U.S. Department
of Transportation
**Pipeline and Hazardous
Materials Safety
Administration**

Administrator

1200 New Jersey Ave., S.E.
Washington, DC 20590

ACTION MEMORANDUM TO THE SECRETARY

From: Cynthia Quarterman
x6-4433

Prepared by: Dr. Magdy El-Sibaie
Associate Administrator for Hazardous Materials Safety
x6-0656

Thru: Peter M. Rogoff
Acting Under Secretary of Transportation for Policy
x6-4540

Subject: Transportation of Hazardous Materials 2011-2012 Biennial Report to Congress

Due: August 10, 2013

ACTION REQUIRED

I request that you sign the attached letters transmitting the Report to Congress on the Transportation of Hazardous Materials 2011-2012 Biennial Report to Congress.

SUMMARY

This report is a compilation of data describing the performance and accomplishments of the U.S. Department of Transportation's hazardous materials transportation safety program. It is prepared as required by the Federal Hazardous Materials Transportation Law (49 U.S.C. § 5121 (h)). Appendix V of this report also addresses requirements under Subtitle D of the **USA PATRIOT Improvement and Reauthorization Act of 2005**—Enhanced Environmental Regulation of Methamphetamine Byproducts.

BACKGROUND

Section 5121(h) of 49 U.S.C. directs that once every two years the Secretary of Transportation shall prepare and transmit to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a comprehensive report on the transportation of hazardous materials during the preceding two calendar years. This report must include the following:

(1) A statistical compilation of accidents and casualties related to the transportation of hazardous materials;
(2) A list and summary of applicable Government regulations, criteria, orders, and special permits (previously called Exemptions);
(3) A summary of the basis for each special permit;
(4) Identification and evaluation of the effectiveness enforcement and voluntary compliance activities relating to functions regulated by the Secretary under Section 5103(b)(1);
(5) A summary of outstanding problems in carrying out Chapter 51 in order of priority; and
(6) Recommendations for appropriate legislation.

Subtitle D of the USA PATRIOT Improvement and Reauthorization Act of 2005 requires the Secretary to report to Congress on whether all known byproducts of the methamphetamine production process are designated as hazardous materials. The attached report fulfills the legislative reporting requirements.

STATEMENT OF LATENESS

This report, due to Congress on August 10, 2013 was received in Policy and sent out for the clearance process on June 20, 2013. Significant and time consuming discussions with reviewers ensued and the final clearance was received on June 9, 2014.

RECOMMENDATION

I recommend that you sign the attached letters to transmit the attached Report to Congress.

Attachments

The Secretary

APPROVED: _____

DISAPPROVED: _____

COMMENTS: _____

DATE: 8-12-14

THE SECRETARY OF TRANSPORTATION
WASHINGTON, DC 20590

August 12, 2014

The Honorable John D. Rockefeller IV
Chairman
Committee on Commerce,
Science and Transportation
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

I am pleased to provide you with a comprehensive report on the transportation of hazardous materials during the preceding two calendar years as required by Section 5121(h) of the Federal Hazardous Materials Transportation Law (49 U.S.C. 5101 et seq.). In accordance with the requirement, this report includes:

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(6) Recommendations for appropriate legislation.

The enclosed "Transportation of Hazardous Materials 2011-2012 Biennial Report to Congress" fulfills the statutory requirements in 49 U.S.C. § 5121(h). This report was prepared by the Pipeline and Hazardous Materials Safety Administration with input from the Department's Federal Aviation Administration, Federal Motor Carrier Safety Administration, Federal Railroad Administration, and the United States Coast Guard, which enforce hazardous materials transportation laws for their respective modes of transportation.

Appendix A of this report also addresses requirements under Subtitle D of the USA PATRIOT Improvement and Reauthorization Act of 2005—Enhanced Environmental Regulation of Methamphetamine Byproducts.

I have sent a similar letter to the Ranking Members of the Senate Committee on Commerce, Science and Transportation and the Chairmen and Ranking Members of the House Committee on Transportation and Infrastructure, and the Committee on Energy and Commerce. If I can provide further information or assistance, please feel free to call me.

Sincerely,

Anthony R. Foxx

Enclosure

THE SECRETARY OF TRANSPORTATION
WASHINGTON, DC 20590

August 12, 2014

The Honorable John Thune
Ranking Member
Committee on Commerce,
Science and Transportation
United States Senate
Washington, DC 20510

Dear Senator Thune:

I am pleased to provide you with a comprehensive report on the transportation of hazardous materials during the preceding two calendar years as required by Section 5121(h) of the Federal Hazardous Materials Transportation Law (49 U.S.C. 5101 et seq.). In accordance with the requirement, this report includes:

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Anthony R. Foxx

Enclosure

THE SECRETARY OF TRANSPORTATION
WASHINGTON, DC 20590

August 12, 2014

The Honorable Bill Shuster
Chairman
Committee on Transportation
and Infrastructure
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

I am pleased to provide you with a comprehensive report on the transportation of hazardous materials during the preceding two calendar years as required by Section 5121(h) of the Federal Hazardous Materials Transportation Law (49 U.S.C. 5101 et seq.). In accordance with the requirement, this report includes:

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Anthony R. Foxx

Enclosure

THE SECRETARY OF TRANSPORTATION
WASHINGTON, DC 20590

August 12, 2014

The Honorable Nick Rahall, II
Ranking Member
Committee on Transportation
and Infrastructure
U.S. House of Representatives
Washington, DC 20515

Dear Congressman Rahall:

I am pleased to provide you with a comprehensive report on the transportation of hazardous materials during the preceding two calendar years as required by Section 5121(h) of the Federal Hazardous Materials Transportation Law (49 U.S.C. 5101 et seq.). In accordance with the requirement, this report includes:

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Sincerely,

Anthony R. Foxx

Enclosure

THE SECRETARY OF TRANSPORTATION
WASHINGTON, DC 20590

August 12, 2014

The Honorable Fred Upton
Chairman
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

I am pleased to provide you with a comprehensive report on the transportation of hazardous materials during the preceding two calendar years as required by Section 5121(h) of the Federal Hazardous Materials Transportation Law (49 U.S.C. 5101 et seq.). In accordance with the requirement, this report includes:

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Sincerely,

Anthony R. Foxx

Enclosure

THE SECRETARY OF TRANSPORTATION
WASHINGTON, DC 20590

August 12, 2014

The Honorable Henry Waxman
Ranking Member
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515

Dear Congressman Waxman:

I am pleased to provide you with a comprehensive report on the transportation of hazardous materials during the preceding two calendar years as required by Section 5121(h) of the Federal Hazardous Materials Transportation Law (49 U.S.C. 5101 et seq.). In accordance with the requirement, this report includes:

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Sincerely,

Anthony R. Foxx

Enclosure

U.S. Department
of Transportation
**Pipeline and
Hazardous Materials
Safety Administration**

Transportation of Hazardous Materials 2011-2012

Biennial Report to Congress

**Under Title 49 of the United States Code
and
USA PATRIOT Improvement and Reauthorization Act of 2005**

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I. Introduction

This report is a compilation of information and data summarizing the performance, evaluation, enforcement, and compliance with the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) under Title 49 of the United States Code (49 U.S.C.) for years 2011-2012.

Section 5121(h) of 49 U.S.C. requires the Secretary of Transportation to, once every 2 years, prepare and transmit to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a comprehensive report on the transportation of hazardous materials (hazmat) during the preceding 2 calendar years. This report meets this requirement for Calendar Years 2011 and 2012 (CY11-12).

