of a tank car) may create more (or less) of a potential hazard depending on the nature of the material or whether a leak actually occurred. Note, however, a conclusion that little or no actual hazard was caused by a violation does not automatically rule out the need for enforcement action.

### **8.6.3 Any Actual Harm to Persons or Property Already Caused by the Condition or Action**

The ultimate goal of FRA's regulatory and enforcement programs is to prevent death or injury to persons or damage to property caused by unsafe behavior. Accordingly, enforcement action should always be taken when a violation either has caused or contributed to the severity of harm to persons or property.

The violation report, itself, must explain the causal link between the violation and the harm. The violation need not have been the sole or primary cause, and need not have been a cause at all if it contributed to the severity of the harm. However, it will not suffice simply to say that a violation and some actual harm coincided (e.g., a shipping paper violation is discovered on a train involved in a fatal accident, but the violation played no apparent role in the accident's cause or severity). If no relationship between the violation and the harm can be shown, the violation may still be a strong candidate for enforcement, but not based on consideration of this factor. A violation report in such a case must also explain the extent of the harm. For example, rather than simply stating that two persons were injured by the violation, the report should discuss the nature and extent of the injuries. These cases are inherently strong candidates for extraordinary penalties and the report should provide information necessary to support such a claim. Any recommendations for extraordinary penalties (e.g., maximum penalty, multiple-day penalty, or a large number of counts or reports that would add up to a large dollar amount for a related set of violations) must be submitted to RCC with a memo signed by the regional administrator explaining in detail the rationale for the recommendation. (See the August 31, 2016 joint RRS-RCC guidance memo on this subject, found in Appendix D of the General Manual.)

#### **8.6.4 The Offending Person's<sup>35</sup> General Level of Current Compliance as Revealed by the Inspection as a Whole**

Most FRA inspections or investigations entail observation of more than one event or piece of equipment. This enables the inspector to draw a conclusion about the railroad or offeror's general level of compliance at the current time. At one end of the spectrum, this factor could lead the inspector to conclude that a violation is merely an aberration and enforcement action is not needed to encourage compliance. At the other end of the spectrum, violations may be so common that enforcement action is obviously in order. Ordinarily, of course, the facts will be somewhere in between, requiring the inspector to balance this factor against the seriousness of the violations and other factors. Note that the inspection might reveal a multitude of violations that even though not serious in relative terms, indicate a very poor compliance program on the part of the company. This could lead the inspector to recommend enforcement action on some or all of the violations discovered.

#### **8.6.5 The Person's Recent History of Compliance with the Relevant Set of Regulations, Especially at the Specific Location or Division of the Railroad or Shipper Involved**

The historical record of a company's (or an individual's) compliance is an important factor to be weighed. This is an important area where RRS and the regional specialists will help the inspectors sift through the data for important indicators.

While inspectors form their own impressions about companies and specific locations based on experience, resource limitations prevent inspectors from getting to all locations as frequently as would be preferable. The inspector who is equipped with national and/or RBI data on that company may be better able to focus the inspection and more or less inclined to take enforcement action depending on the broader picture of compliance.

This factor is aimed primarily at either spotting patterns of noncompliance that might not be apparent from a single, isolated inspection or patterns of good compliance that might temper an inspector's reaction to an otherwise unsatisfactory inspection. Although the consideration of this factor should be based on the available data, there is no rigid prescription for which data to include.

Generally, the older the information, the less useful it is (e.g., noncompliance 4 years before the inspection is not very meaningful), and the more specific the information, the more useful it is (e.g., a clustering of violations of a particular regulation over time may indicate the need to come down hard on any such violations currently discovered, especially if the violations are serious).

Focusing the review of the historical data on the particular facility presently involved often makes sense. If one facility or division manages to achieve a very high level of compliance as compared to the rest of the company or the industry generally, that argues for encouraging such

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<sup>35</sup> Under the HMR, the term "person" is broadly defined, and includes companies and corporations as well as individuals. For the purposes of the regulations, offerors and carriers are considered persons.

efforts by restricting enforcement actions to the most serious matters. Of course, if one facility is clearly out of line in terms of historic and current compliance, that argues for taking enforcement action on even less serious violations in order to increase the deterrent effect. Spotting broader trends in the data (e.g., a particular railroad's frequent noncompliance with the HM placement regulations) that may have a systemic cause is the job of the regional and headquarters specialists, aided by field observations. Together, they can devise enforcement strategies (e.g., a recommendation to RCC that an action for an injunction against such violations be undertaken) that are responsive to patterns of violations that are apparent from analysis of the overall data.

#### **8.6.6 Whether a Remedy Other Than a Civil Penalty is More Appropriate Under the Circumstances**

FRA has more than just two options (civil penalty against the company or a warning) available when it detects noncompliance. Civil penalties against individuals are one option. Emergency orders, compliance orders, rail worthiness directives, and injunctions are other possibilities, as is criminal prosecution. Combining these options (e.g., a civil penalty against the company and warning to a responsible individual) may be the best way to ensure safety and deter noncompliance.

#### **8.6.7 Such Other Factors as the Immediate Circumstances Make Relevant**

The foregoing list is not all-inclusive; specific situations may involve specific facts that do not fall under any of those headings but need to be figured into the decision of whether to take enforcement action. Perhaps the most common of these additional factors is the violator's culpability, i.e., the relative degree of blameworthiness. In HM cases, FRA must show the violator's acts were committed "knowingly."<sup>36</sup> In hazardous material civil penalty cases against individuals, FRA must show that the violation was committed both "knowingly" and "willfully."

### **8.7 Enforcement Discretion**

It is important to note that the enforcement discretion being applied is that of the agency. While inspectors make the initial determinations on the need for enforcement action, regional personnel play an active and important role in reviewing those determinations with a goal of ensuring effectiveness and reasonable consistency. Supervisory railroad safety specialists play an important role in ensuring that field inspectors have the data necessary to make informed enforcement decisions. To that end, headquarters and field personnel analyze data using the Dashboard Analysis System on a rotating weekly basis. Additionally, supervisory railroad safety specialists, along with their Regional Administrator and Deputy Regional Administrators, analyze data on accidents, incidents, and inspections to detect problem areas at the regional, railroad, or shipper level. This information is used not only in deciding where to inspect, but also in making enforcement decisions. RRS headquarters personnel, with input from the regions, are responsible for spotting national trends that require enforcement action and for providing guidance to the regional and field staff on difficult enforcement policy issues.

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<sup>36</sup> Under the hazardous materials transportation statute, a person acts "knowingly" when: (1) the person has actual knowledge of the facts giving rise to the violation or (2) a reasonable person acting in the circumstances and exercising reasonable care would have that knowledge(see 49 U.S.C. § 5123).

Even where the law does not require that FRA show the offender's mental state, culpability is a factor that should be considered in deciding whether to take enforcement action. For example, the violation may have been the result of a good faith misunderstanding of the relevant law, which often happens when a regulation is brand new or inherently ambiguous. Unless the violation is very serious, enforcement action would ordinarily not be appropriate where there is solid evidence that such a good faith mistake was in fact the cause. Such good faith mistakes, which imply an honest attempt to know and obey the law, should not be confused with the simple ignorance of the law, resulting from a failure to attempt to know it.

Culpability is also very low where the violation is discovered on the property of one company that has not had a reasonable opportunity to correct it, but the violation was clearly more attributable to another company. For example, this may be true with regard to an equipment defect where the receiving railroad has hauled the car only a short distance from the interchange to a major repair point and FRA is confident—based on its experience at that location—that the violation would have been caught and corrected by the receiving railroad even had FRA not been present. There, the better candidate for enforcement action would be the delivering railroad if the evidence indicated that the defect was present when that railroad delivered the car. Likewise, where a placarded tank car is found on railroad property with loose fittings that could not be observed from the ground and with no evidence of a leak, the culpable party is nearly always the car's offeror. It is the offeror that has the primary responsibility to ensure that all closures on a car are secured in such a manner as to remain secured under conditions normally incident to transportation. To get at the root cause of the problem, the violation should be taken against the offeror (unless there is some evidence of vandalism or extremely rough handling since the car left the offeror).

While very low culpability might tip the inspector's discretion toward not taking enforcement action, very high culpability might have the opposite effect. For example, a clearly egregious violation may warrant enforcement action even if isolated or not especially serious. Blatant disregard for the law, even on relatively lesser matters, may indicate an overall poor attitude toward compliance that could carry over to very serious matters.

Inspectors and regional personnel are not expected to spend hours deliberating about every possible enforcement action. Instead, these guidelines are intended to provide a framework that enforcement personnel will incorporate into their entire enforcement approach so that these factors are weighed quickly and effortlessly in most situations. Of course, the time spent weighing these factors should correspond to the seriousness of the situation.

## **8.8 Enforcement Tools**

The inspector—with guidance on the difficult cases from regional and headquarters staff—needs to weigh all of the factors to determine the appropriate course of action. In deciding whether more severe action than the implicit warning conveyed by an inspection report is necessary, one consideration is that choosing to recommend a formal enforcement action entails a considerable investment of time to prepare the violation report and obtain necessary supporting documents. Time spent preparing violation reports is time not spent inspecting, so it makes sense in terms of time allocation for the inspector to choose carefully for enforcement action those violations

that—due to seriousness, frequency, and/or other reasons—are most in need of being deterred.

When a HM inspector has decided that enforcement action is necessary, a variety of tools are available. Below is a brief discussion of each of the available tools.

### **8.8.1 Defect Notice and Spoken Warning**

Even if an inspector has decided that no enforcement action will be taken for an identified defective condition (see Verbal Interventions, Chapter 3 of the General Manual), the inspector must still complete a defect notice. This is necessary to adequately collect all information needed to make fitness determinations of carriers and shippers applying for special permits and approvals.

### **8.8.2 Warning to an Individual**

Warning to individuals discovered to have violated a regulation or law may be issued through verbal warning (documented on the inspection report), by the region or staff director, or through RCC. Warnings are intended to put the individual involved on notice that he or she violated the law or a regulation. Inspectors should follow the procedures outlined in Chapter 3 of the General Manual.

### **8.8.3 Civil Penalty Against a Railroad or Offeror**

Of all the enforcement tools available, inspectors use civil penalties against railroads more frequently than others. To assess a civil penalty against a railroad or shipper, FRA must prove a “knowing” violation of the HMR. Unless it is determined that a more severe penalty is needed, FRA usually follows the penalty schedules for the relevant section of the Code of Federal Regulations. The penalty guidelines are published at 49 C.F.R. Part 209, Appendix B.

### **8.8.4 Extraordinary Civil Penalty**

FRA may assess civil penalties of up to \$179,333 per day for violations of the HMR if the violation results in death, serious illness, or severe injury to any person, or substantial destruction of property. 49 U.S.C. § 5123; 28 U.S.C. § 2461.

In the event an inspector recommends the assessment of civil penalties for multiple days or for an aggravated penalty amount, a *separate* memorandum needs to be written to the inspector’s Regional Administrator describing the reason for the aggravated penalty amount and/or multiple day counts. Before transmitting the violation report and recommendation to RCC, the guidance and steps in the August 31, 2016 joint RRS-RCC guidance memo must be followed. See Appendix D of the General Manual

### **8.8.5 Civil Penalty against an Individual**

To assess a civil penalty against an individual for a violation of the HMR, FRA must demonstrate that the individual both “knowingly” and “willfully” violated the HMR. Inspectors and regional management must work closely with RCC to assess this type of penalty. Note that

individual liability violations are only available against railroad employees. FRA does not have statutory authority to assess penalties against individuals who work for non-railroad entities, such as hazmat offerors/shippers.

### **8.8.6 Compliance Order**

When a cooperative approach has not worked, and civil penalties are either inappropriate or have proven ineffective, but the violation(s) do not create an emergency, FRA may issue a compliance order directing a party to comply with regulations issued under either the Federal railroad safety laws or HM transportation law. See 49 U.S.C. §§ 5121(a) and 20111(b). Inspectors and regional management must work closely with RCC to pursue this type of remedy.

### **8.8.7 Disqualification from Safety Sensitive Service**

When a railroad employee is found to have committed a series of safety violations or a particularly serious violation such that the individual's fitness to perform safety-sensitive service (including service subject to the Federal HM transportation law or the HMR), FRA may disqualify that individual from performing safety-sensitive service. A finding of "willfulness" is not a prerequisite, but it must be demonstrated that the individual is "unfit for safety sensitive service." See 49 C.F.R. Part 209, Subpart D. Disqualification is achieved through a Notice of Proposed Disqualification issued through RCC. Again, this enforcement tool is only available as applied to railroad employees.

Any inspector that suspects a disqualification action may be justified should inform his or her regional specialist as soon as possible. The regional specialist should consult with regional management and if management concurs, the region should contact the HM Staff Director and RCC's individual liability expert for guidance.

### **8.8.8 Injunction**

An injunction is a court order from a U.S. District Court judge requiring a party to comply with the law immediately. FRA uses this tool to stop a pattern of violations that do not present an emergency, but which the railroad or shipper has not acted upon to prevent, despite civil penalties and/or warnings from FRA. Inspectors and regional management must work closely with RCC to pursue this type of remedy.

### **8.8.9 Rail worthiness Directives**

If FRA determines, based on the existence of probable cause, that a tank car or a class or design of tank cars may be in an unsafe operating condition, FRA may require that the car or cars be inspected without regard to any other periodic inspection requirements. Rail worthiness directives describe the condition or defect, and order the testing and inspection of the tank car(s). The directive also requires correction of all defects and unsafe conditions, whether determined by Federal standards or under the AAR Tank Car Manual. See 49 C.F.R. § 180.509.

### **8.8.10 One-Time Movement Approvals**

On a case by case basis FRA may issue approvals to move bulk packagings that do not conform to the HMR. These movement approvals are generally issued by headquarters HM staff after consultation with interested regions. However, as stated in the approval document, the approval does not preclude enforcement action for the transportation of nonconforming packages prior to issuance of the approval. See 49 C.F.R. § 174.50 and Chapter 9 of this manual.

### **8.8.11 Emergency Order**

If FRA determines, based on testing, inspection, investigation, or research, that an unsafe condition or practice (or combination) creates an imminent hazard of death or serious injury, FRA may issue an emergency order to impose restrictions or prohibitions necessary to abate the emergency situation. A hazard is “imminent” if it is reasonably likely to result in death or serious injury to the public or railroad employees before a civil penalty action or compliance order proceeding could be expected to produce a remedial action. Inspectors and regional management must work closely with RCC to pursue this type of remedy. See 49 U.S.C. § 20104 and 49 C.F.R. Part 209, Appendix A, Extraordinary Remedies.

### **8.8.12 Criminal Penalties**

The Federal HM law provides for criminal penalties (a monetary fine and/or imprisonment) for any person who willfully or recklessly violates the HM laws or the HMR. See 49 U.S.C. § 5124. However, FRA is a civil agency, without criminal investigative authority. If an FRA inspector or specialist feels that there may be violations that may have criminal implications, they may refer the matter directly to DOT’s Office of Inspector General (OIG) for investigation. Examples of possible criminal violations include knowingly shipping undeclared hazardous materials and falsifying hazmat training records. FRA RRS employees do not need RCC consultation or approval to refer suspected criminal violations to the OIG. FRA employees may call or email the OIG Hotline directly. <https://www.oig.dot.gov/hotline> FRA employees may provide documents and information to OIG investigators upon request. If there are any questions about working with the OIG, FRA employees may contact RCC for further guidance.