This report includes:

Section II. Hazardous Materials Accident and Incident Statistics

- A statistical compilation of accidents and casualties related to the transportation of hazardous materials

Section III. Hazardous Materials Regulations, Criteria, Orders, and Special Permits Summary

- A list and summary of applicable Government regulations, criteria, orders, and special permits

Section IV. Summary of the Basis for Hazardous Materials Special Permits and Approvals

- A summary of the basis for each special permit

Section V. Highlights and Evaluation of Hazardous Materials Regulations Enforcement and Voluntary Compliance Activities

- An evaluation of the effectiveness of enforcement activities relating to a function regulated by the Secretary under section 5103(b)(1) and the degree of voluntary compliance with regulations

Section VI. A Summary of Outstanding Problems

- A summary of outstanding problems in carrying out this chapter in order of priority

Section VII. Recommendations for Appropriate Hazardous Materials Program Legislation

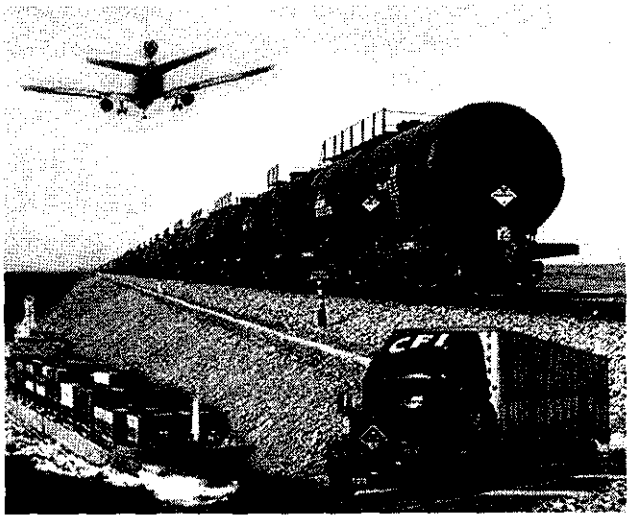
- Recommendations for appropriate legislation

In addition, **Appendix A** of this report addresses additional reporting requirements of the Secretary of Transportation under the USA PATRIOT Improvement and Reauthorization Act of 2005 associated with methamphetamine by-products as hazmat. This provision requires the U.S. Department of Transportation to report to Congress every 2 years whether then-existing statutes and regulations cover methamphetamine by-products as hazmat.

Overview

Under the Federal Hazardous Materials Transportation Law (Federal hazmat law; 49 U.S.C. 5101 et seq.), the Secretary of Transportation is charged with protecting the nation against the risks to life, property, and the environment that are inherent in the commercial transportation of hazmat. The Federal hazmat law authorizes the Secretary of Transportation to prescribe regulations for the safe transportation, including security of hazmat in intrastate, interstate, and foreign commerce. The Secretary has delegated this authority to the Pipeline and Hazardous Materials Safety Administration (PHMSA).
The U.S. Department of Transportation (DOT) is the Federal safety authority for ensuring the safe transport of hazmat via air, rail, highway, and water, with the exception of bulk transportation of hazmat by vessel. DOT operating administrations administer hazmat enforcement programs. Authority to enforce the HMR is delegated under 49 CFR Part 1. Specific enforcement delegations are to the:

- **Pipeline and Hazardous Materials Safety Administration** with particular emphasis on multimodal shipments of hazmat and the manufacture, fabrication, marking, maintenance, reconditioning, repair, or test of multi-modal containers that are represented, marked, certified, or sold for use in the transportation of hazmat;
- **Federal Aviation Administration (FAA)** with particular emphasis on the transportation or shipment of hazmat by air;



PHMSA regulates hazmat transportation by all modes.

- **Federal Railroad Administration (FRA)** with particular emphasis on the transportation or shipment of hazmat by railroad;
- **Federal Motor Carrier Safety Administration (FMCSA)** with particular emphasis on the transportation or shipment of hazmat by highway.

Under 49 CFR Part 1, Subpart C, the U.S. Coast Guard (USCG) is authorized to enforce the HMR in connection with certain transportation or shipment of hazmat by water. This authority originated with the Secretary and was first delegated to USCG prior to 2003, when USCG was made part of the Department of Homeland Security (DHS). [DHS Delegation No. 0170, Sec. 2(99) & 2(100); see also 6 U.S.C. §§ 458(b), 551(d) (2).]

Program Goals

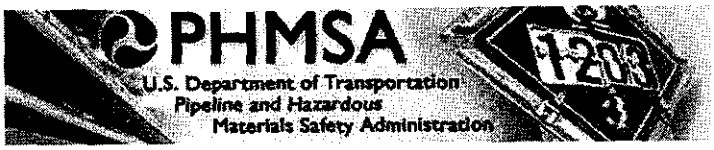
Hazmat is essential to the economy of the United States and the well-being of its people. Gasoline, diesel fuel and propane fuel automobiles, as well as heat and cool homes and offices. Many fertilizers, pesticides, compressed gases, basic chemicals and explosives are used in farming, medical applications, and in manufacturing, mining, and other industrial processes. According to the 2007 Commodity Flow Survey conducted by the Department and the U.S. Census Bureau, more than 2.2 billion tons of regulated hazmat—including explosive, poisonous, corrosive, flammable, and radioactive materials—are transported in this country each year. PHMSA estimates that there are approximately one million daily movements of hazmat by airplane, train, truck, and vessel in quantities ranging from several ounces to thousands of gallons[1]. These shipments move through densely populated or sensitive areas where the consequences of an incident could be loss of life or serious environmental damage. Our communities, the public, and workers engaged in hazmat commerce count on these shipments being safe, secure, and reliable.

DOT's hazmat mission is to **protect people and the environment from the risks of hazmat in transportation**. In addition to fulfilling the Department's primary safety mission, DOT operating administrations play an important role in helping to ensure reliability throughout the transportation system on which the American public depends.

During CY11-12, DOT made progress and implemented numerous improvements to its hazmat program.

[1] PHMSA's estimate of the number of daily shipments of hazmat is a rough extrapolation of a 1998 analysis conducted by the Research and Special Programs Administration. The basis for this is the increased tonnage of hazardous materials transported as reported in U.S. Census Bureau Commodity Flow Surveys between 1997 and 2007.

Pipeline and Hazardous Materials Safety Administration (PHMSA)



PHMSA's **2012-2016 Strategic Plan** outlines a fundamental safety goal of the organization—to improve public health and safety by reducing transportation-related deaths and injuries. To achieve this goal, PHMSA prescribes a comprehensive transportation safety system. The system establishes risk-based safety standards that require three interdependent processes for every hazmat. They are:

- Classify the hazmat,
- Contain the hazmat as prescribed, and
- Communicate the hazard appropriately through shipping papers, markings, labels, and/or placards.

Specifically, in CY11-12, PHMSA completed several initiatives to reach its safety goals. Some of these activities are highlighted below.

The agency addressed four outstanding **National Transportation Safety Board (NTSB) recommendations** that were related to improving the safe transportation of hazmat, including actions regarding lithium batteries aboard aircraft, the Hazardous Materials Emergency Preparedness (HMEP) grants program, and communication with pipeline operators. The outcomes of these four recommendations are:

- R-07-4: Classified as "Open—Acceptable Response"
- A-07-104: "Closed—Reconsidered" letter on 12/26/2012
- A-07-105: "Closed—Reconsidered" per NTSB letter on 12/26/2012
- R-12-8: NTSB classified the recommendation as "Closed—Acceptable Action" on 9/20/12[2]

PHMSA conducted several efforts to improve its policy and regulatory activities. The agency created and implemented a **Policy Analysis Protocol** to better define risks through the use of enhanced processes, data, and tools. The agency improved its ability to identify and examine all possible alternatives to transportation risks. The process begins when a risk to the transportation of hazardous materials is first assessed, and ends with the implementation of an identified approach of how to best manage the risk, such as performing a regulatory alternatives evaluation.

[2] PHMSA issued Advisory Bulletin ADB-2012-08 at 77 FR 147 (July 31, 2012).

While individual circumstances may occasionally require flexibility, the Policy Analysis Protocol sets the groundwork for a sound regulatory approach to achieve safety that may result in a variety of actions, to include outreach, training, inspections, investigations, and rulemakings.
PHMSA also worked to **harmonize the Hazardous Materials Regulation (HMR)** with the International Civil Aviation Organization Technical Instructions (ICAO TI), the United National Model Regulations, and the International Maritime Dangerous Goods Code. By the end of 2012, PHMSA published an NPRM and will continue to work in 2013 to harmonize appropriate sections of the ICAO TI with the HMR. In CY12, PHMSA also finalized two international harmonization rulemakings (under dockets HM-215K [3] and HM-215L[4]) that aligned the U.S. HMR with the most recent editions of international standards for the transportation of hazmat.
Consistency between US and international regulations enhances the safety and environmental protection of hazardous materials transportation through better understanding of the regulations, an increased level of industry compliance, the smooth flow of hazardous materials from their points of origin to their points of destination, and consistent emergency response in the event of a hazardous materials incident. Additionally alignment of the US HMR and international regulations promotes international trade through standardization and reduces regulatory burden by using a single set of guiding principles worldwide.

The agency completed several accomplishments that address public safety and community preparedness. For example, PHMSA created and distributed **web-based training** that is free to the public and includes the Hazmat Transportation and Security Awareness Training Modules.