## **8.9 Deciding which Enforcement Option is Appropriate**

When the inspector has decided that merely reporting his/her findings to the company or individual and discussing the need to improve compliance is unlikely to have a sufficient deterrent effect under the circumstances, the inspector will decide which enforcement tool is most appropriate. If the violation creates an immediate hazard of death or serious injury, and the inspector is not confident of immediate corrective action, consideration should be given to an emergency order. In the case of a situation that may require an emergency order, immediate consultation with the Regional Administrator is essential. Remember that emergency orders can be used even when the unsafe condition does not violate existing law if FRA can make a rational case that the conditions or practices create a hazard of death or injury.



If the violation presents a very serious risk of death or injury, but the risk is not so imminent as to warrant emergency action, or the violation actually caused significant harm (death, injury, or substantial hazardous material release), consideration should be given to a civil penalty case with a recommendation for aggravated penalties. When submitted to RCC, such a report must include a cover memorandum from the region explaining the basis for extraordinary penalties (i.e., penalties above the ordinary scheduled amount or for multiple days). If such a penalty is recommended, the report must indicate the basis for that recommendation. For violations of the hazardous materials laws and/or regulations, an ordinary maximum penalty of up to \$77,114 may be assessed for knowing violations. An aggravated maximum penalty of up to \$179,933 may be assessed for a knowing violation that results in death, serious illness, or severe injury to any person or substantial destruction of property.

Extraordinary penalties should never be recommended without providing the necessary support for the recommendation because this will only delay transmittal of the penalty demand letter.

If the situation is one that does not rise to the level of an emergency, but the sheer volume of violations or their recurring nature suggests that a measure other than a civil penalty might be necessary to obtain corrective action on a specific problem, consideration should be given to recommending a compliance order, or injunction. A compliance order entails the possibility of an administrative hearing before the order would even be issued, so it is not a tool designed for quick action. A compliance order would most likely be useful on clear-cut and repetitious violations and where FRA has sought reasonable and well-defined remedial action from the offender, but FRA has been met with resistance. In such situations, a compliance order proceeding may provide the extra leverage FRA needs, but not result in cumbersome litigation, because the facts are indisputable.

Injunctions are court orders prohibiting violations that add the weight of the court's contempt powers to further FRA's compliance efforts. However, to obtain an injunction, FRA has to persuade the DOJ of the need for extraordinary relief and, assuming that DOJ is willing to file suit, FRA will then have to persuade the court that it should issue an injunction. Injunctions are most likely to be used where civil penalties alone have been ineffective in lessening the frequency of a particular type of violation, the violation is serious, and the company is unusually obstinate in its safety behavior.

Individual liability (including warning letters and civil penalties) is a tool that should be considered in situations where deterring an individual's noncompliance is what is most needed. Individual liability is especially useful where the violation arose from the individual's own choice. If a company's policy or failures by the company to properly train or supervise the individual are factors an inspector has to consider, the inspector should consider the company's supervision for enforcement. An exception would be if the company policy can be traced directly to a specific individual. In some situations, enforcement will include both individual liability and corporate liability at the same time.

Finally, under 49 U.S.C. § 5124, a person willfully or recklessly violating the Federal HM transportation safety law, or the regulations implementing it, is liable for criminal prosecution. If the inspector believes that a criminal violation exists, the inspector may refer the matter directly

to DOT's OIG for criminal investigation. The inspector and regional management may contact RCC, though no RCC approval is needed to refer a matter to the OIG for investigation via the OIG hotline. <https://www.oig.dot.gov/hotline>If there are any questions about how to proceed in the investigation and any concerns about evidence, or about working with the OIG, FRA inspectors and regional managers should contact RCC. As a matter of caution, evidence in criminal cases may become "tainted" through improper handling by its custodians; in addition, a criminal investigation involves the constitutional rights of the respondent/defendant. It also means that in order to make policy and legal decisions, access to the facts of the case should be limited to those with a need to know. If a particular case becomes a matter for the criminal courts, access to the evidence will be severely restricted by Federal rules and that task is easier if the facts have not been the subject of wide discussion. Again, RCC should be contacted with any questions along these lines.

## **8.10 Determining the Existence of a Violation**

The HMR require that certain elements be present for a violation to exist. A person subject to the regulations must commit an act (in most cases, the offer, acceptance, or transportation of a shipment) that does not comply with the regulations. For a civil penalty to be assessed, the act must have been committed "knowingly" (i.e., with actual knowledge of the facts or with presumed knowledge of the facts that would have been obtained had the person exercised reasonable care under the circumstances). In order to determine who the responsible "person" is, the test is functional: anyone engaged in an activity covered by the HMR is responsible for the proper accomplishment of the activity.

In addition, the regulations contain "triggering events": actions taken by a person that may lead to the person being held responsible for compliance or noncompliance with the regulations.

### **8.10.1 Person Who Offers or Offerors**

Generally, a person must perform a regulated HM function to be held liable for a violation. See the discussion of FRA's "Scope of Regulatory Authority" in Chapter 2 of this manual.

Under traditional commercial law, the offer for transportation occurs when the bill of lading is prepared and signed by the offeror. However, an "offer for transportation" may occur when a person takes actions indicating that preparation of the car is complete, and the car is ready to be picked up by the railroad. These actions depend upon the customary practices of that person, and may include notifying the railroad that the car is ready for pickup, transmitting the shipping papers to the railroad (electronically or by placing them with or near the car), placing the car on a "ready" track, or a clear statement by an authorized representative of the offeror that the shipment is ready for transportation. Other indicators that an offeror has completed preparation of the shipment are the presence of appropriate loaded or residue placards and/or seals on closures. All of these elements need to be analyzed to determine whether an offer has been made.

For instance, violations for insecure closures, which are found on a loaded tank car after the manway cover or the lid of the protective housing has been sealed, may be violations under 49

C.F.R. §§ 173.24(b) and (f), and 173.31(d)(1)(iv), which require fittings to be in proper condition for safe transportation prior to shipping. (The theory is that, once the seal is applied, the offeror has no further intention to recheck the car.) However, inspectors must check whether the offeror signed the shipping paper, notified the railroad, etc., and what the offeror's specific intentions were with respect to that car. It may be possible that despite the presence of the seals the offeror intended to recheck the shipment prior to the actual offer.

Inspectors do not necessarily have to demonstrate that a shipment left the offeror's property in order to show that it was offered for transportation in noncomplying condition. By addressing the criteria discussed here, inspectors may be able to show that for all practical purposes the offer had effectively been made before the railroad hauled the shipment away. However, FRA does not want to cite offerors for violations that necessarily entail an offer in situations in which the offeror can demonstrate—by reference to specific facts—that it was the offeror's intention to inspect or remedy the noncomplying condition before the shipment left the property.

Certain regulations may be violated before an offer is made or after receipt of a completed shipment. See the discussion of FRA's "Scope of Regulatory Authority" in Chapter 2 of this manual. In these situations, proof of an offer by the offeror is unnecessary; instead an inspector must demonstrate what regulated HM function(s) were performed in noncompliance with the HMR (or were required to be performed and were not). Inspectors will evaluate the situation in light of the specific wording of the relevant regulations. During loading or unloading operations, the noncomplying activity, itself, usually triggers the violation.

Examples are failure to place appropriate caution signs on the tracks during unloading, or improper loading, of specific materials. In some situations, a violation may exist even before the HM is actually tendered to the carrier for transportation (i.e., when a pre-transportation function is performed not in compliance with the HMR).

### **8.10.2 Originating Carriers**

The "trigger" for a railroad is the acceptance or transportation of a shipment of HM. See 49 C.F.R. § 174.3. Under traditional commercial law, the acceptance occurs when the bill of lading is signed by the carrier. Acceptance by an originating carrier can also occur when the carrier takes physical possession of a car (e.g., by coupling to the car and moving it); this concept is in agreement with the definition of "in service" from FRA's Freight Car Safety Standards. See 49 C.F.R. § 215.5(e).

It should be noted that a carrier may be deemed to have "accepted" a car, and become liable under the HMR even though no "offer" was made. For instance, a carrier might remove a car from an offeror's facility although the offeror has taken no action to "offer" the car for transportation. In that case, the carrier will be liable for defects (since it has "accepted" or taken the car), while, except as noted above relating to pre-transportation functions, the offeror is not (since it never "offered" the car and presumably could argue that it had not completed preparing it for transportation).

### **8.10.3 Non-originating Carriers**

Non-originating carriers come under the regulations when they accept a car in interchange by “placing it in service,” usually by coupling to it. Alternate methods of acceptance may be created by agreement between railroads and must be examined on a case-by-case basis. Delivering carriers remain responsible, of course, for all violations occurring to that point.

### **8.10.4 Manufacturers**

A manufacturer of packagings generally becomes liable for compliance with the HM law and regulations when it marks a container with a “DOT” specification.

### **8.10.5 Repair or Reconditioning Facility**

A repair or reconditioning facility becomes liable for noncompliance with the HM law and regulations when it performs a repair or other function regulated by the HMR or subject to the HMR’s packaging standards, and that repair or activity does not comply with the HMR.

Circumstances outside the scope of these examples are possible and entities other than those listed here may violate the HMR. Inspectors should seek guidance from their specialist on how to proceed in such circumstances.

## **8.11 Interregional Coordination**

Interregional coordination is particularly important due to railroad industry consolidation. Interregional coordination leads to consistent enforcement activities and ensures that FRA assesses issues that take place across regional boundaries. Regional and headquarters specialists, through periodic conferences, emails, and telephone contacts, need to play a key role in ensuring that system wide compliance problems are addressed in a coordinated versus piecemeal approach. Railroad System Oversight Managers (RSOM) should be involved in the discussions regarding major interregional enforcement issues and should be providing information to specialists on system wide compliance problems.

## **8.12 Enforcement Actions Against Individuals**

### **8.12.1 General Principles**

The Federal HM transportation law (at 49 U.S.C. § 5123) states that a person who knowingly violates the HM laws or regulations is liable to the U.S. Government for a civil penalty.

This standard is very similar to that used in conjunction with individual liability cases prosecuted under the railroad safety laws. See 49 C.F.R. Part 209, Appendix A, which provides that a “willful” violation is one that is “an intentional, voluntary act committed either with knowledge of the relevant law or reckless disregard for whether the act violated the requirements of the law.”

### ***8.12.1.1 Consideration of the Totality of the Circumstances***

An inspector will determine from the totality of the facts and circumstances whether actual knowledge or reckless disregard for the regulations is present. A clear-cut example of a “willful” violation occurs when the violating act was committed by or at the direction of the individual following a specific warning from an FRA inspector to that individual that such an act would be a violation of Federal law. However, that is not the only possible situation that establishes individual liability. The inspector should thoroughly investigate to gather all relevant information, and determine from that information if the necessary standard may be proven.

### ***8.12.1.2 FRA and Inspector Discretion***

Individual liability is an important tool but should be used appropriately, and where it will achieve the desired result. Overuse and/or use in questionable or weak cases will damage FRA’s credibility and the effectiveness of the enforcement tool. Individual liability is a tool that should be considered in situations where deterring a particular individual’s noncompliance is what is most needed. This tool is especially useful where the violation arose from the individual’s own choice. FRA has the discretion to pursue enforcement action against the railroad, the individual, or both. The decision should depend on the culpability of the respective parties.

Inspectors should not be afraid to use his or her discretion to recommend individual liability when warranted, but inspectors should not “threaten” individuals with individual liability actions. Instead, an inspector should communicate to the individual that if the practice continues, the inspector might have to recommend to their supervisor that individual liability be considered. Of course, at the same time, an inspector should be absolutely sure the violation would be a probable and worthy case. For all these reasons, early communication between the investigating inspector and regional specialist on potential individual liability issues is critical.

### **8.12.2 Level of Individual Liability to Recommend**

#### **Decision to Issue a Regional Warning Letter**

Usually, regional warning letters will be used for a first-time offense where there is doubt as to the offending employee’s knowledge of the law, or where the offense is not highly serious and a warning is deemed adequate to prevent a recurrence.

When an inspector determines that an individual should be issued a regional warning letter for a violation, the inspector shall orally advise the individual of the facts, including the fact that the inspector intends to recommend that a written warning notice be issued to the individual. This will ensure that the individual immediately knows that he or she has performed an unlawful act and should not do so again. The circumstances, including the time of the violation and the time the individual was so notified shall be carefully noted by the inspector.

As soon as practicable, the inspector should contact his or her regional specialist, who will arrange a conference call with the Regional Administrator or regional staff member, delegated by the director. If the specialist is not available, the inspector shall directly contact the Regional Administrator.

Once it is decided that the facts support at least the issuance of a regional warning letter against the individual, the inspector will submit a completed FRA Form F6180.80 to the Regional Administrator, making sure to check Item 4, "No," to indicate that no formal enforcement action will be recommended. The Regional Administrator will then cosign the form and mail the original (first copy) to the individual by registered mail. The Regional Administrator will insert the region's sequential calendar year report number (e.g., 3-90-1) in the space provided in the upper right corner, on the copies only, and will mail the appropriate copy to the office of the Associate Administrator for Railroad Safety/Chief Safety Officer in an individual envelope with "F6180.80" marked on the outside; mail the "Employer" copy to the individual's employer; and retain the appropriate copy in the secure regional file.

Regional warning letters can be issued by the region without RCC involvement, but RCC must be provided a copy of the letter (FRA Form F6180.80) once issued.

For headquarters warning letters, email the information to the FRA attorney for the region in which the incident occurred and/or the subject matter expert, and notify the RCC attorney assigned to coordinate individual liability actions.

**Note:** If it is subsequently determined that no violation occurred, the inspector must contact the individual and discuss the circumstances that led to the verbal warning and explain why the warning was not valid.

### **Decision to Recommend a Formal (Chief Counsel) Warning Letter or Assessment of a Civil Penalty**

When an inspector or Regional Administrator determines that an individual should be issued a warning letter from RCC or assessed a penalty, the inspector shall orally advise the individual of the circumstances surrounding the violation, including the fact that the inspector intends to recommend formal enforcement action against the individual. This will ensure that the individual immediately knows that he or she has performed an unlawful act. The circumstances, including the time of the violation and the time the individual was notified, must be carefully noted by the inspector.

As soon as practicable, the inspector shall contact his or her regional specialist, who will arrange a conference call with the Regional Administrator or regional staff member delegated by the Regional Administrator. If the specialist is not available, the inspector shall directly contact the Regional Administrator.

The Regional Administrator will contact the Director, Office of Technical Oversight, and the Assistant Chief Counsel for Safety Law and advise them of the circumstances. When

headquarters concurs with the need for and basis for formal enforcement action, the inspector will submit a completed FRA Form F6180.80 (checking Item 4, “Yes”) and a narrative memorandum detailing the facts to the Regional Administrator, which should show as its subject: “Violation Report concerning (fill in individual’s name) with a recommendation for (fill in with formal warning letter or penalty).” The memorandum must specifically address each element necessary to make a case against an individual in the format prescribed in Chapter 5.

The Regional Administrator will cosign the FRA Form F6180.80 and mail the original to the individual by registered mail. The Regional Administrator will insert the region’s sequential calendar year number in the space provided in the upper right corner on the copies.

The appropriate copy of the FRA Form F6180.80 and the original, along with one copy of the memorandum and any attachments, shall be forwarded to the Assistant Chief Counsel for Safety Law for further action. (Inspectors should not use violation report transmittal FRA Form F6180.72 for this transmission or include these documents in any envelope with unrelated violation reports against railroads or offerors.)

The appropriate copy of the FRA Form F6180.80 and a copy of the memorandum shall be forwarded to Associate Administrator for Railroad Safety/Chief Safety Officer in an individual envelope with “F6180.80” marked on the outside and the appropriate copy shall be retained in the secure regional file. The “Employer” copy will be mailed to the individual’s employer.

See Chapter 2 of this manual for guidance in the preparation of violation reports against individuals.

### **8.12.3 Chief Counsel Warning Letters, Civil Penalties, Disqualifications**

Mail five hard copies of the individual liability form (FRA Form F6180.80), the individual liability memorandum, and relevant and appropriate supporting documentation to the Individual Liability Expert Attorney (contact the HM Staff Director for that person’s name if needed).

### **8.12.4 Privacy Act Restrictions**

The Privacy Act of 1974, 5 U.S.C. § 552a, was created in response to concerns about how the creation and use of personal data might impact individuals’ privacy rights. It safeguards privacy through four procedural and substantive rights in personal data.

First, it requires government agencies to show an individual any records kept on him or her. Second, it requires agencies to follow certain principles, called “fair information practices,” when gathering and handling personal data. Third, it places restrictions on how agencies can share an individual’s data with other people and agencies. Fourth, it allows individuals to sue the government for violating its provisions. Therefore, FRA employees can be held personally liable for the unauthorized release of information from any “system of records” about individuals maintained by the Federal Government.

A system of records is defined as any group of records where information is retrieved by the name of the individual or by an individual identifier. Databases and collections of records that do not allow retrieval of information on particular individuals are not included. FRA has two systems of records (one kept by the RRS and one kept by RCC) concerning noncompliance with the railroad safety laws by individuals. Included in those systems of records are (1) information contained in a FRA Form F6180.80 notice concerning the individual to whom the notice is addressed and (2) any other information contained in a “system of records” concerning the individual’s noncompliance, such as a computer or paper file on a particular violation by an individual for which the individual is being investigated, warned, or cited for penalty as an individual. In order to prevent the existence of secret databases, agencies must publish the details of all their systems of records in the Federal Register. The publication must cover intended uses of the system, and allow for interested persons to submit written data, views, or arguments to the agency.

Agencies are permitted to make certain disclosures from their Privacy Act systems of records when necessary to further certain “regular uses” if a notice proposing such regular uses has been published in the Federal Register, and a comment period has run. FRA has established the following regular uses for information contained in the RRS Individual Enforcement Case System:

- Review these records to determine whether cases should be forwarded to the RCC for prosecution.
- Otherwise review these records to accomplish the mission of the Office of Railroad Safety.
- Disclose pertinent information in these records to any source from which additional information is requested in the course of conducting an investigation to the extent necessary to identify the purposes of the request and to identify the information requested.
- Provide notice of the investigation and its outcome to the individual’s employing railroad or offeror or another railroad related to the case through joint facilities or trackage rights in order to give those entities information they may need to assist in preventing a recurrence of noncompliance.
- Provide information concerning enforcement actions for violations of safety statutes and regulations to government agencies and the regulated industry in order to provide them with information necessary to carry out their responsibilities.
- Provide information concerning enforcement actions for violations of safety statutes and regulations to the public in order to increase the deterrent effect of the actions and keep the public informed about how the laws are being enforced.

These regular uses provide regional personnel sufficient flexibility to accomplish their mission without running afoul of the Privacy Act. Normally, only the fact that an investigation is being



conducted and the name of the individual should be provided to the person from whom you are requesting information. The fourth regular use is what permits the regional office to send a copy of the FRA Form F6180.80 notice to the individual's employing railroad or offeror.

However, in order to ensure that the regular uses are not misapplied or applied inconsistently, disclosure of information on individuals to those outside FRA other than the types of disclosure discussed in the preceding paragraph may not be made without prior approval from RRS management in consultation with RCC on the propriety of any such disclosure. Moreover, certain rules on storage of records on individuals must be observed in order to comply with the Privacy Act.

Accordingly, inspectors are not to maintain file copies of records about noncompliance of an individual after they have forwarded a notice concerning that individual to the region; instead, inspectors will submit their file to the region. Regional Administrators will establish a secure file for all such records and will ensure that, except as discussed above, no information contained in this file is released without the authorization from RRS management. Information submitted by the individual will be placed in that file along with the other pertinent records. The files will be stored in file cabinets that will be locked after working hours. Automated files will be password protected and will only be retrievable by direct terminal access with the selection of the data elements determined by the authorized user. Manual (paper) records will be retained for a period of 3 years. Automated (computer) records will be maintained for 5 years. (Inspectors should consult RCC prior to disposing of any records that may still be subject to an enforcement action.) Paper files should be shredded. Certain automated records will be retained indefinitely to provide complete compliance histories.

To avoid problems in this area, regional personnel should follow this general rule: except for sending the individual's employer its copy of the FRA Form F6180.80 notice, personnel should not disclose records about individuals or discuss information in those records with persons outside of FRA. (Except as is necessary to complete the investigation and any resulting enforcement action, or as specifically authorized by RRS.) If an inspector is in doubt about how to handle a situation or he or she has a question pertaining to the Privacy Act, contact RCC through your regional management.

## Chapter 9 – FRA Hazardous Materials One-Time Movement Approval Process

### 9.1 Purpose

The movement approval process, established in 49 C.F.R. § 174.50, was developed in response to the generation of large numbers of emergency Special Permit (formerly called exemptions) requests by the regulated community in its effort to move nonconforming tank cars for repair. An emergency Special Permit (49 C.F.R. § 107.117) is generally issued to prevent a significant economic loss, neutralize a condition that threatens national security, or prevent injury to persons or property. Often, the “significant economic loss” criterion was used even though the primary reason for the emergency processing request was the necessity to move a tank car to effect repairs that could not be accomplished at the car’s current location.

FRA and PHMSA developed a process to increase movement efficiency without compromising the safety of HM transportation. The final rule (Docket HM-216, 61 Fed. Reg. 28677, June 5, 1996) consolidated and revised 49 C.F.R. §§ 174.47, 174.48, and 174.50 (§ 174.50 already allowed for short movements of nonconforming or leaking packages under certain conditions) into the current § 174.50. The new section prohibited the movement of bulk packagings, as defined in 49 C.F.R. § 171.8, that do not conform to the HMR without prior approval, or unless a short movement will reduce or eliminate an immediate threat or harm to human health or the environment. A brief explanatory discussion of the movement approval process accompanies an optional form for submitting the necessary information to FRA. The approval application is also available in Adobe Acrobat (.pdf) and Microsoft Word (.docx) formats for submissions via email to [HM ASSIST@dot.gov](mailto:HM ASSIST@dot.gov). The application and procedural OTMA process guidance is explained in the most current version of the Hazardous Materials Guidance Notice (HMG-127).

The primary purpose of movement approvals is to ensure that bulk HM packagings that no longer meet their packaging specifications move safely by rail, when necessary, in order to effect corrective actions and/or necessary repairs. However, the movement approval process also serves to provide an informational database that can be mined and evaluated to determine potential or actual systemic problems with a particular series of tank cars, type of valve, gasket material, etc., as well as identify the root causes of defects and potentially affect permanent long-term solutions. The information obtained as a result of the movement approval process can also lend itself to being able to identify facilities that may have procedural problems and require greater assistance in ensuring that their practices, in regard to package preparation for transportation, are adequate to ensure regulatory compliance and safety.

### 9.2 General Information

Since 1996, FRA has implemented an approval process in accordance with 49 C.F.R. § 174.50 of issuing one-time approvals that, under the authority of the FRA Associate Administrator for Railroad Safety/Chief Safety Officer, permits the movement of bulk packagings in rail transportation in accordance with specifically identified conditions, as stated in any given

approval issued, when the packagings no longer conform to their regulatory packaging specification. The HMR, at 49 C.F.R. § 174.50, provide in relevant part:

§ 174.50, Nonconforming or leaking packages:

A leaking non-bulk package may not be forwarded until repaired, reconditioned, or overpacked in accordance with § 173.3 of this subchapter. Except as otherwise provided in this section, a bulk packaging that no longer conforms to this subchapter may not be forwarded by rail unless repaired or approved for movement by the Associate Administrator for Safety, Federal Railroad Administration. Notification and approval must be in writing, or through telephonic or electronic means, with subsequent written confirmation provided within two weeks. For the applicable address and telephone number, see § 107.117(d)(4) of this chapter.

Title 49 C.F.R. § 174.50 is applicable to all bulk packagings (i.e., tank cars, portable tanks, intermediate bulk containers, hopper cars, and gondola cars), as defined in 49 C.F.R. § 171.8, that are being or will be transported by rail when they do not conform to their packaging specifications. This includes bulk packagings that may not contain regulated HM, but which are being represented in transportation by rail as specification packagings per 49 C.F.R. § 171.2(g).

### 9.3 Approval Guidance

The following general policies and guidance exist to assist persons seeking approval for the movement of nonconforming bulk packagings and for inspectors who provide informational guidance to such entities:

- Approval is required for the movement of bulk packagings not conforming to the HMR, except where the movement is short and necessary to reduce or eliminate an immediate threat or harm to human health or the environment.
- Approvals for bulk packagings that are leaking will generally not be issued; however, they may be moved “only so far as necessary to reduce or to eliminate an immediate threat or harm to human health or to the environment when it is determined its movement would provide greater safety than allowing the package to remain in place.” (49 C.F.R. § 174.50)
- Approval requests for bulk packagings where a temporary valve securement device, commonly referred to as a “C-kit,” has been applied, will be considered during the request evaluation process for issuance of an approval with certain specific provisions, and consideration of the movement distance requested, the nature of the product, as well as determining if movement is the best course of action during the request evaluation process.

- Approval is needed to move nonconforming DOT-specification bulk packagings, even if they are secured on a flatcar or in a gondola car.  
An OTMA-2 will be applicable for bulk package/packaging, or other railcars (e.g., covered hopper cars containing a regulated hazardous material), that are found to be overloaded in transportation by greater than 1 percent of the allowable total gross rail load (GRL), rounded up to the next 100 pounds on a weight-in-motion scale, or for any bulk package/packaging that is overloaded by greater than 1,000 pounds of the allowable total GRL on a static scale.
- Approvals will not generally be granted to move cars that are overloaded by volume and have insufficient outage in the tank for the product they contain. In these instances, shippers will need to arrange for transloading with the rail carrier having possession of the shipment.
- Approval is not needed for tank cars when the tank and/or service equipment is overdue for testing, provided that the tank car was filled prior to the inspection date (49 C.F.R. § 173.31(a)(3)).
- Rail carriers are not obligated to honor an approval issued by FRA and have the right to refuse movement even if an approval is issued. They may require alternate solutions that do not involve further movement on their rail system. FRA recommends that the requestor needing the approval contact appropriate representatives from the rail carriers who will be involved in moving the defective packaging. This is to ensure that the rail carriers are willing and able to transport the packaging on their respective systems in order to get the packaging to the requestor's desired location upon issuance of an approval by FRA.
- FRA cannot issue movement approvals for tank cars that are offered into transportation for interchange service and exceed the 40-year age limit, as stated in the AAR's Interchange Rules, Rule 90. This is not a Federal regulatory age limit, and persons with cars affected by this will need to seek resolution with the AAR and the rail carriers involved.
- Approvals issued by FRA will only be applicable to movements of defective packagings by rail within the United States. Authorized movement of defective packagings in Canada requires the issuance of a "temporary certificate" from the competent authority of Transport Canada. The requestor will need to coordinate their request and obtain corresponding approval from Transport Canada. Movements of defective packagings across the border to or from Mexico will require the requestor to coordinate with the appropriate Mexican agency representatives.

In the case of movements originating in the United States with a requested destination abroad, the reviewer should request evidence of competent authority approval from the destination country prior to issuing an OTMA in order to ensure cars are not rejected at the border

- Verbal movement approvals can be requested, and FRA may grant a verbal approval when circumstances and situations warrant. See the verbal movement approval process in Section 9.4 of this chapter for more detailed information on the process.

## **9.4 Movement Approval Process**

The movement approval process, per 49 C.F.R. § 174.50, is administered and maintained by the headquarters staff of the HM Division in the Office of Safety Assurance and Compliance in Washington, DC, with the assistance of the various hazmat specialists and inspectors in the field.

### **9.4.1 Written Approvals**

The process for a written approval is as follows:

#### **9.4.1.1 Evaluating Applications**

- Approval requests are received from the industry. FRA does not stipulate who should request the approval. However, requests must include sufficient information so that the headquarters hazmat staffer can effectively evaluate the request and determine if the defective packaging can be moved safely. This document may also be completed and sent by email or fax.
- Once a request is initially determined to be required in accordance with 49 C.F.R. § 174.50, a sequential approval number is automatically assigned by entering the approval request information into the One-Time Movement (OTM) database. An approval number consists of the letters “FRA” followed by a dash and a nine-digit number. The first two digits being the year; the second two, the month; and the last five, the sequentially assigned number that begins with “00001” at the start of each calendar year. (All FRA regional HM specialists have access to the hazmat OTM database.)
- The HM Division specialist evaluating the OTMA-1 and OTMA-2 applications conducts a thorough review and evaluation of the submittal in order to determine if movement can be accomplished safely. If the movement can be accomplished safely, then the reviewer issues the approval with all conditions determined to be necessary to ensure safe movement. This review may include consideration of a requestor’s past history in complying with previously issued movement approvals.
- The assigned specialist coordinates, as needed, with the requestor to obtain any additional information necessary to effectively evaluate the nature and severity of the defective condition as identified in the request. Failure to respond to requests may result in denial of the application.
- To the extent necessary and practicable, the assigned specialist coordinates with the appropriate representatives of the rail carriers who will be transporting the defective bulk packaging in order to include them in the process and take any operational concerns they may have into consideration during the evaluation process. Additionally, the assigned

specialist coordinates with the car owner, as appropriate, to ensure awareness of the problem.

- Depending on the nature and severity of the defective condition, specialists may request, through the regional hazmat specialist, that a hazmat field inspector conduct a field observation of the packaging, and provide feedback that may assist in the movement approval evaluation process.
- If, upon evaluation, it is determined that an approval is to be issued; the assigned specialist drafts the approval, signs it, and provides a signed approval to the applicant by email.
- The processor ensures that all appropriate FRA regional HM specialists, who may be affected by or need to know of the movement of the packaging under the issued approval, are provided with a copy of the approval.
- Regional HM specialists review each movement approval sent to them to determine what follow-up action, if any, is warranted based on the nature of the noncompliance issue and the conditions, as stated in the approval.

#### ***9.4.1.2 Structural Issues***

- Specialists processing applications must consult with a headquarters HM Division engineer when the defect requiring the movement approval involves the structural integrity of the tank car tank that could affect the tank car tank. These include, but are not limited to, the stub sill, head brace, reinforcing bars, and pad to tank welds. On other components, such as service equipment, the HM staff handling the approval request will use discretion in determining whether an engineering consultation is necessary.
- Headquarters engineers will evaluate the integrity of the tank and provide the specialist with any conditions necessary to ensure a safe movement. If the engineer deems that movement of the tank car on its own wheels cannot be made safely, the assigned specialist shall deny the application unless the equipment can be loaded and secured on other rail equipment.
- When the structural integrity is in question, the regional staff shall also be consulted with in order to ensure that the proper conditions are met to ensure safe movement of the tank car.

#### ***9.4.1.3 Coordination with Additional Disciplines***

- If necessary, the approval processor coordinates with the appropriate Motive Power and Equipment (MP&E) Division specialists if a tank car also has mechanical noncompliance issues that will not or cannot be repaired before movement. Coordination is to be made with headquarters MP&E staff if car movement is interregional (involves more than one FRA region) and with the appropriate regional MP&E specialist if car movement is

intraregional (within a single FRA region). This may result in a separate MP&E one-time move being issued or the issuance of a joint approval under the hazmat approval process.