During CY11-12, the agency made progress in focusing its **enforcement and compliance** program on high safety risks, as well as streamlining the agency's regulatory and compliance programs. For example, as part of its Fireworks Strategic Initiative, PHMSA began targeting inspections to identify illegal and non-compliant firework shipments, as well as Memorandum of Agreements (MOA) conducted in conjunction with other modes, which outline specific terms of cooperation on policy and regulatory matters surrounding the transportation of dangerous goods. PHMSA also began visiting U.S. Customs and Border Protection (CBP) weekly to access its Commercial Targeting Analysis Center importer data, which is analyzed and used to drive targeted enforcement operations. This is an important achievement in terms of increasing PHMSA's data quality, as well as toward strengthening relationships and collaboration with other agencies. PHMSA has been making strides to improve the efficiency and effectiveness of its Fitness Evaluation Program by establishing standard operating procedures (SOP), objective

[3] RIN 2137-AE83

[4] RIN 2137-AE87

evaluation criteria, and a comprehensive fitness inspection program in an effort to ensure the applying regulated entities are fit to receive their requested special permit or approval. Additional enforcement and compliance-related activities can be found in **Section V.**

In addition, the agency improved its **IT functionality and web-based accessibility** through an ongoing effort within IT Modernization, releasing the beta version of the new Special Permit Processing capability to the public and beginning the development of the Field Operation Case Management capability. In an effort to promote **performance management**, PHMSA developed new metrics and dashboards in its Hazmat Intelligence Portal (HIP) as well as through holding Quarterly Management Reviews (QMR). The QMRs are a forum for PHMSA to formally review its past performance, highlight current issues, and identify strategies to address outstanding issues and problems.

Federal Aviation Administration (FAA)

The Federal Aviation Administration's Hazardous Materials Safety Program (HMSP) establishes **regulatory oversight and outreach goals** for the purpose of reducing the incidence of improperly shipped hazmat by air and to identify the areas of highest risk in connection with both air carrier and shipper activities. In CY11-12, the FAA's 117 Hazmat Special Agents conducted more than 8,000 inspections of air carriers, shippers, and repair stations.

In addition, more than 1,000 **outreach activities** were conducted by the FAA during this time. This outreach work serves to increase awareness among the public, the aviation industry, and other groups, of the dangers of hazmat transported on domestic and international passenger and cargo aircraft.

Using an alternative to enforcement, FAA's HMSP informs and educates airline passengers who were discovered to have hazmat in their checked baggage about the dangers of transporting hazmat by air. During CY11-12, more than 26,000 letters informing passengers of their apparent non-compliance with the HMR were mailed to passengers identified by airlines. Reports involving the discovery of certain hazardous materials, i.e., those that are determined to be noncritical (least dangerous), are forwarded to FAA HMSP. Through a letter, FAA HMSP informs and educates each identified passenger about the hazardous materials discovered in their respective checked baggage. Finally, the FAA HMSP also began to work more closely with the airline industry to improve delivery of hazmat information to passengers through a formally established Aviation Rulemaking Committee.

Federal Motor Carrier Safety Administration (FMCSA)

Cargo tank rollovers are the largest contributing factor to hazmat deaths and major injuries. To address this problem and to respond to NTSB recommendations to curtail rollovers, FMCSA continues to work with its modal partners to distribute the **Cargo Tank Rollover Prevention** video to the hazmat industry, which was a joint project with PHMSA. By highlighting the video on FMCSA's website, it continues to be a popular download with more than 60,000 hits recorded on the FMCSA and PHMSA websites since its debut in August 2010. Additionally, the video has been adopted and modified for specific use by companies such as Exxon Mobil Worldwide and has been translated into Spanish, French, and Japanese.

FMCSA conducted several high-profile **investigations** in 2011 and 2012. One initiative examined the manufacture and repair of nurse tanks, resulting in one company recalling approximately 1,100 tanks and a complete revamping of its manufacturing processes. FMCSA also partnered with its modal and state partners in performing targeted inspections of pyrotechnics companies in an effort to improve the safety of fireworks transportation. Finally, FMCSA as well as other partner agencies have played a major role in the review of motor carriers applying for and using hazmat special permits. During 2011-2012, FMCSA reviewed more than 500 PHMSA special permit applications from motor carriers and provided PHMSA with recommendations to either approve or disapprove the application, based on the motor carriers' performance.

Overall, FMCSA has endeavored to raise the bar for entry into the motor carrier industry and for remaining there through stronger oversight of the regulated community. This is best demonstrated through the inception of the Hazardous Materials Compliance Behavioral Analysis and Safety Improvement Category (BASIC) in the agency's Compliance, Safety and Accountability (CSA) Safety Measurement System (SMS). Based on a number of criteria, including the need for placarding, approximately 20,000 hazmat motor carriers are held to higher standards for review. The data in SMS for these carriers account for more than 75 percent of the total number of hazmat violations recorded at roadside inspections; the remaining violations are being discovered through investigation guidelines that require FMCSA investigators to perform a Hazmat Supplemental Review whenever the transportation of hazmat is discovered during routine motor carrier reviews and investigations.

Federal Railroad Administration (FRA)

FRA issued Hazardous Materials Guidance 127 (HMG-127) in 2012. This document outlines a revised process for requesting approval to move to destination a railcar that no longer complies with the requirements of the Federal regulations (referred to as a one-time movement approval or OTMA). The new process is intended to distinguish between minor defects representing little risk to safety, and those defects that are of significant concern. In the revised procedure, the requirements for obtaining an OTMA are commensurate with the risk. In 2012, FRA issued 2,300 OTMAs, which is more than double the number issued in 2011. This improved compliance enables FRA to identify trends in defective equipment and/or poor performance at a particular shipper or tank car facility.

U.S. Department of Transportation
Federal Railroad Administration

FRA continues to work with industry to improve the survivability of tank cars involved in derailments. The FRA Hazardous Materials Division and the Research and Development Program have partnered with industry in a collaborative effort to identify design enhancements for the next generation of tank cars to transport poison inhalation hazmat. The areas under investigation include:

- new or emerging crash energy management technology;
- new tank car steels or existing steels with modified chemistry to improve toughness;
- standardized models and simulation methods; and
- methods to quantify the reduction in risk resulting from the proposed design enhancements.

Moreover, FRA has worked closely with industry to evaluate proposed design enhancements for general purpose tank cars (DOT 111 specification). Understanding the efforts regarding tank cars transporting high-risk hazmat, FRA has stressed the importance of meaningful improvements to design enhancements for tank cars that transport other hazmat to prevent an increasing performance gap.

As part of their National Safety Program Plan (NSPP), FRA's Hazardous Materials Division has identified three focal projects: training compliance at the loading/unloading racks; classification of hazmat (especially shale fracturing products); and audits of inland intermodal facilities. These projects have been identified through careful analysis of violation reports, accident and non-accident reports, and one-time movement requests.

Normally, a company with a comprehensive training program has fewer incidents in transportation; however, in some cases, a company may have a compliant training program at the

corporate level while one or more of its plants have a poor compliance history. This project continues previous FRA efforts to perform training reviews for compliance with 49 CFR § 172.704 of companies with incidents of non-accidental releases, recommendations for civil penalty, and/or situations of failure to adhere to special permits/one-time movement approvals. The audits include evaluation of the training program, consistency of the program between corporate and plant site level, and identification of areas of potential miscommunication that hinder the effectiveness of the training.

Shale formation fracturing "fracking" products, which include natural gases and petroleum liquids, present unique challenges to compliance with the HMR. These challenges arise from the variability in composition of the products and the fact that there are a number of operations that transload from cargo tanks into tank cars. This is especially true in regions where rail does not extend to the point of origin. The variability in composition causes difficulty in determining the specific gravity and flash point of the materials. To exacerbate the problem, trans-loading multiple cargo tanks containing various concentrations of "fracking" products from different sources into a single tank car increases the variability of the content and can significantly alter the physical and chemical properties of the resultant mixture. The focus of the audits is to learn how a facility determines the specific gravity of the mixture, which is necessary to determine the proper loading outage, as well as how a facility determines the flash point of the material that is needed to properly classify and, in turn, select the proper packaging.

Finally, FRA is conducting focused inspections at inland rail intermodal facilities. Facilities to be audited are selected by regional personnel annually. Other agencies have been invited to participate in these inspections. The multimodal project will provide FRA with a multifaceted approach to addressing hazmat issues in intermodal transportation. This effort will support Government oversight of containerized shipments in each hazard class, include focused inspections of blocking and bracing, and provide an opportunity to discover and identify undeclared shipments. Finally, this project supports the Department's strategic goal of developing closer working relationships and cross-modal program consistency for hazmat regulatory compliance.

United States Coast Guard (USCG)

The USCG and National Cargo Bureau (NCB) established a **training partnership** in 2012 to improve awareness, coordination, and cooperation on areas of common interest, to include the inspection of containers at port facilities. Through the partnership, the NCB and the Coast Guard developed training modules for NCB Surveyors to provide at local ports. Additionally, they held subsequent discussions on container inspection and other port operations. More than 250 USCG members have attended these training sessions since the launch in early 2012. Both

organizations now have a better understanding of the others' capabilities and protocols, and there is stronger collaboration for conducting hazmat and general cargo container inspections.

The Coast Guard Container Inspection Training and Assistance Team (CITAT) located in Oklahoma City, OK, provided training to 227 industry representatives from 2011 to 2012, and supports PHMSA's training efforts as a presenter at all Hazardous Materials Multi-Modal Training Conferences. Additionally, CITAT regularly participates with DOT's Transportation Safety Institute and trained 240 industry members during this same period. CITAT has conducted training for 116 military, port authority, and customs personnel in Indonesia, Belize, Uruguay, and Guyana.

The Coast Guard Office of Port and Facility Compliance (CG-FAC) joined with CBP in 2012 to collaborate on an initiative for targeting and inspecting containerized hazmat shipments. CG-FAC developed a policy and user guide to encourage field units to use CBP's Automated Commercial Environment (ACE) for planning container inspection operations. ACE is an additional tool that assists CG inspectors in identifying hazardous cargo well in advance of its scheduled arrival at U.S. ports. Using ACE, the USCG will develop a stronger capability to coordinate container inspection activities with CBP in an effort to enhance maritime domain awareness.

II. Hazardous Materials Accident and Incident Statistics

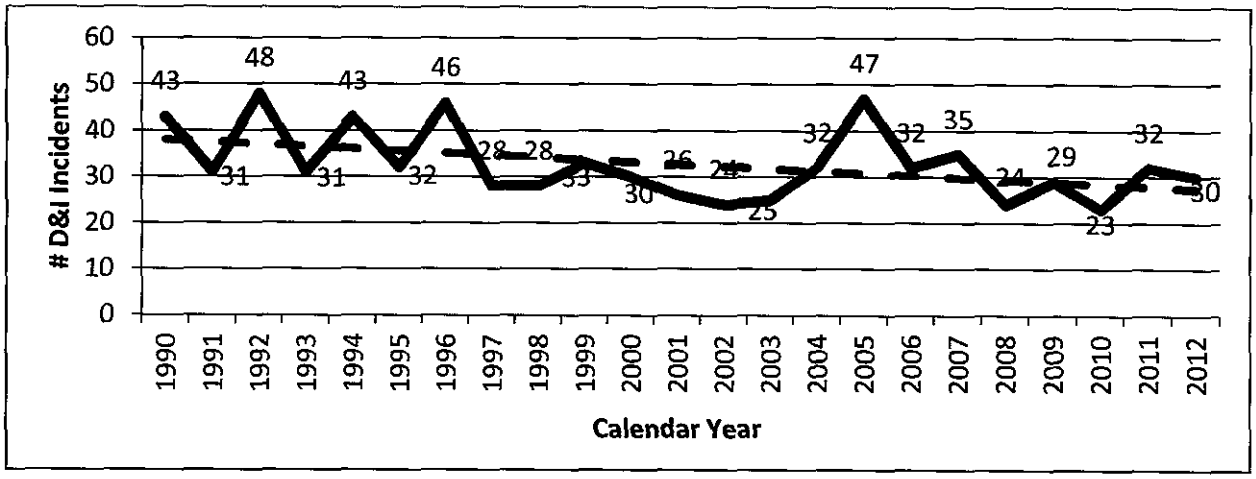
DOT's hazmat safety goal directly supports the Secretary of Transportation's goal—to enhance public health and safety by working toward the elimination of transportation-related deaths and hospitalized (major) injuries (D&Is). Below is a statistical compilation of accidents and casualties related to the transportation of hazmat.

PHMSA requires that all unintentional releases of hazmat in transportation be reported. [5]
The agency receives approximately 15,000 incident reports per year from shippers and carriers. PHMSA strives to reduce the number of hazmat transportation incidents involving D&Is. **PHMSA's main performance indicator of the effectiveness of its programs is the number of D&I incidents that occur as a result of a hazardous materials incident.** As the agency

[5] 49 CFR §171.16

continues to improve its operations, the number of D&I incidents have been declining about 10 percent every 7 years. (**Figure II-1**)

Figure II-1: Death and Major Injury Incidents (CY 1990-2012)



Source: Hazmat Intelligence Portal, U.S. Department of Transportation. Data as of May 15, 2013.
PHMSA achieved its goal in CY11-12 to minimize D&I incidents to no more than 22-34 and 21-32, respectively.

- **In 2011, the maximum target was 22-34** D&I incidents, and there were 32 D&I incidents with 13 deaths and 26 major injuries.
- **In 2012, the maximum target was 21-32** D&I incidents and there were 30 D&I incidents with 11 deaths and 19 major injuries.

Table II-1, below, illustrates a modal breakdown of the total number of incidents that occurred in CY11-12, as well as the total number of incidents with D&Is. Table II-2 illustrates a modal breakdown of the total number of *individuals* that died and/or suffered a major injury due to the incident. Note that more than one person can be affected by an incident, thus the numbers in Tables II-1 and II-2 may not match. The data are also shown as bulk vs. non-bulk, as defined in the HMR (49 CFR Part 171.8).

Table II-1: Incidents By Mode and Calendar Year

Mode Of Transportation	Total Incidents				Incidents with D&Is			
	2011		2012		2011		2012	
	Bulk	Non-Bulk	Bulk	Non-Bulk	Bulk	Non-Bulk	Bulk	Non-Bulk
AIR	0	1,400	0	1,459	0	0	0	0
HIGHWAY	1,367	11,442	1,200	11,942	23	3	23	4
RAIL	697	48	587	69	6	0	3	0
WATER	8	63	6	64	0	0	0	0
Total	2,072	12,953	1,793	13,534	29	3	26	4

Source: Hazmat Intelligence Portal, U.S. Department of Transportation. Data as of May 15,

Table II-2: Deaths and Major Injuries By Mode and Calendar Year

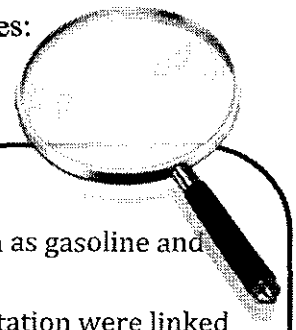
Mode Of Transportation	Total Number of Deaths				Total Number of Major Injuries			
	2011		2012		2011		2012	
	Bulk	Non-Bulk	Bulk	Non-Bulk	Bulk	Non-Bulk	Bulk	Non-Bulk
AIR	0	0	0	0	0	0	0	0
HIGHWAY	11	1	11	0	15	3	11	5
RAIL	1	0	0	0	8	0	3	0
WATER	0	0	0	0	0	0	0	0
Total	12	1	11	0	23	3	14	5

Source: Hazmat Intelligence Portal, U.S. Department of Transportation. Data as of May 15, 2013.

The majority of D&Is occurred in highway mode, which is proportional to the majority of all incidents that consistently occur in highway mode. (**Table II-1**) There are more than five times as many non-bulk incidents as there are bulk incidents; however, the majority of D&Is are attributed to bulk incidents. (**Table II-1**) There were no D&Is resulting from air or water mode, and only one death that occurred in rail mode. (**Table II-2**) During CY11-12, the large majority of deaths (23 out of 24) and major injuries (37 out of 45) were attributed to bulk incidents. **PHMSA uses incident data to help better identify areas of concern, to target hazmat risks for further attention, and to develop data-driven regulatory and compliance strategies.** With this intent, in 2011, PHMSA completed its identification and analysis of the "Top Consequence Hazardous Materials by Commodities & Failure Modes." This report outlines the various risks in the hazmat transportation system from 2005-2009 that caused deaths and major

injuries. It can be accessed at:
http://www.phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/Hazmat/Top%20Consequence%20Hazardous%20Materials%20Commodities%20Report.pdf

A sample of key findings from this analysis includes:



- Some hazmat had higher consequences due to their more frequent level of transport providing for greater exposure, such as gasoline and diesel fuel
- The majority of the deaths and injuries due to hazmat transportation were linked to a relatively small sub-set of all hazmat
- In other cases it was the sheer volatility or danger of the substance that lead to significant consequences
- The majority of the hazmat deaths and injuries during the last five years occurred during highway or rail transport
- Highway rollovers and rail derailment while in transit were the two principal failure causes recorded

Table II-3 and **Table II-4,** below, illustrate the top 10 commodities and failure modes ranked by high-impact casualties from CY11-12. The commodities in **Table II-3** are ranked first by number of aggregate deaths, then by number of major injuries, and third by number of overall incidents."