- Coordination with MP&E personnel is not required if the tank car is loaded onto and secured to a mechanically compliant flatcar or into a mechanically compliant gondola car, regardless of whether the tank car meets the mechanical regulations.

#### 9.4.2 Verbal Approvals

A verbal movement approval can be requested and may be granted for emergency situations where 49 C.F.R. § 174.50 applies and the movement is outside the scope of the regulations for short movements. Generally, the reason for verbally granting approvals is to prevent imminent and serious harm to the public and the environment. The process for requesting a verbal approval is as follows:

- During regular work hours (Monday–Friday, 8 a.m. to 5 p.m. EST), verbal movement approvals may be requested by contacting the FRA Hazardous Materials Division in Washington, DC, either by telephone or electronically.
- After normal work hours, verbal movement approvals may be requested by contacting the National Response Center (NRC) at (800) 424-8802, and notifying the NRC watchstander that emergency processing of a movement approval is needed.
  - The NRC watch stander will notify either the Director, Office of Technical Oversight, or another authorized representative of the Hazardous Materials Division, who will discuss the request with the applicant.
  - If the car is not leaking and the requested move is no further than 25 miles, the specialist for the region in which the car is located is authorized to verbally grant the approval.
- The requestor should be prepared to provide basic information, i.e., product involved, type of bulk packaging/railcar, brief summary of the situation and reasons for needing a verbal approval.
- FRA will evaluate the request and the need for a verbal approval. If warranted, the hazmat representative shall verbally authorize movement, with operational conditions if determined to be necessary for safe movement. If approved, the applicant shall be issued an identifying number for tracking purposes that is structured “FRA-YY/MM/DD/R\_/V” (where YY=Year, MM=Month, DD=Date, R=Region involved, and V=Verbal).
- A written approval request shall still be submitted to FRA in accordance with the written approval process as soon as is reasonably possible, but no later than 2 days after the granting of the verbal approval.
-

## 9.5 Root Cause Analysis Reports

A root cause analysis (RCA) is a vital component in efforts to achieve FRA's goal of eliminating NARs. Currently, FRA can identify components in which defects are encountered with the highest frequency. Without determining the root cause, the defects cannot be adequately addressed. To this end, the following procedures are provided to guide FRA personnel in requesting, evaluating, and processing RCA reports.

### 9.5.1 Requirements for Requesting and Submitting an RCA

The grantee of the OTMA (including OTMA-3) must notify the owner of the bulk package/packaging owner so that the owner can direct the bulk package/packaging to the appropriate bulk package/packaging facility for cleaning and/or repair. Once notified, the owner is responsible for notifying the bulk package/packaging facility of the requirements for a root cause analysis. An RCA is required as a condition of the OTMA for the following defective conditions, or if explicitly requested by FRA's Headquarters HM Specialists or indicated in Section 9 of the issued OTMA:

- Breach of the bulk packaging tank.
- Broken pressure relief valve stem.
- Overloaded (by weight and/or volume) bulk packages (unless specifically excepted in the issued FRA email authorizing movement).

A recommended format for a root cause analysis report is provided in Attachment A of HMG-127.

- The words "root cause analysis" will be used in the reporting requirements. The form contains the basic guidelines for the content.
- The RCA must be submitted 90 days from the date the OTMA is issued. The grantee may request extension of this deadline but must provide justification. The maximum extension will be 90 days.
- Grantees will be instructed to submit the RCA to the HM Division group mailbox (HMASSIST@dot.gov). In the case where an engineer evaluated the request, that engineer must be copied on the email. If the submission is to be via regular mail, the RCA must be submitted to the Staff Director, with the engineer copied.

### 9.5.2 Review of Submitted Analyses

HM Engineers are responsible for RCA evaluation. The following minimum content requirements comprise an acceptable RCA:

- **Basic information and a detailed statement of the problem,**



Tank car number, the location of defect on tank car, the make and model of component, and the description of the defect should accompany the detailed statement of the problem.

- **Factor(s) contributing to the problem,**  
A narrative of the investigation and findings supported by inspection reports, photographs, and drawings,
- **The cause of the factor(s), if a cause can be determined,**  
Tie the stated defect/problem to the findings in a logical manner.
- **Steps taken to prevent future occurrence,**  
Based on the findings and conclusions of the investigation, describe the steps taken to modify operational or inspection steps to prevent reoccurrence.

If the minimum content requirements are not met, the engineer will request additional information to satisfy the requirements. Failure to respond may constitute non-reporting and could result in denial of future applications or penalty action.

## 9.6 File Closure

Once the grantee has satisfied the requirements of the application, the file shall be considered closed. When the approval requires a root cause analysis, the reviewing engineer will save all related information to the database in the respective file for the assigned OTMA number. The engineer will submit a comment describing the root cause and insert the final approval date in the response received field in the database.

## APPENDIX A – HM Guidance Notices\*

HMG 127 – Version # 4

<https://www.fra.dot.gov/eLib/details/L15988>

HMG 109

[https://www.fra.dot.gov/eLib/details/L02654#p1\\_z10\\_gD\\_s23\\_ICT](https://www.fra.dot.gov/eLib/details/L02654#p1_z10_gD_s23_ICT)

HMG 107

[https://www.fra.dot.gov/eLib/details/L02655#p1\\_z10\\_gD\\_s23\\_ICT](https://www.fra.dot.gov/eLib/details/L02655#p1_z10_gD_s23_ICT)

HMG 106

[https://www.fra.dot.gov/eLib/details/L02656#p1\\_z10\\_gD\\_s23\\_ICT](https://www.fra.dot.gov/eLib/details/L02656#p1_z10_gD_s23_ICT)

HMG 105 [changes forthcoming 2016-2017]

[https://www.fra.dot.gov/eLib/details/L02657#p1\\_z10\\_gD\\_s23\\_ICT](https://www.fra.dot.gov/eLib/details/L02657#p1_z10_gD_s23_ICT)

HMG 104

[https://www.fra.dot.gov/eLib/details/L02658#p1\\_z10\\_gD\\_s23\\_ICT](https://www.fra.dot.gov/eLib/details/L02658#p1_z10_gD_s23_ICT)

HMG 103

[https://www.fra.dot.gov/eLib/details/L02659#p1\\_z10\\_gD\\_s23\\_ICT](https://www.fra.dot.gov/eLib/details/L02659#p1_z10_gD_s23_ICT)

HMG 102

[https://www.fra.dot.gov/eLib/details/L02660#p1\\_z10\\_gD\\_s23\\_ICT](https://www.fra.dot.gov/eLib/details/L02660#p1_z10_gD_s23_ICT)

HMG 101

[https://www.fra.dot.gov/eLib/details/L02661#p1\\_z10\\_gD\\_s23\\_ICT](https://www.fra.dot.gov/eLib/details/L02661#p1_z10_gD_s23_ICT)

**\*Some HM Guidance Notices are under revision. Updated Guidance Notices will be provided when they are finalized and will become an addendum to the HM Manual.**

## **APPENDIX B**

### **INTERAGENCY MEMORANDUMS OF AGREEMENT/ UNDERSTANDING**

**(See Link Below)**

<http://our.dot.gov/office/fra.rrs/rrs2/rrs10/rrs12/Shared%20Documents/Foorms/AllItems.aspx?RootFolder=%2Foffice%2Ffra%2FErrs%2Frrs2%2Frrs10%2Frrs12%2FShared%20Documents%2FMOA%5FMOU%20Agreements&FolderCTID=0x012000755D1FD5C902A048B70F0EDA784E38D8&View={A350B21D-6AD2-4703-B4A5-6B8A6D5722A4}>

## APPENDIX C

# CHECKLIST FOR WRITING VIOLATION REPORTS

- **Establish Elements of Violation.**
  - Review language of specific regulation, order, or statute violated.
  - Address each element of the violation in logical order.
  - If willfulness is alleged, explain basis (See discussion of term in Part 209, Appendix A).
  
- **Determine Likely Sources of Evidence to Support Each Element of Violation.**
  - Inspector's own observations.
  - Photographs: very helpful if violation lends itself to being captured on film.
  - Documents: describe source of each document and purpose for including it (what does it show and how does it help make the case?); do not alter the document.
  - Admissions against interest: statements by company officials or employees admitting element of violation; can be found in company documents or reports of interview.
  - Signed witness statements: need to use most current version of witness statement form and need to address elements of violation and basis of witness's knowledge.
  
- **Anticipate Defenses or Mitigating Factors.**
  - Consider records (e.g., repair records contradicting our version of events) railroad might offer to rebut allegations; obtain them and explain why they do not defeat the case.
  - Expect challenges to allegations based solely on witness statements; make sure statements anticipate and rebut those statements.
  - Anticipate ways railroad may try to minimize seriousness of violation or mitigate by reference to remedial action, and explain why such points are or are not valid.
  
- **Provide Important Background Information.**
  - Recent history of compliance with relevant set of regulations, especially at this location.
  - Course of dealings with railroad or shipper on this enforcement issue.
  - Any circumstances that make this violation especially hazardous.
  - Any circumstances that substantially mitigate the seriousness or culpability
  - Alleging violations for multiple days, seeking maximum penalty, or seeking multiple related counts that add up to a high dollar amount? If yes:

- Violation report itself should very briefly summarize basis of request for extraordinary penalties.
- Consult region and determine who will draft cover memo from regional manager that will provide more extensive discussion of need for such penalties.
- You only need one cover memo for related group of violation reports.
- **Review Draft Report.**
  - Quality control: fix typos, misspellings, etc.; remove any references to a complaint or to a complainant; Remove opinions about companies or individuals.
  - Ask yourself if all elements of violation are satisfactorily addressed.
  - On a complicated case, ask a colleague (even from another discipline) to read the draft to see if it clearly states the case and answers relevant questions.

**APPENDIX D**  
**TRANSPORTATION WORKER IDENTIFICATION**  
**CREDENTIAL (TWIC) INFORMATIONAL BULLETIN**  
(See attached)



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## TWIC INFORMATIONAL BULLETIN

### List of Agencies Qualifying for the “Federal Officials” Exemption

Federal officials and Law Enforcement officials are not required to obtain or possess a TWIC in order to gain or have unescorted access to MTSA regulated facilities and/or vessels while in the performance of their official duties (33 CFR 101.514(b), (c), (d)). This also includes contractors assigned to Federal agencies that are issued agency credentials (either HSPD-12 compliant credentials or the agencies official credentials currently in use) and to those State and local regulatory enforcement officials that are described in TWIC Policy Advisory Council Decision 01-07 (<http://homeport.uscg.mil/twic>).

The following list is provided to serve as a quick reference guide at access control points aboard MTSA regulated facilities and vessels; it is not intended to be all inclusive as there are numerous federal agencies with jurisdiction in and around the maritime transportation sector. All personnel with security duties including CSOs, FSOs, VSOs, and security guards should familiarize themselves both with this list and with the credentialing and/or uniforms (if applicable) from the below list of agencies.

Personnel with security duties are reminded that the TWIC exemption applies only to those Federal officials, Law Enforcement officials and Federal Government contractors who are entering while in the performance of their official duties and who have their respective agency/department credentials and/or Department of Defense Common Access Card (CAC) to provide for verification in accordance with 33 CFR 101.515(c).

- Army Corp of Engineers
- Centers for Disease Control
- Federal Bureau of Investigation
- Federal Emergency Management Agency
- Federal Grain Inspection Service
- Federal Railroad Administration
- National Marine Fisheries
- National Oceanographic & Atmospheric Administration
- National Science Foundation
- National Transportation Safety Board
- Pipeline & Hazardous Materials Administration
- Transportation Security Administration
- US Coast Guard
- US Coast Guard Auxiliary
- US Customs & Border Protection
- US Department of Agriculture
- US Department of Defense
- US Department of Energy
- US Department of Homeland Security
- US Department of Interior
- US Department of Transportation
- US Drug Enforcement Agency
- US Environmental Protection Agency
- US Immigration & Customs Enforcement
- US Maritime Administration
- US Marshals Service
- US Nuclear Regulatory Commission
- US Postal Service
- US Secret Service

\*\* Security personnel are encouraged to contact their local Coast Guard Captain of the Port (COTP) with any questions regarding this bulletin and for clarification on agency and/or department officials not listed above.

# APPENDIX E

## GLOSSARY AND ACRONYMS

### Glossary of Terms and Definitions

**Acceptance:** Consent to the terms of an offer in which consent creates a contract: implies the right to reject.

**Administrator:** The Administrator of the Federal Railroad Administration.

**Agent:** One who, by mutual consent, acts for the benefit of another; one authorized by a party to act on that party's behalf.

**Associate Administrator:** The Associate Administrator for Railroad Safety/Chief Safety Officer of the Federal Railroad Administration.

**Broker:** One who acts as an intermediary for a commission or fee, brings parties together, and assists in negotiating contracts between them.

**Federal Hazardous Material(s) Law:** Federal Hazardous Material(s) Transportation Law found at 49 U.S.C. § 5101 et seq.

**Fitness:** Demonstrated and documented knowledge and capabilities resulting in the assurance of a level of safety and performance necessary to ensure compliance with the applicable provisions and requirements of the Hazardous Materials Regulations, Special Permit, or approval issued under the regulations.

**Freight Forwarder:** A person who, having no interest in goods and no ownership or interest in the means of their carriage, undertakes (for hire) forwarding these goods by safe carrier to a destination.

**General Manual:** The manual that provides the general duties and responsibilities common to all field personnel of the Office of Railroad Safety.

**Hazardous Materials Regulations or HMR:** Title 49 Code of Federal Regulations (C.F.R.) Parts 100–199.

**Hazardous material, Hazmat, or HM:** A substance or material, including a hazardous substance, which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated.

**Hazardous Material Incident:** A hazardous material event that requires the submission of a DOT Form 5800.1. See 49 C.F.R. 171.15 and 171.16.

**Inspection:** Checking or reviewing a person against established laws, rules, regulations, and standards.

**Inspection Report:** Federal Railroad Administration Inspection Report Form FRA F6180.96, and the continuation sheet FRA Form F6180.96a.

**Inspector:** A Federal hazardous materials inspector and any authorized person acting in that capacity.



**Investigation:** An inspection or study by close examination and systematic inquiry of accidents, incidents, violations, or alleged violations of laws, rules, regulations, and standards.

**Offer:** A “manifestation of willingness to enter into a bargain, so made as to justify another person in understanding that his assent to that bargain is invited and will conclude it.” Restatement, Contracts (2d) § 24.

**Offeror:** A person who performs functions associated with offering a hazardous material for transportation. A person who offers packagings of a hazardous material or packages containing the residue of a hazardous material for transportation. Although the word “shipper” does appear in the Hazardous Materials Regulations (HMR), it is used in an ordinary layman's manner rather than as a specific, technical term of art.

**Office of Hazardous Materials Safety:** A division within the Pipeline and Hazardous Materials Administration. Its responsibilities include the development of the HMR.

**One-Time Movement Approval:** The Federal Railroad Administration’s process to allow movement of non-complying bulk packages for a special purpose (usually repair) under specified conditions ensuring the safety of the rail movement. (See 49 C.F.R. § 174.50.) Granting of such authority does not relieve a party from any statutory liability applicable to such movements.

**Person:** An individual, corporation, company, firm, partnership, society, association, or joint- stock association, which includes any trustee, receiver, assignee, or personal representative thereof.

**Pipeline and Hazardous Materials Safety Administration (PHMSA):** The lead agency in the development of the HMR. The agency was formerly known as Research and Special Programs Administration.