Table II-3: Top 10 Commodities 2011-2012 Ranked by High-Impact Casualties
(High Impact Casualties = Deaths + Major Injuries or Hospitalizations)

Rank	Commodity Name	Deaths	Major Injuries	Total Incidents Involving Commodity
1	GASOLINE AND GASOHOL	16	3	485
2	LIQUEFIED PETROLEUM GAS	14	3	416
3	DIESEL FUEL	2	1	707
4	ANHYDROUS AMMONIA	1	3	84
5	SULFURIC ACID	1	2	286
6	PROPANE	1	1	12
7	ALCOHOLS, N.O.S.	1	0	573
8	PETROLEUM DISTILLATES, NOS	1	0	249
9	PETROLEUM OIL	1	0	7
10	SULFUR, MOLTEN	0	3	19

Source: Hazmat Intelligence Portal, U.S. Department of Transportation. Data as of February 21, 2013.

Similarly, **Table II-4,** below, highlights that in 2011-2012, the majority of the top failure modes ranked by high impact causalities were the same as those from 2005-2009. These rankings are arranged, similar to in Table II-3, first by number of aggregate deaths and then by number of major injuries.

Table II-4: 2011-2012 Top Failure Modes (Across All Transportation Phases) Ranked by High-Impact Casualties

(High Impact Casualties = Deaths + Major Injuries or Hospitalizations)

Rank	Failure Mode	Deaths	Major Injuries	Incidents with D&Is	Transportation Phase (Number of Incidents)
1.	Vehicular Crash or Accident Damage	8	8	11	In Transit – 10 Unloading – 1
2.	Rollover Accident	9	1	10	In Transit – 10
3.	Human Error	3	11	14	In Transit – 3 Loading- 2 Unloading-9
4.	Component or Device*	2	7	7	In Transit – 3 Loading – 1 Unloading - 3
+	Multiple Causes	1	2	3	In Transit – 1 Unloading - 2
5.	Overfilled	1	1	2	Unloading – 2
6.	Dropped	0	3	2	Loading - 1 Unloading - 1
7.	Abrasion	0	1	1	Unloading – 1
	Commodity Self-Ignition	0	1	1	Unloading – 1
	Conveyer or Material Handling Equipment Mishap	0	1	1	Loading – 1
	Corrosion - Interior	0	1	1	In Transit – 1
	Fire, Temperature, or Heat	0	1	1	Loading – 1
	Inadequate/ Improper Preparation for Transportation**	0	1	1	Unloading – 1
	Over-Pressurized	0	1	1	Unloading – 1
	Valve Open	0	1	1	In Transit – 1

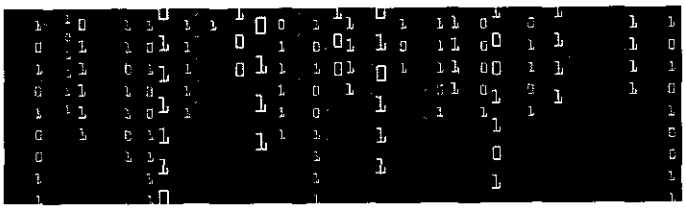
Source: Hazmat Intelligence Portal, U.S. Department of Transportation. Data as of March 22, 2013.

+This category contains incidents for which there were two or more failure modes reported.
**This failure mode is an aggregate of five failure modes: 1) Broken Component or Device; 2) Loose Closure; Component or Device; 3) Defective Component or Device; 4) Missing Component or Device; 5) Misaligned Material, Component or Device. The values provided have been adjusted to assure that there is no double counting as a result of this aggregation.*

***This failure mode is an aggregate of two failure modes: 1) Improper Preparation for Transportation; and 2) Inadequate Preparation for Transportation. The values provided have been adjusted to assure that there is no double counting as a result of this aggregation.*

PHMSA conducted several activities during CY11-12 to improve its **data quality**. Specifically, the agency:

- Conducted a **preliminary incident needs assessment** that evaluates how PHMSA uses its incident data, shows what information PHMSA needs—but does not currently have—to conduct sufficient analysis, reveals data accuracy issues, and illuminates what PHMSA can do to address these issues.
- Created a **quality control process** for dealing with incident data that results from public evacuations.
- Continued to work on **integrating commodity flow survey data** into its incident data in order to normalize the number of incidents that occur.



- Established an **Incident Management System** to centralize all data PHMSA collects related to an incident, information collected from the DOT F 5800.1, and identify the contributing causes of an incident. During 2011-2012, this effort primarily focused on investigating incidents that result in deaths and/or injuries. At the end of CY12, PHMSA held its first annual D&I Briefing to present the findings of FY12 D&I investigations.

PHMSA's modal partners also use various IT systems to carry out their hazmat safety missions. For example, to carry out its hazmat-related activities, FMCSA uses HIP in conjunction with **Motor Carrier Management Information System (MCMIS)**. MCMIS is a motor carrier safety measurement tool used to identify carriers for specific interventions and to properly use FMCSA resources where they are needed most—CSA. When utilized together, these two systems aid FMCSA in collecting data that is used to develop interventions and programs designed to improve the safety and security of the transportation of hazmat by highway. FRA uses the Railroad Accident/Incident Reporting System (RAIRS), a series of databases that capture all of the reportable casualties, train accidents, highway-rail crossing collisions, and operational statistics reported to the FRA from the nation's railroads. The statistics from RAIRS provide the FRA with its safety scorecard. The information also is used for risk analysis and determines anomalies for focused inspections.

III. Hazardous Materials Regulations, Criteria, Orders, and Special Permits Summary

Program Focus

PHMSA's **hazmat** regulatory program continues to focus on the **modernization and streamlining of its regulatory system and reduction of regulatory burdens**. The program evaluates existing regulations to examine their continued applicability given changes in circumstances and technologies and then determined whether they should be amended or eliminated. During the past 2 years, PHMSA reviewed regulations, letters of interpretation, petitions for rulemaking, special permits, enforcement actions, approvals, and international standards to identify inconsistencies, outdated provisions, and barriers to regulatory compliance. Additionally, as part of the Retrospective Regulatory Review in accordance with Executive Order 13563, PHMSA initiated ten (10) rulemaking actions to streamline the hazmat regulations. During CY11-12, PHMSA's **hazmat** regulatory program took action to improve its regulations and promote a harmonized transportation system that supports transportation safety and security. A full listing of the rulemakings and notices published during the report period has been provided in **Appendix B**. Rulemakings that are a part of the Department's Retrospective Regulatory Review are indicated with the denotation (RRR) in the rulemaking title.

Program Overview

PHMSA's **hazmat** regulatory program works closely with PHMSA's pipeline regulatory program to promote a common PHMSA process to identify, develop, track, prioritize, and implement regulatory changes. Furthermore, PHMSA works closely with the Office of the Secretary of Transportation to ensure that PHMSA's regulatory program is in compliance with the Administrative Procedure Act and Departmental Rulemaking Requirements.

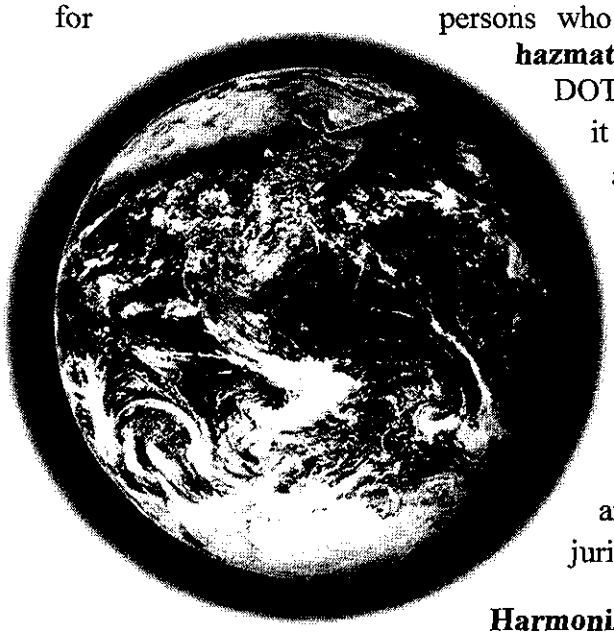
PHMSA monitors the safety performance of the transportation system, including incident and accident reports, recommendations from NTSB, international regulatory developments, advances in technology, and non-transportation incidents involving **hazmat** in part to help determine if possible regulatory actions are needed. PHMSA also evaluates requests for new or amended regulations received from stakeholders through petition for rulemakings in Accordance with §§ 106.95 and 106.100, the regulated industry, other government agencies (USCG, EPA, OSHA, ATF, etc.,) and DOT's operating administrations (FAA, FMCSA, FRA). The Hazardous Materials Information Center (HMIC) serves as another mechanism used by PHMSA to identify possible regulatory weaknesses. The HMIC is a nation-wide, toll-free telephone service operated by the program to provide timely, accurate, and complete answers to questions concerning the safe transportation of hazmat. In a typical year, HMIC responds to more than 25,000 telephone calls and e-mails requesting assistance. Based on the volume and type of calls received, PHMSA is able to identify areas in the HMR that could be improved upon through revisions or clarification.

PHMSA employs an integrated set of analytical and regulatory tools, including setting safety standards, analyzing trends in accidents and incidents, monitoring the performance of the hazmat transportation system, and identifying vulnerabilities. These activities are heavily dependent on data to identify high-risk shippers, high-vulnerability routes and transfer points, and unsafe carriers.

When evaluating a particular issue, a policy analyses is completed to determine the best course of action as not every issue is best handled through rulemaking. For example, the outcome of the policy analyses may recommend other non-regulatory alternatives such as enhanced enforcement, training and outreach. When a policy analysis determines that a rulemaking is necessary PHMSA considers a number of options in order to determine the most efficient, least burdensome solution that achieves our safety goals.

PHMSA works toward the prevention of D&Is associated with the transportation of hazmat by all transportation modes. The agency concentrates on the prevention of high-risk incidents identified through the evaluation of transportation incident data and findings compiled through the collection and review of incident reporting forms (Form 5800.1). In addition, PHMSA also focused our efforts on incidents identified through the NTSB investigation process. PHMSA uses all available agency tools to assess data; evaluate alternative safety strategies, including regulatory strategies as necessary and appropriate; target enforcement efforts; and enhanced outreach, public education, and training to promote safety outcomes.

The HMR primarily addresses safety issues but does include security requirements for hazmat shipments of certain type and quantities. These security requirements include detailed security plans for certain classes and quantities of **hazmat**. Finally, the HMR has **training requirements** for persons who prepare **hazmat** for shipment or who transport **hazmat** in commerce (See § 172.800-172.822).



DOT is striving to enhance global connectivity by making it a priority to pursue international transportation safety standards, where appropriate, that are consistent with the high level of safety standards required by U.S. regulations. Virtually all hazmat imported to, or exported from, the U.S. is transported in accordance with international regulations and the HMR. The objective of DOT's hazmat safety program is to maintain a global system of hazmat transportation regulations that will enhance the safe and efficient movement of hazmat across borders and jurisdictions.

Harmonization with international standards can enhance safety, promote compliance, and facilitate free trade while potentially minimizing the regulatory

burden on the public. Participation in international standard setting bodies helps ensure U.S. interests are considered in the development of global standards, and affords an opportunity to promote requirements that are consistent with DOT's transportation safety and efficiency goals.

For example, DOT successfully engaged in international efforts to develop provisions for the safe and efficient transportation of small quantities of environmentally hazardous substances, facilitate international movement of neutron radiation detectors critical to global transport security, and introduce provisions for the transport of adsorbed gases—all efforts supporting U.S. safety interests as well as helping to ensure market access for U.S.-based technologies. Additionally, in support of a Cooperative Project Arrangement with the Chinese Ministry of Transport, DOT successfully worked with China on a number of initiatives to improve the safety, security, and economic viability of hazmat shipments between the U.S. and China.

The shipment of hazmat based on the quantities, types of materials, number of miles traveled, and duration of shipments pose inherent risks to the public and the environment, but are essential to our quality of life making their safe, secure, and reliable transportation a matter of significant national interest. China is one of the largest U.S. trading partners for hazmat. The Transportation Forum between the U.S. and China is designed to address these shared risks and other hazardous transportation issues. Similar cooperative efforts with a strong emphasis on regulatory compatibility are currently underway with Transport Canada under the auspices of the U.S.-Canada Regulatory Cooperation Council, exploring such areas as harmonization of highway tank and cylinder standards and enhanced recognition of special permit and approval processes.

DOT supports a uniform, global approach to the safe transportation of hazmat through participation in the following international organizations:

DOT's objective is to promote a worldwide system that affords the necessary consistency between modal and regional regulations that promote the safe and efficient movement of shipments.

Regulatory Achievements During CY11-12

PHMSA's hazmat program was developed under authority of 49 U.S.C. 5103(b), which authorizes the Secretary of Transportation to prescribe regulations for the safe transportation, including security, of hazmat in intrastate, interstate, and foreign commerce. Based on this authority, PHMSA initiates rulemaking actions based a number of drivers. Most importantly, the program initiates rulemakings to address safety or security problems identified by DOT, NTSB, the regulated community, or members of the public. In addition, the program may initiate a rulemaking to respond to a specific Congressional or new or revised statutory mandate. As well, it may initiate a rulemaking action to respond to petitions for rulemaking received from the regulated community or members of the public, or as the result of regulatory reviews that identify areas where the regulations may be improved to enhance understanding and compliance or reduce regulatory burdens. Finally, the program may initiate a rulemaking to harmonize its regulations with international standards and regulations governing the transportation of hazmat.

As part of the rulemaking process PHMSA assesses of the relative costs and benefits, both safety and efficiency gains resulting of each rulemaking action. The results of this assessment may influence the final regulations including or may result in the program pursuing alternatives to rulemaking such as issuing advisory guidance, targeting outreach efforts or enforcement activities.

During this reporting period, PHMSA's Office of Hazardous Materials Safety (OHMS) published notices and rulemakings covering a variety of topics. **Appendix B** contains a full list of rulemaking and notice actions for the report period. Key focus areas are summarized below:

Special Permit Incorporation

PHMSA completed a major re-evaluation of its special permits and approvals program. Special permits allow a company or individual to package or ship hazmat in a manner that varies from the regulations so long as an equivalent level of safety is maintained. PHMSA published a final rule on January 5, 2011, revising the procedural regulations for special permits docket HM-233B (Hazardous Materials: Revisions of Special Permits Procedures, RIN-2137-AE57). The agency also provided an electronic submission process for permit applications. Further, as part of this re-evaluation, PHMSA concluded that many of the special permits issued to members of associations should be converted to regulations of general applicability. PHMSA proposed and finalized several regulatory actions to incorporate special permits issued to members of associations.

Aviation Safety

Lithium batteries present special risks in transportation because of their potential to overheat and ignite under certain conditions; once ignited, lithium battery fires can be especially difficult to extinguish. In general, the risks posed by lithium batteries are a function of battery size (the amount of lithium content and corresponding energy density) and the likelihood of short circuiting or rupture. In 2011 and 2012 PHMSA initiated efforts to propose changes to strengthen the current regulatory framework applicable to lithium batteries. Specifically, PHMSA participated in International Civil Aviation Organization's meetings of the Dangerous Goods Panel developing new international hazardous materials safety standards including those specific to lithium batteries. In addition, PHMSA continued to pursue internal regulatory efforts to harmonize the HMR with international regulatory standards. .

Retrospective Regulatory Review

Executive Order 13563 states that the government's regulatory system must protect public health, welfare, safety, and our environment while promoting economic growth, innovation, competiveness, and job creation. Executive Order 13563 is supplemental to and reaffirms the principles, structures, and definitions governing regulatory review that were established in Executive Order 12866 Regulatory Planning and Review of September 30, 1993. In addition, Executive Order 13563 specifically requires agencies to: PHMSA is engaged in a continuing effort to review its regulatory requirements to: (1) involve the public in the regulatory process; (2) promote simplification and harmonization through interagency coordination; (3) identify and consider regulatory approaches that reduce burden and maintain flexibility; (4) ensure the objectivity of any scientific or technological information used to support regulatory action; and (5) consider how to best promote retrospective analysis to modify, streamline, expand, or repeal existing rules that are outmoded, ineffective, insufficient, or excessively burdensome. During the report period, PHMSA initiated several actions to reduce the regulatory burden on hazmat shippers and carriers, consistent with our overall safety goals.