**Principal:** “One who has permitted or directed another to act for his benefit and subject to his direction or control.” Seavey Law of Agency § 3 (1964)

**Secretary:** The Secretary of Transportation.

**Sensitive Security Information:** Information that, if publicly released, would be detrimental to transportation safety and/or security as defined by 49 C.F.R. Parts 15 and 1520. Although not considered classified information, there are specific procedures for recognizing, marking, protecting, safely sharing, and destroying it.

**Special Permit:** A document issued by the Associate Administrator of PHMSA under the authority of 49 U.S.C. § 5117 permitting a person to perform a function that is not otherwise permitted under Subchapter A or C of 49 C.F.R. or other regulations issued under 49 U.S.C. § 5101 et seq. (e.g., Federal Motor Carrier Safety Administration routing requirements). The terms “Special Permit” and “exemption” have the same meaning for the purposes of Subchapter A or C or other regulations under 49 U.S.C. § 5101 through 5127.

**Specialist:** A hazardous materials specialist, who is a key advisor to the Regional Administrator or Hazardous Materials Staff Director on hazardous materials matters. Specialists provide technical guidance to inspectors.

**Violation Report:** Hazardous Materials Violation Report Form FRA F6180.110.

## Acronyms

|            |   |
|------------|---|
| AARRS/CSO  | Associate Administrator Railroad Safety/Chief Safety Officer                                    |
| AAR        | Association of American Railroads   |
| ALARA      | as low as reasonably achievable   |
| ASTM       | American Society for Testing and Materials  |
| ASME       | American Society of Mechanical Engineers  |
| ASSE       | American Society of Safety Engineers  |
| ATSDR      | Agency for Toxic Substances and Disease Registry (U.S. Department of Health and Human Services) |
| <br>       |   |
| BOE        | Bureau of Explosives  |
| <br>       |   |
| CDC        | Center for Disease Control and Prevention   |
| CERCLA     | Comprehensive Environmental Response, Compensation and Liability Act                            |
| C.F.R.     | Code of Federal Regulations   |
| CHEMNET    | A mutual aid network of chemical offeror and contractors  |
| CHEMTREC   | Chemical Transportation Emergency Center  |
| CHLOREP    | A mutual aid group comprising offerors and carriers of chlorine                                 |
| CMA        | Chemical Manufacturers Association  |
| COFC       | container on flatcar  |
| <br>       |   |
| DHS        | U.S. Department of Homeland Security  |
| DOD        | U.S. Department of Defense  |
| DOE        | U.S. Department of Energy   |
| DOJ        | U.S. Department of Justice  |
| DOT        | U.S. Department of Transportation   |
| <br>       |   |
| EPA        | U.S. Environmental Protection Agency  |
| EPCRA      | Emergency Preparedness and Community Right-to-Know Act  |
| EO         | emergency order   |
| <br>       |   |
| FEMA       | Federal Emergency Management Agency   |
| FHML/FHMTL | Federal Hazardous Material Law/Federal Hazardous Material(s) Transportation Law                 |
| FR         | Federal Register  |
| FRA        | Federal Railroad Administration   |
| <br>       |   |
| GAO        | Government Accountability Office  |
| <br>       |   |
| HHS        | U.S. Department of Health and Human Services  |
| HM         | Hazardous material(s) or hazmat   |
| HMR        | Hazardous Materials Regulations   |
| HTUA       | high-threat urban area  |
| <br>       |   |
| MOT        | material of trade   |
| <br>       |   |
| NAR        | non-accident release  |

|          |  |
|----------|--|
| NCP      | National Contingency Plan                                |
| NIOSH    | National Institute of Occupational Safety and Health     |
| NSPP     | National Safety Program Plan                             |
| NTSB     | National Transportation Safety Board                     |
| NIP      | National Inspection Plan                                 |
| NRC      | National Response Center                                 |
| NRT      | National Response Team                                   |
| NRF      | National Response Framework                              |
| OHMS     | Office of Hazardous Materials Safety                     |
| OSC      | on-scene coordinator                                     |
| OSHA     | Occupational Safety and Health Administration            |
| OTA      | Office of Technology Assessment, U.S. Congress           |
| OTMA     | one-time movement approval                               |
| PHMSA    | Pipeline and Hazardous Materials Safety Administration   |
| PIH      | poison inhalation hazard                                 |
| PPB      | parts per billion  |
| PPM      | parts per million  |
| PPT      | parts per trillion                                       |
| RCA      | root-cause analysis                                      |
| RCRA     | Resource Conservation and Recovery Act                   |
| RIP      | Regional Inspection Point                                |
| RPD      | Office of Railroad Policy and Development                |
| RSIA     | Rail Safety Improvement Act of 2008                      |
| RRS      | Office of Railroad Safety                                |
| RRT      | regional response team                                   |
| RSAC     | Railroad Safety Advisory Committee                       |
| RSOM     | Railroad Safety Oversight Manager                        |
| RSPA     | Research and Special Programs Administration (Now PHMSA) |
| RTECS    | Registry of Toxic Effects of Chemical Substances         |
| RQ       | reportable quantity                                      |
| SARA     | Superfund Amendments and Reauthorization Act of 1986     |
| SCA      | Safety Compliance Agreement                              |
| SIDT     | Safety Improvement and Development Team                  |
| SP       | Special Permit   |
| SSI      | sensitive security information                           |
| STRACNET | Strategic Rail Corridor Network                          |
| TOFC     | trailer on flatcar                                       |
| TIH      | toxic inhalation hazard                                  |
| TSA      | Transportation Security Administration                   |
| TSCA     | Toxic Substances Control Act                             |
| TWA      | time-weighted average                                    |

## **APPENDIX F**

### **Risk-based Shipper Facility Inspection Protocol Development of a Model and Results of Its Application to FRA Regions**

Hazardous Materials Division  
Office of Safety  
Federal Railroad Administration

## **1.0 Summary**

This paper describes a risk based model for prioritizing the inspection of shippers' facilities in each FRA region using available data sources. The model is intended to be used in conjunction with other available resource planning tools, including the National Inspection Plan (NIP), and the National Safety Program Plan (NSPP), to provide a comprehensive assessment of risk at the regional, and national level to assist regional HM Specialists in developing inspection priorities and making resource allocation decisions. The model uses past five fiscal years' Non-Accident Release (NAR) data, inspection history data, hazmat volume data, and hazard class data to generate a risk ordered list (from highest risk score to lowest) of shippers in each FRA region.

The model contains several region specific parameters whose values are not currently known. Therefore, the model requires the input of additional parameter values before a final risk based listing of shippers can be achieved.

This paper also discusses the difficulties encountered in exercising the model. The principal difficulty is that there is no uniformity of reference to a shipper both within a database as well as across several databases that are used. The same shipper is identified with different names, different spellings, abbreviations, and misspelled names. In addition, there is no uniform standard notation of shipper identification either in the Form 5800 database (which is used for NAR information generation) or in Form 96 inspection data.

## **2.0 Background**

One of the goals of the Hazardous Materials Division (HMD) of the Office of Safety is to reduce the number of Non-accident releases (NAR) of hazardous materials during their shipment on rail. NARs pose hazards to both railroad workers and others in the vicinity of the release and also can cause environmental pollution. About one in 17 NARs results in an injury through exposure to hazardous materials.

Additionally, regulatory non-compliance and failure to consider Original Equipment Manufacturers recommendations related to securement of a tank car for transportation can compromise the ability of the tank car to retain the hazardous material during an accident or incident.

### **The National Inspection Plan (NIP)**

With the goal of reducing NARs FRA/HMD established a National Inspection Plan (NIP) for implementation by each of the 8 FRA regions. The NIP is intended to focus on inspection activities, primarily at rail carrier inspection points, such as yards, offerer's sidings and interchange points. Presently, the NIP addresses railroad inspection time for HM in detail on a per carrier basis. Shipper allocations are provided as a total, by region. The NIP can be modified by the region based on changing circumstances and priorities.

The NIP is based on a data-driven model developed and implemented as follows.

- FRA headquarters establishes an initial baseline plan for each of the eight regions. The plan for the HM discipline sets numeric goals derived from models based on trend analyses and other data that allocate inspection activity for each railroad by State. This

mechanism uses an accident/incident analysis tool to pinpoint locations where HM accidents/incidents are likely to occur, assisting in the allocation of inspection resources.

- Regional leadership adjusts the respective regional plans to reflect emerging issues. These adjustments are made before the beginning of each new fiscal year and at the midyear point to respond to changing trends.
- The NIP is implemented through a Web-based interface, allowing both regions and headquarters to monitor the progress of field inspections during the fiscal year.

The HM inspection time allocation based on the NIP, in FY 2015, is provided in Table 1, as an example. Also provided is the FY 2014 NAR count by origination in each region. It is seen that the shipper facility inspection count allocations do not seem to be driven by the NARs experience in a particular region. For example, Region 1 has the lowest number of 2014 NARs yet has the highest allocation of inspection units at shipper’s facilities, while Region 5 which has the most number of NARs has the 3<sup>rd</sup> lowest inspection units allocated to shipper’s facilities.

In the opinion of HMD the primary cause of NARs is a result of improper securement of service equipment by the offeror/shipper prior to offering a tank car into transportation. In effect, NARs provide a useful indicator of the performance of shippers in each region. One would expect the shipper inspection unit allocation to be commensurate with the NARs in each region. Unfortunately, this is not the case as seen in Table 1.

Table 1: Shipper Inspection Unit Allocations and NAR Counts

| Shipper Location Region | FY 2015 NIP allocation for inspection of shipper facilities (%) | FY 2014 Reported NARs |
|-------------------------|---|-----------------------|
| 1                       | 31.5  | 32                    |
| 2                       | 12.3  | 66                    |
| 3                       | 29.5  | 78                    |
| 4                       | 9.4   | 76                    |
| 5                       | 18.6  | 296                   |
| 6                       | 20.7  | 95                    |
| 7                       | 23.7  | 61                    |
| 8                       | 19.5  | 107                   |
| ALL Regions             | <b>Total -&gt;</b>  | <b>811</b>            |

Therefore, HMD has initiated the development of a data driven, risk based shipper facility inspection model that would take into account historical information on not only the number of NARs but very specific (past) performance information of individual shippers in a region and additional shipper specific risk factors. The model is intended to rank order shipper performance (from worst to best) using a risk metric. Such a ranking will provide the inspectors a data driven basis on which to develop an inspection frequency protocol using data driven risk based tools.

The proposed risk based model framework, discussed in this paper, will augment the NIP by providing a structured approach to the development of strategies using a common methodology

applied at HQ and in the Regions. Specifically, this methodology will help identify where HM incidents are most likely to originate from.

A part of this methodology is a Shipper Inspection Prioritization Model. The model will require further refinements as it is tested and evaluated by Specialists and Inspectors.

### **3.0 Purpose**

This Risk-based Framework will provide broad guidance to FRA Specialists and Regional inspectors by applying a data based quantitative approach to enforcement of the *Hazardous Materials Regulations (HMR)*. *This approach will be referred to as “Risk Based Shipper Inspection Model Protocol [RiBSIMP].”*

### **4.0 Overview of the Framework**

Inspection Prioritization Model (Risk model) which includes two specific components:

- Prioritization based on historical data (section 5.1)
- Regional issue-based priorities or issues (section 6.2);

The following sections will describe each of the elements and provide guidance on how to apply and use them.

### **5.0 Inspection Prioritization Model (Risk Model)**

The Risk Model is formed of two major components;

- Prioritization based on specific data
- Regional issue-based priorities

By combining the two components, described in detail below, and applying a numerical ranking scheme, the HMD can provide a reasonable, realistic and documented ranking of the entities that fall under its enforcement authority. At the same time, it offers needed flexibility by using program resources to address specific issues as well as enabling re-assessment and re-prioritization throughout the year as conditions warrant, such as emerging issues not captured by historical data.

#### **5.1 Prioritization based on historical data**

The first component of the Risk Model is the processing of objective, site specific, data. Relevant data, available from databases maintained by the Department of Transportation (DOT), are used in this risk model. The data sources used are identified in Table 2.

Table 2: Data sources used in the Risk Model for Shipper Facility Inspection Protocol

| Data   | Data Source                    |
|--|--------------------------------|
| Inspection history – a calculation of the number of days since the last inspection   | Secure Site                    |
| Compliance history – the number and type of defects identified in the most recent inspection as well as the number and type of defects reported on previous inspections over the past 5 years                  | Secure Site and OTMA Database  |
| Citation history – the number and type of violations recommended during the last inspection as well as the number and type of violations recommended as a result of previous inspections over the past 5 years | Secure Site and OTMA Database  |
| Safety History – the number of references in the 5800 database over the past 5 years   | Hazmat Inspection Portal (HIP) |
| Safety History – the number of hazardous materials incidents regardless of mode.   | HIP                            |
| Shipper Specific Risk Factors  | Secure Site                    |

### 5.1.1 Description of the Risk Model

The model develops a Risk Score for each shipper in each region based on past performance in inspections, the occurrence of NARs from packages offered by the shipper, and additional risk factors. The model is represented by the equation<sup>1</sup>.

$$RS = \left\{ \left[ T + D_{avg} (C_{avg} + R) + F_{NAR} \right] * F_{RE} + SE \right\} \quad (1)$$

Where,

- RS = Risk score (an open ended numerical score)
- T = A risk number for time elapsed since most recent inspection (Table 3)

<sup>1</sup> The reason that the factors C and R are added is that the defects score D can be caused either by the improper shipper inspection before submitting the package to transportation in the current shipment (and discovered by the inspector) **OR** caused by repeated and multiple violation of the same HMR sections. The addition (C + R) represents an “OR” gate in the Venn diagram sense.



- $N_{i,j}$  = Number of  $i^{\text{th}}$  category of defects found in  $j^{\text{th}}$  inspection visit (“j” could be different years)
- $D_i$  = A risk (weight) factor for the  $i^{\text{th}}$  defect category. This signifies the importance of a particular defect on the overall risk (Table 4)
- $D_{\text{avg}}$  = Average risk factor based on the number of defects, defect weights and number of inspection visits. See equation 2
- $K$  = Total number of types of defects inspected (see defect type listing by 49 CFR compliance sections in Table 4). That is,  $i = 1, 2, 3 \dots K$
- $M$  = Number of inspection visits performed for which the risk assessment is undertaken (say, over the past 5 years). That is,  $j = 1, 2, 3 \dots M$

$$D_{\text{avg}} = \frac{\sum_{j=1}^{j=M} \sum_{i=1}^{i=K} D_i N_{i,j}}{\sum_{j=1}^{j=M} \sum_{i=1}^{i=K} N_{i,j}} \quad (2)$$

- $D_{\text{avg}}$  = Average value for the risk enhancement factor which is based on the maximum value of the number of defects found for each category of defect, averaged over several inspection visits. See equation 4.
- $N_j$  = Maximum of the number of defects cited in each ( $i^{\text{th}}$ ) category for a particular inspection visit (j)

$$N_j = \text{Max} \{N_{i,j}\}_{\text{over all } i^{\text{th}} \text{ defect categories}} \quad (3)$$

- $C_j$  = A risk factor for multiple defects of the same category dependent on  $N_j$  (Table 5).

$$C_{\text{avg}} = \frac{\sum_{j=1}^{j=M} C_j}{M} = \text{Mean value of multiple defects risk factor over all inspections} \quad (4)$$

- $R$  = Repeat non-compliance offense (of defects) factor. This is based on the maximum number of inspections (or years) in which the same type of defect is found, considering all categories of defects (see equation 5 and Table 6)
- $n_{Yj}$  = Number of inspection visits (or years) in which the same  $i^{\text{th}}$  defect is cited.
- $n_{\text{max}}$  = The highest of  $n_{Yi}$ . That is, the highest number inspection trips with repeat determination defects of the same kind.

$$n_{\text{max}} = \text{Max} \{n_{Yi}\}_{\text{measured over all } i^{\text{th}} \text{ defects}} \quad (5)$$

- $F_{\text{NAR}}$  = Risk score for non-accident releases (Table 7)
- $F_{\text{RE}}$  = A factor that considers other risk enhancing factors – See discussions in section 5.1.4

$$F_{\text{RE}} = F_{\text{HM}} \times F_{\text{V}} \times F_{\text{LR}} \times F_{\text{RP}} \quad (6)$$

Where the F's are Risk Factors due to,

- $F_{HM}$  = hazmat class (Table 8)
- $F_v$  = Volume of hazmat shipments (Table 9)
- $F_{LR}$  = Shipments being loaded or empty/residue (Table 10)
- $F_{RP}$  = Route Planning Requirement (Table 11)
- SE = Score attribution from Emerging Issues (Table 12)

These data points are given values indicated above (as well as risk factors) and a simple calculation will identify, based on high score, the higher risks. This score will be reported in the Secure Site (in a region specific spreadsheet).

Initially, the calculations will be done manually outside of NIP and the score will be imported to a dedicated field within the NIP. Eventually, the calculations will be done automatically within the system and will permit immediate re-ranking of inspection sites as new companies are identified and added to the list of Regional Inspection Points (RIP). The ability to re-calculate is also necessary in order to consider 'emerging issues' appropriately and assess their effect on the ranking.

Although the data points may remain constant there is sufficient flexibility in the process to allow for additional or alternative data points to be considered.

#### 5.1.2 Quantified Risk Score for time since last inspection (T)

Table 3:  
[Risk Factor to consider the frequency of past Inspection Visits - T]

| Risk   | Score (T) | Time since last inspection (t), in months |
|--------|-----------|---|
| High   | 10        | $t > 60$                                  |
| Medium | 5         | $12 < t < 60$                             |
| Low    | 0         | $t < 12$                                  |

#### 5.1.3 Quantified risk scores for compliance history

##### 5.1.3.1 Risk score weight ( $D_i$ ) by defect category

Table 4:  
[Risk factor based on the type of defect -  $D_i$ ]

| Risk   | Risk Score weight ( $D_i$ ) | Shipper  |
|--------|-----------------------------|--|
| High   | 5                           | 173.410–173.477, 173.31, 173.24, 173.24b, 172 Subpart I    |
| Medium | 3                           | 107 Subpart G, 172 Subpart H                               |
| Low    | 1                           | 172 Subpart C, 172 Subpart D, 172 Subpart E, 172 Subpart F |

5.1.3.2 Risk factor ( $C_j$ ) based on the number of counts of the  $i^{\text{th}}$  defect during  $j^{\text{th}}$  inspection visit

Table 5:  
[Risk Factor which considers Multiple counts of same defect -  $C_j$ ]

| Maximum number of counts in any defect category ( $1 < i < K$ ) in any inspection visit ( $j$ ) ( $N_j$ ) | Risk factor ( $C_j$ ) |
|---|-----------------------|
| $N_j > 10$  | 2.0                   |
| $3 < N_j \leq 10$   | 1.5                   |
| $N_j \leq 3$  | 1.0                   |

5.1.3.3 Repeated non-compliance (R)

If an entity has a compliance history that includes repeated violations of the same regulations (viz., defect category) a risk factor is applied to the overall compliance risk score. Similar defects/violations in previous audit/inspection will result in a factor applied to their compliance risk score per the following Table 6.

Table 6  
[Risk Factor which considers Repeat non-compliance - R]

| $n_{\text{max}}$<br>(See equation 5) | Repeat non-compliance Risk Factor "R" |
|--------------------------------------|---------------------------------------|
| 1                                    | 0                                     |
| 2                                    | 1                                     |
| 3                                    | 1.5                                   |
| 4                                    | 2                                     |
| $\geq 5$                             | 3                                     |

5.1.3.4 Quantified risk score based Non-Accident Releases (NAR)

Table 7:  
[Risk Factor based on the NARs attributable to the Shipper - NAR]

| Risk   | Score (NAR) | Number of NARs ( $N_{\text{NAR}}$ ), attributable to a shipper, which occurred over the previous |                             |                             |
|--------|-------------|--|-----------------------------|-----------------------------|
|        |             | 12 months  | 36 months                   | 60 months                   |
| High   | 5           | $N_{\text{NAR}} \geq 2$  | $N_{\text{NAR}} \geq 4$     | $N_{\text{NAR}} \geq 6$     |
| Medium | 3           | $N_{\text{NAR}} = 1$   | $2 \leq N_{\text{NAR}} < 4$ | $4 \leq N_{\text{NAR}} < 6$ |
| Low    | 0           | $N_{\text{NAR}} = 0$   | $N_{\text{NAR}} = 0$        | $N_{\text{NAR}} = 0$        |

5.1.4. Risk enhancing (other) parameters associated with a shipper ( $F_{RE}$ )

Risks arise not only from how well (or not) the shipper complies with the shipment preparation and pre-shipping package inspection but also on the nature of the commodity shipped and volume of shipments. These risk parameters are discussed in this section and included in the risk model so that the effect of these “external” factors are considered in the overall ranking of a shipper, for planning inspections.

5.1.4.1 Risk factor ( $F_{HM}$ ) for the type of hazardous material shipped

A shipper that offers a material which is more hazardous than another material should be ranked higher in the risk scale. With this philosophy in mind the following risk factors are set up:

Table 8  
[Risk Factor due to the Class or Division of Hazmat -  $F_{HM}$ ]

| Class # | Division # | Hazardous Materials (HM) Category             | HM Risk Factor ( $F_{HM}$ ) |
|---------|------------|---|-----------------------------|
| 1       | 1.1        | Explosives (mass explosion hazard)            | 5                           |
| 1       | 1.2        | Explosives (projection hazard)                | 5                           |
| 1       | 1.3        | Explosives (fire hazard)                      | 5                           |
| 1       | 1.4        | Explosives (no significant blast hazard)      | 3                           |
| 1       | 1.5        | Very insensitive explosives (blasting agents) | 2                           |
| 1       | 1.6        | Detonating substances (extremely insensitive) | 2                           |
| 2       | 2.1        | Flammable gas                                 | 4                           |
| 2       | 2.2        | Non-flammable compressed gas                  | 2                           |
| 2       | 2.3        | Poisonous gas                                 | 5                           |
| 3       |            | Flammable and combustible liquid              | 3                           |
| 4       | 4.1        | Flammable solid                               | 3                           |
| 4       | 4.2        | Spontaneously combustible material            | 3                           |
| 4       | 4.3        | Dangerous when wet material                   | 3                           |
| 5       | 5.1        | Oxidizer                                      | 3                           |
| 5       | 5.2        | Organic peroxide                              | 3                           |
| 6       | 6.1        | Poisonous material                            | 4                           |
| 6       | 6.2        | Infectious substance (Etiologic agent)        | 1.5                         |
| 7       |            | Radioactive material                          | 4                           |
| 8       |            | Corrosive material                            | 3                           |
| 9       |            | Miscellaneous hazardous material              | 1                           |
| None    |            | Other regulated material ORM-D                | 1                           |

5.1.4.2 Risk factor ( $F_V$ ) for the annual volume of hazardous material shipments.

Table 9  
[Risk Factor due to Annual Volume of Shipments -  $F_V$ ]

| Volume of hazmat shipments (Carloads/year) | Hazmat volume risk factor ( $F_V$ ) |
|--|-------------------------------------|
| 1 to 50                                    | 1                                   |
| 51 to 250                                  | 2                                   |
| 251 to 1000                                | 3                                   |
| 1001 and higher                            | 4                                   |
| N/A  | 1.5                                 |

Note: N/A is assigned 1.5 because if recordkeeping is not practiced by the shipper on how many shipments are made annually that represents a failure.

5.1.4.3 Risk factor ( $F_{LR}$ ) to consider the loaded or residue nature of shipment

Table 10  
[Risk Factor due to Loaded or Empty Car -  $F_{LR}$ ]

| Types of packaging handled at the shipper facility | Car load condition risk factor ( $F_{LR}$ ) |
|--|---|
| Loaded only  | 1.00  |
| Empties/residue only                               | 0.50  |
| Loaded and empties/residue                         | 0.75  |
| N/A  | 1.00  |

5.1.4.4 Risk factor ( $F_{RP}$ ) which considers Route Planning Requirements (§172.820), including Toxic Inhalation Hazard (TIH) material, High-Hazard Flammable Train Quantities, Highway Route Controlled quantities of Radioactive material, and greater than 5,000 pounds of Division 1.1, 1.2, and 1.3 explosives.

Table 11  
[Risk Factor due to considerations of Safety Security & Route Planning -  $F_{RP}$ ]

| Routing Assessment  | Risk Score Factor Symbol | Value of Risk Score Factor |          |
|---|--------------------------|----------------------------|----------|
|   |                          | Yes                        | No       |
| Any shipment required to conform to route planning (§172.820) | $F_{RP}$                 | <b>1.5</b>                 | <b>1</b> |



5.1.5 Emerging issues (SE)

Identification of emerging issues related to a specific entity enables FRA to properly allocate inspection resources in order to address concerns that arise between planning cycles and would not be accounted for with available data. For example, personnel/procedural changes at a particular shipper location that would impact hazmat transportation safety risks. An emerging issue would be subject to the same rigor and calculations as shown above in order to ensure

that resources are committed to ‘real’ risks as opposed to ‘perceived’ risks. Emerging issues identified with a particular entity will be given a score by regional personnel and incorporated into the risk score calculation below.

Quantifying risk of emerging issues is subjective and leverages the expert knowledge held by the FRA. This will be done by tabling an argument (based on a prescribed form which includes a standard 3x3 “Heat Table 12” and defending the argument amongst peers. Regional managers and Specialists are best suited to identify within their regions issues which need to be addressed and which may not be captured in the model based on the data indicated above.

Table 12: Heat Table  
[Risk Factor due to Emerging Issues -SE]

|   |   |   |   |
|---|---|---|---|
| Severity<br>(increasing)<br> | 7   | 8 | 9 |
|   | 4   | 5 | 6 |
|   | 1   | 2 | 3 |
|   | Likelihood (increasing)<br> |   |   |

From this discussion a number of regional, or multi-regional, issues may be identified as priorities and these may be brought forward as a recommendation for National Safety Program Plan (NSPP) projects for the next Fiscal year, and accounted for by numeric risk score in the model. The decision process will be documented and defensible. These issues will be deliberated at least once each year at the annual hazmat specialist meetings, and periodically throughout the year, as appropriate.

## 5.2 Scaled Risk Index (RI)

Using equation 1 and the maximum values of various risk factors defined in Table 3 through Table 14, it can be shown that the value of the maximum Risk Score  $(RS)_{max}$  is 3214.

A more manageable (numerically) definition of risk is the “Risk Index” for each shipping facility defined as follows, with indicated definitions of the symbols

RI = Risk index (in %), which ranges from 0 to 100

RS = Risk score calculated (for each shipper) using equation 1.

$(RS)_{max}$  = Maximum value of risk score (RS) consistent with the maximum values of parameters

$$RI = 100 \left\{ \frac{RS}{(RS)_{max}} \right\} = \text{Risk Index} \quad (\text{with } 0 \leq RI \leq 100) \quad (7)$$

$$(RS)_{max} = [10+5(2+3)+5]*(5*4*1*1.5)+9 = 1,209 \quad (8)$$

$$RI = 100 \left\{ \frac{RS}{(RS)_{\max}} \right\} = \left[ \frac{100}{1209} \right] * \left\{ \left[ T + D_{avg} (C_{avg} + R) + F_{NAR} \right] * F_{RE} + SE \right\} \quad (9)$$

### 5.3 The Model Calculation

Based on the data values for different parameters indicated above, each shipper will be assigned a risk score calculated as follows

The maximum Risk Score (see equation 8) is 3214. The various maximum values of the parameters used to obtain this value are also indicated in equation 8. The risk index is then defined as the ratio of actual score for the shipper (RS) and the maximum score possible  $[(RS)_{\max}]$ .

### 5.4 Risk calculation Procedure

The risk calculation, step by step procedure is indicated in Table 15. The results, obtained using the procedure, are indicated in the next section.

### 5.5 Results

Sample results of applying the above described Shipper Risk Model are indicated in Table 16. Data for the Fiscal Years 2010 thru 2014 (5 years' data) are used in the calculations. The results are organized first by Region and then by the highest risk score of a shipper. Only the top 5 highest score shippers are presented in this Table 16.

It is seen that there are a few shippers whose names appear in the inspection database (Form 96 reports) but do not appear in the NAR database. This is because there is no uniformity of reference or indication of shippers' names in any of the databases used in these calculations. The principal difficulty is that there is no uniformity of reference to a shipper. The same shipper is identified with different names, different spellings, abbreviations, and misspelled names. In addition, there is no uniform standard notation of shipper identification either in the Form 5800 database (which is used for NAR information generation) or in Form 96 inspection data.