In response to this Executive Order, and those that preceded it, and internal DOT initiatives, PHMSA has conducted a retrospective regulatory review and evaluated our regulatory program for effectiveness. In addition we identified areas that could be modified to enhance the program, increase flexibility for the regulated community, and encourage participation from the regulated community while maintaining or enhancing the current level of safety provided by the HMR.

Global Connectivity/International Harmonization

DOT recognizes the vital importance of global connectivity in transportation. Transportation systems within and among Nations are lifelines to the future, to freer trade and accelerated economic growth, to greater cultural exchange, and to the expansion of democracy around the world. Our increasingly globalized economy hinges on efficient supply chains and just-in-time manufacturing. Transportation is critical to both. A major goal for DOT is to facilitate an international transportation system that promotes economic growth and development. In support of DOT's global connectivity goal, PHMSA worked to harmonize the HMR with international standards to facilitate the safe and efficient transportation of hazmat through ports of entry and the supply chain. During CY11-12, PHMSA completed regulatory action to harmonize domestic requirements with international requirements to the extent consistent with our safety and economic goals. (See Hazardous Materials: Harmonization with the United Nations Recommendations on the Transport of Dangerous Goods: Model Regulations, International Maritime Dangerous Goods Code, and the International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air, RIN-2137-AE83). In addition,

PHMSA proposed harmonization regulations on August 12, 2011, under HM-250 (Hazardous Materials: Compatibility with the Regulations of the International Atomic Energy Agency, RIN-2137-AE38) regarding radioactive materials with those of the International Atomic Energy Agency (IAEA).

Explosives Storage

Explosive (Class 1) materials are among the most stringently regulated hazmat. PHMSA incorporated standards into its regulations in a final rule published on June 7, 2011, under HM-238 (Hazardous Materials: Requirements for the Storage of Explosives During Transportation, RIN-2137-AE06) to allow the use of existing standards applicable to the safe storage of Division 1.1, 1.2, and 1.3 explosives in safe havens. Incorporating existing standards served two purposes. First, it provided a clear and specific mechanism for the construction and maintenance of safe havens., and second, it identified a proven standard as the Federally approved standard for safe havens construction in place of an arbitrary requirement that allow for state, local, or Federal approval of safe havens.

Loading and Unloading

PHMSA initiated a rulemaking under HM-247 (Hazardous Materials: Cargo Tank Motor Vehicle Loading and Unloading Operations, RIN-2137-AE37) to consider the adoption of requirements, including operating procedures for loading and unloading operations involving bulk packagings and containers. PHMSA found that, throughout the last decade, roughly one-quarter to one-half of all serious hazmat incidents may be associated with loading and unloading operations involving bulk packagings such as cargo tank motor vehicles and rail tank cars.

In addition, the NTSB and the Chemical and Safety Hazard Investigation Board (CSB) have investigated a number of accidents associated with these loading and unloading operations. PHMSA's data review and the NTSB and CSB investigations suggest that there may be opportunities to enhance the safety of such operations.

Security Planning

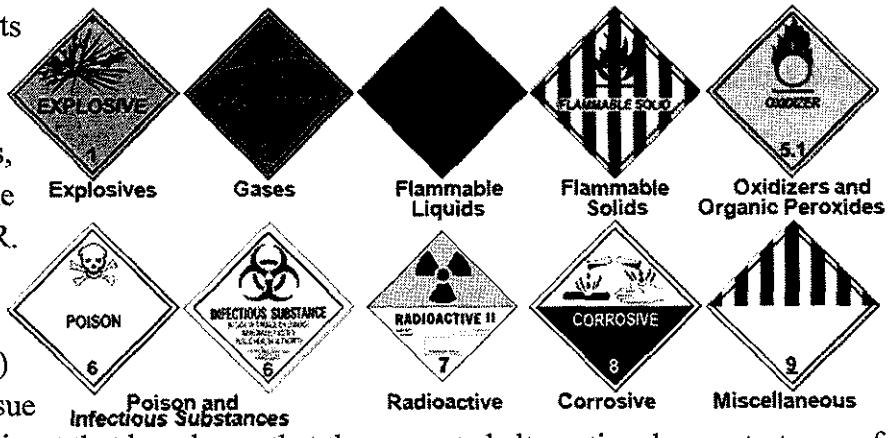
PHMSA worked with DHS to design a world-class transportation security system to prevent terrorists from using transportation as a weapon. PHSMA accomplished this through its final rule (HM-232F): Hazardous Materials: Risk-Based Adjustment of Transportation Security Plan Requirements, RIN 2137-AE22) that revised the regulations for security plans. The provisions in this final rule became effective in October of 2010. Specifically PHMSA adopted regulations that require persons that offer or transport certain types and quantities of hazmat would be required to create a security plan to address topics including en route security, personnel security,

and unauthorized access. The revised regulations (See § 172.800-172.822) create a distinction between hazmat that present a significant security risk while in transportation and the vast majority of hazmat that poses no significant security risk in transportation.

IV. Summary of the Basis for Hazardous Materials Special Permits and Approvals

This section of the report provides a summary of the basis for Special Permits and Approvals. **Appendix C** contains a summary list of newly granted hazmat special permits for the report period.

The HMR generally are performance-oriented regulations, and provide the regulated community with standards to meet safety requirements. Even so, not every transportation situation can be anticipated and incorporated into the regulations.



Special permits (previously called exemptions) set forth alternative requirements, or variances, to the requirements in the HMR. Federal hazmat transportation law (49 U.S.C. § 5117) authorizes PHMSA to issue such variances to an applicant that has shown that the requested alternative demonstrates a safety level that is at least equal to the safety level required under Federal hazmat law or is consistent with the public interest if a required safety level does not exist. Special permits are a necessary part of PHMSA's regulatory framework. New products, technologies, or packagings become available every day and, sometimes, the regulations do not adequately address these items.

Certain hazmat regulations also require a person to seek written authorization or "approval" from PHMSA to perform a certain transportation-related function. For example, PHMSA issues approvals covering the classification and transportation of explosives, certain lithium batteries, fuel cells, chemical oxygen generators, and radioactive materials. In addition, PHMSA issues approvals authorizing companies to manufacture certain types of packagings, such as cylinders, and to perform the tests and inspections required to ensure that the packaging may continue to be used for transporting hazmat. PHMSA also issues "competent authority" approvals for the

transportation of hazmat in accordance with international transportation standards and regulations.

To learn more about the program and to search for special permits or approvals, visit: http://www.phmsa.dot.gov/hazmat/regs/sp-a

Recent major safety accomplishments of the PHMSA Hazardous Approvals and Permits Division include:

- Incorporated 13 existing DOT-approved Special Permits representing more than 400 permit holders into the regulations [6],
- Increased the oversight and issuance of new approval requirements to all currently authorized Independent Inspection Agencies for DOT compressed gas cylinders and Third Party Packaging Labs ,
- Approved two additional DOT Explosives Test Laboratories,
- Launched the Special Permit Portal, which is an on-line system for special permit applications streamlining the evaluation of renewals and party-to permits [7], and
- Conducted Safety Equivalency Re-evaluations on all currently approved DOT Special Permits.

During 2011-2012, PHMSA completed many of the process improvements implemented since 2009 and redirected resources, successfully reducing the number of pending special permits and approvals and significantly reducing the number of those more than 180 days old.

The information below (**Tables IV-1**, **IV-2**, and **IV-3** and **Figures IV-1** and **IV-2**) illustrates the progress PHMSA made during this time period, starting in 2011, with nearly 500 special permits more than 180 days old, and ending 2012 with only three. Similarly, PHMSA started with 259 approvals more than 180 days old in 2011 and ended in 2012 with only 45.