After reviewing the risk scores of the shippers in each region and considering available resources, the region will determine the thresholds for critical inspections (number of inspections to be performed in a particular fiscal year, which of the shippers to be inspected and how often)

Table 15

PROCEDURE FOR RISK RANKING OF SHIPPERS

- 1 Gather the raw data from on NARs form 5800 database for the FY years of interest
- 2 Clean up database to ensure that the shipper address and state are properly indicated
- 3 From a database of States vs. FRA regions, categorize each shipper in the NAR data into the respective FRA regions.
- 4 Clean up the different identification of the same shipper in different ways (abbreviations,, different starting name, arbitrary use of periods, identification as “co”, Co”, “inc.”, “Inc.”, “LLC”, “L.L.C.” etc., and spelling mistakes in the shipper names.
- 5 Obtain the RISPC data from the inspections database. This is organized by fiscal year, region in which shipper inspection was conducted, shipper’s name, and the defects identified in the 96 Form.
- 6 Clean up multiple representations of the same shipper name and sort the database first by region number, then by fiscal year and then by shipper name. [Even in this database the same types of multi name representations of the shipper is a problem as in the NAR database].
- 7 Assign on this database risk scores for each type of defect according to the score in Table 4.
- 8 Develop for each shipper in each region the total counts of defects (over the fiscal years of interest – in this case 2010 to 2014) and the weighted defect count. The latter is the sum of the product of defect count for a particular defect and its weight per Table 4. From these two numbers calculate the average “weighted” defect count. This is the value of defect risk score (D).
- 9 The score (C) is set to 1 for all shippers since this data is not available to the headquarters. This score from Table 5 represents the enhancement factor on scored (D) due to the **findings from the most recent inspection** of the counts of the same defect for the same shipper.
- 10 Develop a database of unique shipper names. Rework the NAR database and change all multi representations of shipper names with the unique ones.
- 11 Summarize (i.e., enumerate) the NARs by region, FY, and Shipper.
- 12 Assign to each shipper in the database a score from Table 7, depending upon the total number of NARs attributable to the particular shipper in each region. In the example considered the total NARs attributable to each shipper for a total period of 5 fiscal years (2010 to 2014) are used.
- 13 Match the region number and shipper name in the modified RISPC database (in item 6) with the region number and shipper name in the NAR database [remaining after the action in item 4]. There are many shippers name that do not match or do not exist in one or other database.
- 14 For the shipper names and regions that match include the NAR risk score in the RISPC database.
- 15 Calculate the overall risk score (RS) for each shipper in the RISPC database.
- 16 Organize this database by highest risk score shippers (the top 5 of them) for each region



Table 16  
[Example Table of how the results would be presented]

| Summary of the Shipper's Risk-based Score with Highest at Top |  |                          |                               |  |   |                                 |                            |                       |
|---|--|--------------------------|-------------------------------|--|---|---------------------------------|----------------------------|-----------------------|
| Region #  | Shipper Name   | Avg Score by defects "D" | Score due to # of defects "C" | Score due to repeat of most violated defects "R" | Qualified risk score for time since last inspection "T" | Total # of NARs in past 5 years | Risk score due to NARs "N" | TOTAL RISK SCORE "RS" |
| <b>Region 1</b>   |  |                          |                               |  |   |                                 |                            |                       |
| 1   | REAGENT CHEMICAL & RES.  | 2.7                      | 1.50                          | 3.00   | 5.00  | 11.00                           | 5.00                       | 22.32                 |
| 1   | GLOBAL PETROLEUM CO. (ZGLB)  | 3.3                      | 1.80                          | 3.00   | 5.00  | 0.00                            | 0.00                       | 20.76                 |
| 1   | OCCIDENTAL CHEMICAL COMPANY (ZOCC)   | 3.0                      | 1.20                          | 3.00   | 5.00  | 4.00                            | 3.00                       | 20.73                 |
| 1   | BUCKEYE PARTNERS (ZBEP)  | 3.4                      | 1.40                          | 3.00   | 5.00  | 2.00                            | 0.00                       | 20.02                 |
| 1   | SHELL CHEMICAL COMPANY   | 2.7                      | 1.40                          | 3.00   | 5.00  | 4.00                            | 3.00                       | 19.77                 |
| <b>Region 2</b>   |  |                          |                               |  |   |                                 |                            |                       |
| 2   | KOPPERS, INC (ZKPI)  | 3.1                      | 1.50                          | 3.00   | 5.00  | 9.00                            | 5.00                       | 24.01                 |
| 2   | DUPONT (ZDF)   | 2.8                      | 1.30                          | 3.00   | 5.00  | 14.00                           | 5.00                       | 22.18                 |
| 2   | ASHTA CHEMICAL INCORPORATED (ZACH)   | 3.0                      | 1.00                          | 3.00   | 5.00  | 10.00                           | 5.00                       | 22.00                 |
| 2   | AMERICAN REFINING GROUP  | 2.8                      | 1.10                          | 3.00   | 5.00  | 7.00                            | 5.00                       | 21.59                 |
| 2   | BRC RAIL CAR SERVICE COMPANY   | 3.8                      | 1.20                          | 3.00   | 5.00  | 0.00                            | 0.00                       | 21.01                 |
| <b>Region 3</b>   |  |                          |                               |  |   |                                 |                            |                       |
| 3   | UNION TANK CAR   | 4.7                      | 1.30                          | 3.00   | 5.00  | 0.00                            | 0.00                       | 25.07                 |
| 3   | EASTMAN CHEMICAL CO.   | 4.4                      | 1.40                          | 2.00   | 5.00  | 11.00                           | 5.00                       | 25.06                 |
| 3   | OLIN CORPORATION   | 3.4                      | 1.40                          | 3.00   | 5.00  | 15.00                           | 5.00                       | 24.99                 |
| 3   | ALLIED UNIVERSAL CORPORATION   | 3.1                      | 1.50                          | 3.00   | 5.00  | 10.00                           | 5.00                       | 23.95                 |
| 3   | HERITAGE PROPANE CO. (ZHRT)  | 3.1                      | 1.70                          | 3.00   | 5.00  | 3.00                            | 3.00                       | 22.70                 |
| <b>Region 4</b>   |  |                          |                               |  |   |                                 |                            |                       |
| 4   | HERITAGE CRYSTAL CLEAN, LLC. (ZHCQ)  | 3.5                      | 1.38                          | 2.00   | 5.00  | 13.00                           | 5.00                       | 21.94                 |
| 4   | DOW CHEMICAL (RCC-ZDCU)  | 3.5                      | 1.63                          | 2.00   | 5.00  | 4.00                            | 3.00                       | 20.85                 |
| 4   | AVENTINE RENEWABLE ENERGY  | 3.8                      | 1.20                          | 1.50   | 5.00  | 7.00                            | 5.00                       | 20.33                 |
| 4   | GATX Rail  | 4.7                      | 1.20                          | 2.00   | 5.00  | 0.00                            | 0.00                       | 20.15                 |
| 4   | GRAIN PROCESSING COMPANY   | 2.9                      | 1.00                          | 3.00   | 5.00  | 4.00                            | 3.00                       | 19.73                 |
| <b>Region 5</b>   |  |                          |                               |  |   |                                 |                            |                       |
| 5   | UNION TANK CAR   | 4.6                      | 1.80                          | 3.00   | 5.00  | 0.00                            | 0.00                       | 27.11                 |
| 5   | AMERICAN RAILCAR INDUSTRIES  | 4.9                      | 1.40                          | 3.00   | 5.00  | 0.00                            | 0.00                       | 26.35                 |
| 5   | RESCAR INC. (ZRES) (RAIRS-RSCX)  | 4.4                      | 1.60                          | 3.00   | 5.00  | 0.00                            | 0.00                       | 25.12                 |
| 5   | SAFETY RAILWAY SERVICE   | 5.0                      | 1.00                          | 3.00   | 5.00  | 0.00                            | 0.00                       | 25.00                 |
| 5   | REAGENT CHEMICAL & RES.  | 3.2                      | 1.60                          | 3.00   | 5.00  | 8.00                            | 5.00                       | 24.77                 |
| <b>Region 6</b>   |  |                          |                               |  |   |                                 |                            |                       |
| 6   | SUNCOR ENERGY (USA) INC. (ZSEU)  | 3.5                      | 1.30                          | 2.00   | 5.00  | 12.00                           | 5.00                       | 21.39                 |
| 6   | CHIEF ETHANOL FUELS, INC. (ZCEF)   | 5.0                      | 1.25                          | 1.00   | 5.00  | 9.00                            | 5.00                       | 21.25                 |
| 6   | UNION TANK CAR CORPORATION   | 5.0                      | 1.25                          | 2.00   | 5.00  | 0.00                            | 0.00                       | 21.25                 |
| 6   | ABENGOA BIOENERGY CORP. (ZABEQ)  | 3.7                      | 1.33                          | 1.50   | 5.00  | 12.00                           | 5.00                       | 20.39                 |
| 6   | DYNO NOBEL INC.  | 2.8                      | 1.30                          | 3.00   | 5.00  | 3.00                            | 3.00                       | 19.84                 |
| <b>Region 7</b>   |  |                          |                               |  |   |                                 |                            |                       |
| 7   | TESORO CORPORATION (ZTES)  | 3.4                      | 1.20                          | 3.00   | 5.00  | 13.00                           | 5.00                       | 24.47                 |
| 7   | CHEVRON USA INC (ZCUI)   | 3.1                      | 1.60                          | 3.00   | 5.00  | 17.00                           | 5.00                       | 24.24                 |
| 7   | PARAMOUNT PETROLEUM CORPORATION  | 3.2                      | 1.40                          | 3.00   | 5.00  | 15.00                           | 5.00                       | 24.10                 |
| 7   | INTERSTATE OIL COMPANY   | 3.8                      | 1.60                          | 3.00   | 5.00  | 1.00                            | 0.00                       | 22.61                 |
| 7   | EXXON MOBIL (ZEXM)   | 3.0                      | 1.20                          | 3.00   | 5.00  | 11.00                           | 5.00                       | 22.60                 |
| <b>Region 8</b>   |  |                          |                               |  |   |                                 |                            |                       |
| 8   | J R SIMPLOT COMPANY (ZJRS)   | 2.9                      | 1.70                          | 3.00   | 5.00  | 10.00                           | 5.00                       | 23.75                 |
| 8   | UNION TANK CAR CORPORATION   | 4.6                      | 1.00                          | 3.00   | 5.00  | 0.00                            | 0.00                       | 23.40                 |
| 8   | GLACIAL LAKES ENERGY LLC (ZGLE)  | 2.9                      | 1.20                          | 3.00   | 5.00  | 6.00                            | 5.00                       | 22.02                 |
| 8   | MUSKET CORPORATION   | 3.1                      | 1.40                          | 2.00   | 5.00  | 13.00                           | 5.00                       | 20.60                 |
| 8   | UNIVAR USA INC (ZUNV)  | 2.8                      | 1.30                          | 3.00   | 5.00  | 3.00                            | 3.00                       | 20.14                 |
| <b>NOTES</b>  |  |                          |                               |  |   |                                 |                            |                       |
| (1)   | The shipper's name shown is based on the shipper's address in the particular region when a NAR occurred. The NAR may have occurred in some other region. |                          |                               |  |   |                                 |                            |                       |
|   | Indicates that the NAR database has no record with the shipper's name as indicated in the RSPIC database.  |                          |                               |  |   |                                 |                            |                       |

Note: This example Table does not include additional risk factors whose data are being collected]

## **6.0 Data from FRA Regions**

### **6.1 Regional inspection prioritization overview**

This Framework was developed to allow for the establishment of a nationally consistent, risk-based, approach to FRA enforcement activities while providing for regional differences that are driven by, and respond to, risks that may not be of national scope.

While some regional priorities may be so significant that they become of national interest, there are many more issues that are by nature regional. This Framework requires each region to conduct its own regionally focused risk-based inspection prioritization to identify entities that present a risk to the safe transportation of HM by rail. Further, review by HQ and Regional leadership of regional inspection prioritization will offer the opportunity to identify any issues that are of multi-regional or national significance.

### **6.2 Roles and Responsibilities**

Each region holds the 'expert knowledge' necessary to undertake the risk-based planning exercise. Regions should use all available data driven tools and resources, including this shipper risk ranking output, the National Inspection Plan, the National Safety Program Plan in addition to their professional expertise to plan compliance oversight activities for the fiscal year.

The risk model will only be as useful as the data it contains. The majority of this data is gathered through inspection reports (Form 96) completed in the RISPC system. Inspectors should follow the procedure below to ensure accurate and complete information is entered for each inspection that they perform. The following guidelines should be followed:

**6.2.1 Shipper Identification:** When completing the inspection reports (Form 96 on RISPC) inspectors must:

- Identify the correct shipper name for the facility, being careful to avoid spelling mistakes/typos.
- Ensure that the proper company code is entered for the shipping facility that matches the appropriate company name for the shipping facility.
- Ensure the address entered is the physical location of the facility.

6.2.2 **Risk Factor Data:** When completing inspection reports (Form 96 on RISPC) inspectors must complete the following drop-down risk factor tables. The data will be incorporated into the risk ranking model:

| Meets §172.820(a) - Rail Routing Rule |  |
|---------------------------------------|--|
| Material                              | Car Loads Per/Year   |
| Explosives - 1.1, 1.2, 1.3            | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| PIH - 2.3, 6.1                        | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| HHFT - Class 3                        | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| RAM HRC - Class 7                     | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |

| Total Rail Shipments (All HM Conodities) Per/Year |  |
|---|--|
| Loads   | Car Loads Per/Year   |
| Loads   | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| Residue   | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |

| Hazardous Materials Catogories |          |   |  |
|--------------------------------|----------|---|--|
| Class                          | Division | Hazardous Material Catogory                 | Car Loads Per/Year   |
| 1                              | 1.1      | Explosives (mass explosion hazard)          | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| 1                              | 1.2      | Explosives (projection hazard)              | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| 1                              | 1.3      | Explosives (fire hazard)                    | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| 1                              | 1.4      | Explosives (no significant blast hazard)    | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| 1                              | 1.5      | Very intensive explosives (blating agents)  | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| 1                              | 1.6      | Detonating substances (extremely intensive) | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| 2                              | 2.1      | Flammable Gas                               | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| 2                              | 2.1      | Non-flammable compressed gas                | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| 2                              | 2.3      | Poisonous gas                               | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| 3                              |          | Flammable and combustible liquid            | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| 4                              | 4.1      | Flammable Solid                             | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| 4                              | 4.2      | Substantially combustible material          | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| 4                              | 4.3      | Dangerous when wet material                 | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| 5                              | 5.1      | Oxidizer                                    | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| 5                              | 5.2      | Organic peroxide                            | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| 6                              | 6.1      | Poisonous material                          | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| 6                              | 6.2      | Infectious substance                        | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| 7                              |          | Radioactive material                        | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| 8                              |          | Corrosive material                          | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |
| 9                              |          | Miscellaneous hazardous material            | a) N/A, b) 1 to 50, c) 51 to 250, d) 251 to 1,000, d) 1001 or more |

6.2.3 **Periodic Risk Assessment Updates:** Initially Headquarters hazmat division will complete the assessment manually at least once each year. The output will be distributed to regional leadership prior to September 1, (the beginning of the fiscal year) so that the tool may be incorporated in regional resource planning activities.

Longer term, it is anticipated that the assessments will be automated and incorporate real-time data so regions can monitor regional risk scores throughout the year and make adjustments to their plans, as appropriate.

## **APPENDIX G**

**Inspection Work Sheet for Tank Car Repair Operations Within Shipper Facilities**

**Timeline for the Retrofit of Affected Tank Cars for Use in North American HHFTS**

**Existing Design: DOT-111 Rail Tank Car Used to Transport Flammable Liquids**

# Inspection Work Sheet For Tank Car Repair Operations Within Shipper Facilities



DATE OF INSPECTION \_\_\_\_\_

NAME OF TANK CAR SHOP OPERATION: \_\_\_\_\_

TANK CAR SHOP CONTACT : \_\_\_\_\_

TITLE OF TANK CAR SHOP CONTACT : \_\_\_\_\_

SHIPPER FACILITY NAME \_\_\_\_\_ LOCATION \_\_\_\_\_

TANK CAR SHOP MAILING ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP CODE \_\_\_\_\_

TANK CAR SHOP TELEPHONE NUMBER: \_\_\_\_\_

TANK CAR SHOP CLASS(ES): \_\_\_\_\_ IS THE TANK CAR SHOP AN EXTENSION: \_\_\_\_\_

IF AN EXTENSION, NAME AND ADDRESS OF CONTROLLING TANK CAR SHOP \_\_\_\_\_

DATE OF EXPIRATION OF CERTIFICATION OR REGISTRATION \_\_\_\_\_

FRA INSPECTOR(S) : \_\_\_\_\_

| REGISTRATION CHECK LIST<br>REQUIRED BY AAR APPENDIX B<br>5.02.2 FOR CLASS F, G & L AS FOUND | FACILITY DOCUMENT OR<br>PROCEDURE NUMBER | TITLE 49 C.F.R. § 179.7<br>SITE FOR COMPLIANCE | COMMENTS BY INSPECTOR |
|---|--|--|-----------------------|
|---|--|--|-----------------------|

|  |  |   |  |
|--|--|---|--|
| <b>IN APPENDIX B OF THE M-1002, C-III</b>  |  |   |  |
| 1.0 <b>SCOPE</b><br>Scope of work for which this facility requests registration  |  | 179.7(a) At a minimum, each tank car facility shall have a quality assurance program approved by the AAR  |  |
| 2.0 <b>ORGANIZATION</b><br>(a) Responsibilities of QA personnel defined, highlighting the following functions: performance and management of QA work and verification of conformance to QA requirements (identifying, recording and correcting nonconformance) |  | 179.7 (b)(1) Statement of authority and responsibility for those persons in charge of the quality assurance program   |  |
| (b) Positions each of the tasks shown in 2.0(a) are assigned to and each position's relationship to the organization (organization chart).   |  | 179.7 (b)(2) An organizational chart showing the interrelation-ship between managers, engineers, purchasing, construction, inspection, testing and quality control personnel. |  |
| <b>3.0 INSPECTION &amp; TEST PLAN</b><br>(a) Inspection and Test Plan  |  | 179.7 (b)(5) A description of the manufacturing, repair, inspection,  |  |
| (b) Where subcontractor's services will be utilized  |  | testing, qualification or maintenance program, including the acceptance criteria, so that an  |  |
| (c) Methods employed by contractor to verify subcontractor quality performance   |  | inspector can identify the characteristics of the tank car and the elements to inspect, examine, and test at each point.  |  |
| (d) Verification methods to be employed for special process procedures   |  | 179.7 (b)(6) Monitoring and control of processes & product characteristics during production  |  |

|  |  |  |  |
|--|--|--|--|
| <p><b>4.0 DOCUMENT CONTROL</b><br/> Current issues of applicable documents are available and accessible at all functional areas. A list of applicable publications required to keep current.</p> |  | 179.7 (b)(3) Procedures to ensure that the last applicable drawings, design calculations, specifications, and instructions are used in manufacture, inspection, testing & repair |  |
|--|--|--|--|

|   |  |   |  |
|---|--|---|--|
| <p><b>5.0 MEASURING &amp; TEST EQUIPMENT</b><br/>A system is provided to assure that all measuring and test equipment and devices used to verify quality and monitor special processes are controlled, maintained, and properly documented.</p> |  | <p>179.7 (b)(11) Procedures for the periodic calibration and measurement of inspection and test equipment.</p>  |  |
| <p><b>6.0 INCOMING INSPECTION</b><br/>Provisions are made to inspect, test and identify incoming items as required by the inspection and test plan.</p>   |  | <p>179.7 (b)(4) Procedures to ensure that the fabrication and construction materials received are properly identified and documented.</p>   |  |
| <p><b>7.0 FINAL INSPECTION</b> Provisions are made to inspect, test, identify and document the final items as required by the inspection and test plan</p>  |  | <p>179.7 (b)(5) &amp; (6) [<i>as noted above in section 3.0, INSPECTION AND TEST PLAN</i>]</p>  |  |
| <p><b>8.0 SPECIAL PROCESSES</b> Provisions are made to ensure that the qualifications of personnel, processes, and equipment comply with requirements of applicable specifications, codes and standards are properly documented.</p>            |  | <p>179.7 (b)(9) Qualification requirements of personnel performing non-destructive inspections and tests.<br/>179.7 (b)(10) Procedures for evaluating the inspection and test techniques employed, including the accessibility of the area and the sensitivity and reliability of the inspection and test technique and minimum detectable crack length.<br/>179.7 (c) Each tank car facility shall insure that only personnel qualified for each nondestructive inspection and test perform that particular operation.</p> |  |
| <p><b>9.0 QUALITY RECORDS</b><br/>Provisions are made to maintain quality records as evidence that the reference drawing number and revisions number or part number of the item are identified.</p>   |  | <p>179.7 (b) (12) A system for the maintenance of records, inspections, tests, and the interpretation of inspection and test results.</p>   |  |



|  |  |   |  |
|--|--|---|--|
| <p><b>10.0 NONCONFORMANCE</b> Provisions are made for the retention, evaluation and disposition of all nonconforming items, including those of subcontractors.</p>         |  | <p>179.7 (b) (7) Procedures for correction of nonconformities.</p>  |  |
| <p><b>11.0 INTERNAL QUALITY AUDITS</b> Internal quality audits are planned, scheduled, and documented at least once per year to verify compliance with Specifications.</p> |  | <p>179.7(a) At a minimum, each tank car facility shall have a quality assurance program approved by the AAR</p>   |  |
| <p><b>12.0 TRAINING</b><br/>(a) Approved procedures for identifying training needs and providing training for all personnel involved in quality have been established.</p> |  | <p>179.7 (e) Each tank car facility shall train its employees in accordance with Subpart H of part 172 of this sub- chapter on the program and procedures specified in paragraph (b) of this section to ensure quality.</p> |  |
| <p>(b) Personnel performing specific tasks are qualified on the basis of appropriate education, training and/or experience.</p>  |  | <p>179.7 (e) [as above]</p>   |  |
| <p>(c) Records of training are maintained.</p>   |  | <p>179.7 (e) [as above]</p>   |  |
| <p>(d) Measures to ensure that personnel are aware and knowledgeable of their specific responsibilities for quality have been defined.</p>                                 |  | <p>179.7 (e) [as above]</p>   |  |
| <p>(e) The necessary instruction and means whereby those personnel can develop, achieve, and maintain proficiency are approved.</p>  |  | <p>179.7 (e) [as above]</p>   |  |
| <p><b>13.0 DESIGN CONTROL</b><br/>(a) Design input requirements, including contract review activities, are documented, clarified and reviewed for adequacy.</p>            |  | <p>179.7 (b)(8)&amp;(d) Each tank car facility shall provide written procedures to its employees to ensure that the work on the tank car conforms to the specification, AAR approval, and owner's acceptance criteria</p>   |  |

|  |  |                      |  |
|--|--|----------------------|--|
| (b) The design outputs meet design input requirements. |  | 179.7 (d) [as above] |  |
|--|--|----------------------|--|

\* information is verified by a review of the tank car shop's completed Exhibit B-3 registration checklist, if a registered facility.

**NON-DESTRUCTIVE EXAMINATION RECORDS**

| Name of NDE | eye test date | leak test | mag particle | dye penetrant | ultrasonic thickness | other |
|-------------|---------------|-----------|--------------|---------------|----------------------|-------|
|             |               |           |              |               |                      |       |
|             |               |           |              |               |                      |       |
|             |               |           |              |               |                      |       |
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|             |               |           |              |               |                      |       |
|             |               |           |              |               |                      |       |
|             |               |           |              |               |                      |       |

**\* identify most recent certification date and level for each NDE method to which an examiner is certified by the employer.**

**NON-DESTRUCTIVE TESTS CONDUCTED AT THIS FACILITY:**

*(check all which apply)*

Ultrasonic thickness testing \_\_\_\_ Magnetic particle testing \_\_\_\_ Liquid penetrant testing \_\_\_\_ Leak testing \_\_\_\_

*Identify leak test examination(s) employed:    BT= Bubble Test;    PCT=Pressure Change Test;    HDLT= Halogen Diode Leak Test;  
MSLT= Mass Spectrometer Leak Test*

Nondestructive tests observed during this inspection \_\_\_\_\_

Were tests conducted appropriately? \_\_\_\_\_

Did written procedures covering the NDT program and personnel training meet requirements of Appendix T M-1002? \_\_\_\_\_

Is the NDT program administered in all phases by an NDT Level III? \_\_\_\_\_

Evidence of training in NDT is documented? \_\_\_\_\_

**OUTSIDE SUBCONTRACTORS:**

*(Identify all outside subcontractors and review Exhibit B-1 evaluation sheet)*

| NAME OF SUBCONTRACTOR | DATE OF VERIFICATION | NAME OF VERIFIER | SUBCONTRACTED WORK |
|-----------------------|----------------------|------------------|--------------------|
|                       |                      |                  |                    |
|                       |                      |                  |                    |
|                       |                      |                  |                    |
|                       |                      |                  |                    |
|                       |                      |                  |                    |
|                       |                      |                  |                    |

**NONCONFORMANCE REPORTS:**

1) Does this location generate nonconformance reports for nonconforming supplied materials (Y/N)? \_\_\_\_\_

2) Are nonconformance reports identical to AAR QA 7.1 , 7.2 and 7.3 formats (Y/N)? \_\_\_\_\_

2) If so, are reports completed and filed as required(Y/N)? \_\_\_\_\_

3) Does this location generate reports for nonconformances identified in the production or repair process? \_\_\_\_\_

**HAZMAT TRAINING:**

**COMMENTS:**

\_\_\_\_\_  
*SIGNATURE OF LEAD FRA INSPECTOR*

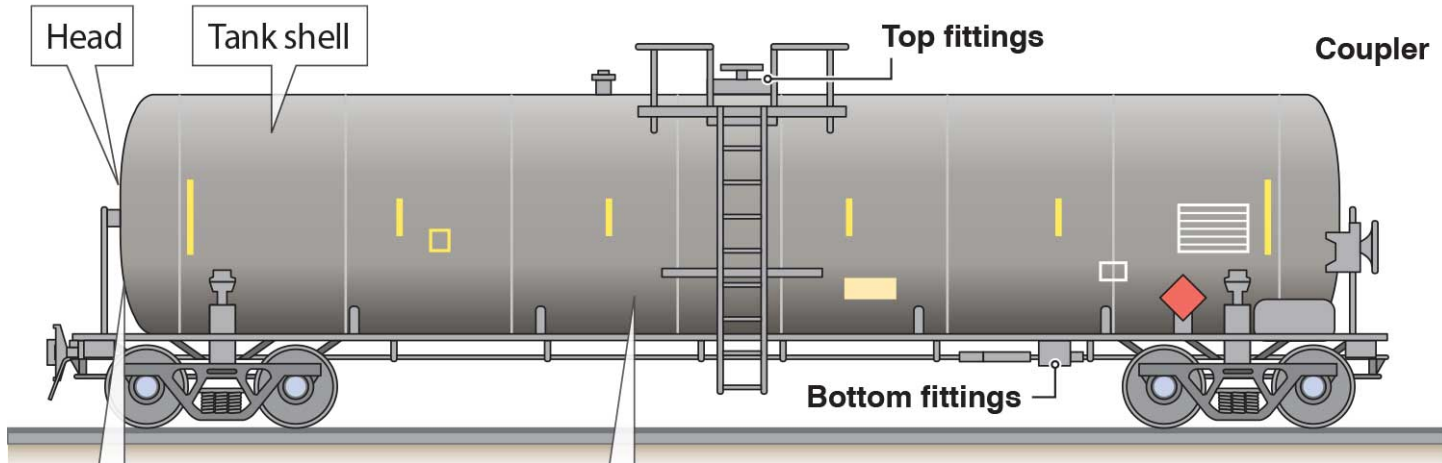
\_\_\_\_\_  
*DATE*

\_\_\_\_\_  
*SIGNATURE OF FACILITY REPRESENTATIVE*

## EXISTING DESIGN: DOT-111 rail tank car used to transport flammable liquids

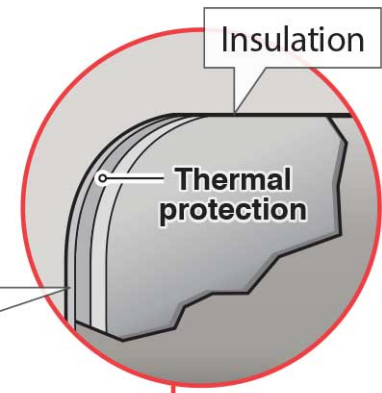
• About 92,000 DOT-111s are in use; these must be retrofitted or replaced within eight years

• Railroads generally don't own tank cars; most are leased by oil companies or other firms moving products by rail



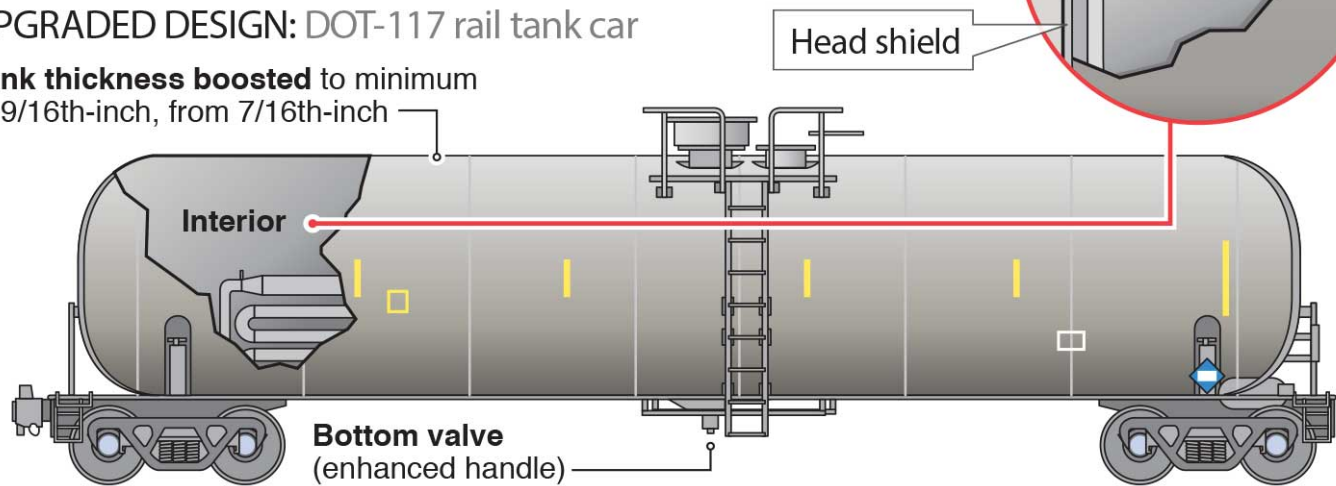
• **Tank head:** Easy to puncture in derailment; an extra half-inch steel shield at each end is shown to cut punctures by more than 90 percent

• **Tank shell:** Exposure to fire weakens thin tank walls; thermal insulation shown to limit ruptures, explosions due to fires



## UPGRADED DESIGN: DOT-117 rail tank car

**Tank thickness boosted** to minimum of 9/16th-inch, from 7/16th-inch



## Timeline for the Retrofit of Affected Tank Cars for Use in North American HHFTs

| Tank Car Type / Service   | US Retrofit Deadline*                               | Tank Car Type / Service   | TC Retrofit Deadline |
|---|---|---|----------------------|
| Non Jacketed DOT-111 tank cars in PG I service  | (January 1, 2017) <sup>[1]</sup><br>January 1, 2018 | Non Jacketed DOT-111 tank cars in Crude Oil service   | May 1, 2017          |
| Jacketed DOT-111 tank cars in PG I  | March 1, 2018                                       | Jacketed DOT-111 tank cars in Crude Oil service   | March 1, 2018        |
| Non Jacketed CPC-1232 tank cars in PG I service   | April 1, 2020                                       | Non Jacketed CPC-1232 tank cars in Crude Oil service  | April 1, 2020        |
| Non Jacketed DOT-111 tank cars in PG II service   | May 1, 2023   | Non Jacketed DOT-111 tank cars in Ethanol service   | May 1, 2023          |
| Jacketed DOT-111 tank cars in PG II service   | May 1, 2023   | Jacketed DOT-111 tank cars in Ethanol service   | May 1, 2023          |
| Non Jacketed CPC-1232 tank cars in PG II service  | July 1, 2023  | Non Jacketed CPC-1232 tank cars in Ethanol service  | July 1, 2023         |
| Jacketed CPC-1232 tank cars in PG I and PG II service and all remaining tank cars carrying PG III materials in an HHFT (pressure relief valve and valve handles). | May 1, 2025   | Jacketed CPC-1232 tank cars in in Crude and Ethanol service and all remaining tank cars carrying PG III materials in an HHFT (pressure relief valve and valve handles). | May 1, 2025          |

<sup>[1]</sup>The January 1, 2017 date would trigger a reporting requirement, and shippers would have to report to DOT the number of tank cars that they own or lease that have been retrofitted, and the number that have not yet been retrofitted.