[6] HM-216b – 77FR37961, HM-233A – 75FR27205, HM-245 – 76FR5438
[7] https://portal.phmsa.dot.gov

Table IV-1: Number Special Permits and Approvals More Than 180 days

	January 1, 2011	January 1, 2012	December 31, 2012
	489	120	3
	259	123	45

Figure IV-1: Status of Special Permits CY11–12

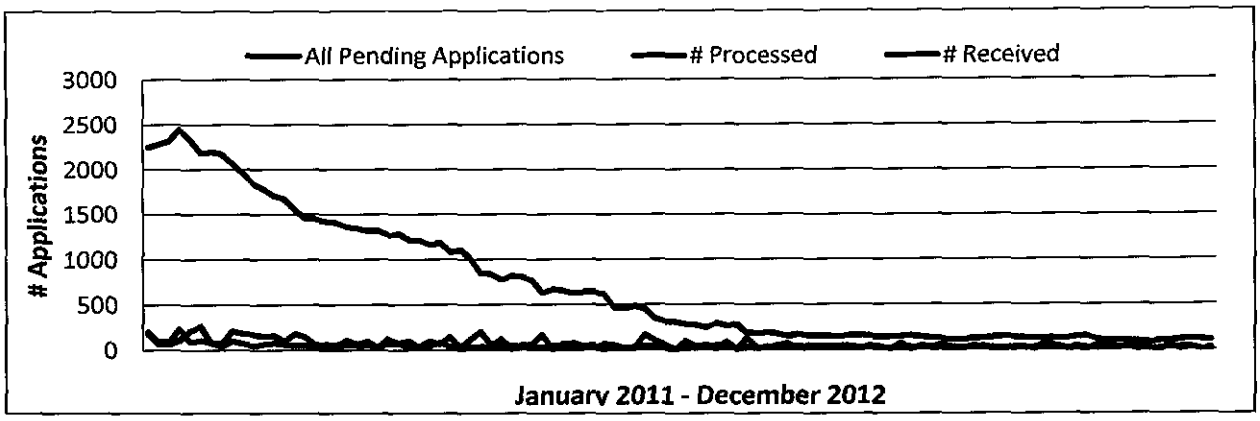


Figure IV-1 illustrates that there was a roughly steady number of special permits processed and received throughout the past 2 years. During this same timeframe, the number of special permits in queue dramatically decreased. Part of the reason for this decrease is due to the fact that the number of special permits received by PHMSA decreased by 40 percent, as shown in **Figure IV-2.** In addition, completion of the Safety Equivalency Recovery Plan provided the necessary background documentation for each special permit, thereby allowing PHMSA to take action on the backlog. This reduction in special permits applications received is further due to the 13 special permits that were incorporated into the HMR that impacted more than 400 grantees; incorporating these special permits eliminated the need for these grantees to reapply for renewal.

Figure IV-2 also highlights that during this period, PHMSA processed more special permits than received, allowing PHMSA to address the backlog of special permits received from previous years but not-yet processed. To expedite the application review, PHMSA developed and launched the Special Permit Portal, an on-line system for special permit applications, streamlining the evaluation of renewals and party-to permits. As part of PHMSA's Safety Equivalency Evaluation (SEE) Recovery Plan, PHMSA reviewed existing special permits in accordance with the current regulations during this time. The numbers in Figure IV include minor Special Permit corrections and updates initiated by PHMSA and addressed through the General Correspondence process.

Figure IV-2: Number of Special Permits Received and Processed, CY11–12
(Includes General Correspondence Initiated by PHMSA)

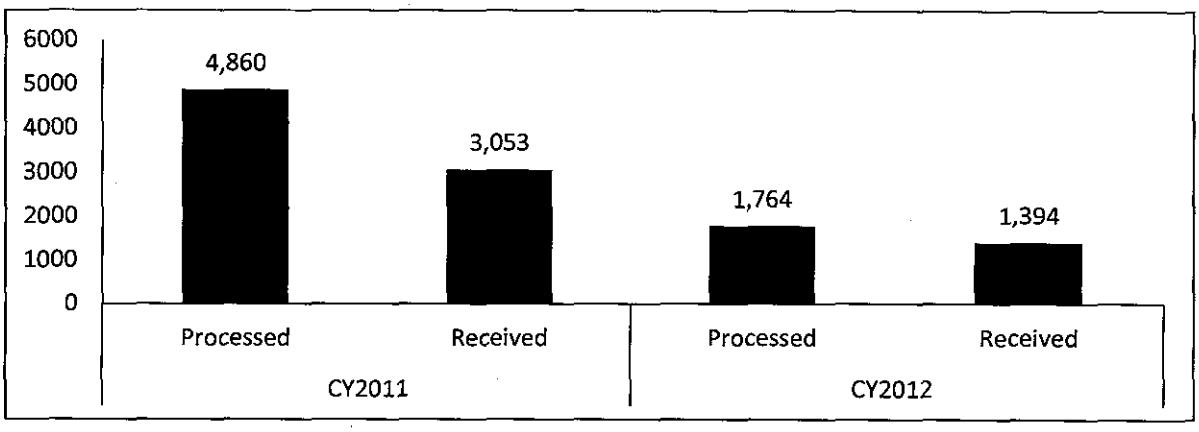


Table IV-2 and **Table IV-3** outlines the types of special permits PHMSA processed in 2011 and 2012 on a monthly basis. These tables illustrate that "Renewals" comprised nearly half of all the special permits that PHMSA processed during this timeframe.

Table IV- 2: CY 2011 Special Permits Processed by Type

	January	February	March	April	May	June	July	August	September	October	November	December	2011 Total
General Correspondence	183	245	233	132	80	130	74	92	53	34	16	64	1336
Modification	8	21	7	11	10	10	7	6	8	13	11	8	120
New	8	53	43	35	20	34	27	23	20	32	32	22	349
Party To	58	101	120	92	73	91	40	89	87	22	55	74	902
Reconsideration			1	2	1		9	14	3	8	1	17	56
Renewal	162	171	394	241	118	127	142	247	163	75	63	159	2062
Revision	7	9	16		1	1			1				35
Grand Total	**426**	**600**	**814**	**513**	**303**	**393**	**299**	**471**	**335**	**184**	**178**	**344**	**4860**

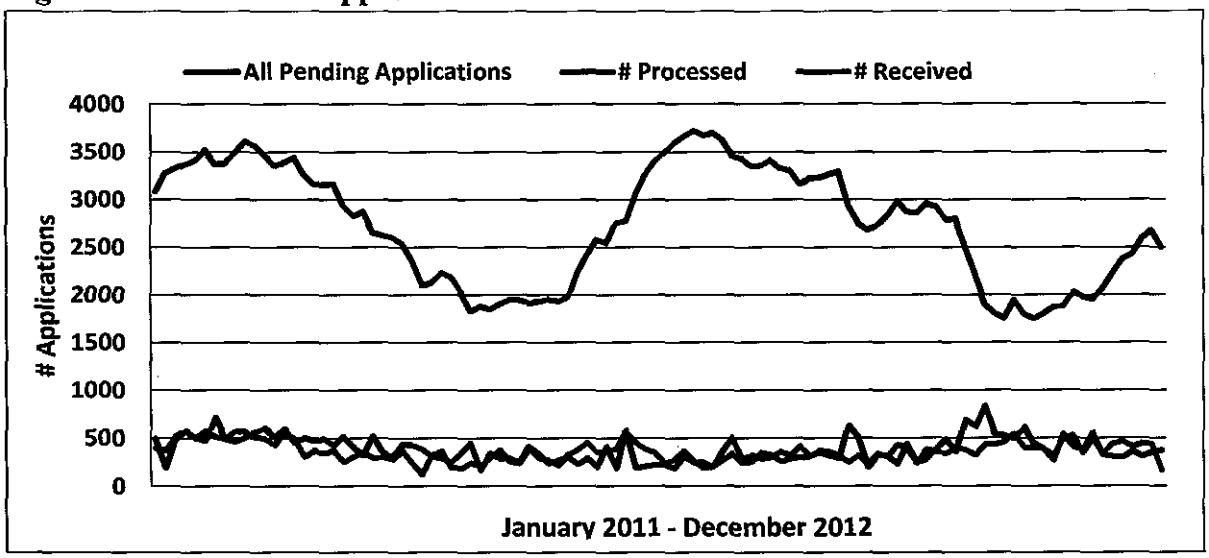
Table IV-3: CY 2012 Special Permits Processed by Type

	January	February	March	April	May	June	July	August	September	October	November	December	2012 Total
General Correspondence	52	20	34	25	14	27	33	23	39	17	16	11	311
Modification	22	12	17	16	11	9	14	11	10	16	19	10	167
New	26	23	33	29	10	18	16	26	8	25	26	6	246
Party To	37	54	32	33	33	12	27	22	15	18	10	12	305
Reconsideration	3	5	5	2	4	1	2	1	4	3	2		32
Renewal	90	112	79	64	46	59	40	38	58	54	17	46	703
Grand Total	**230**	**226**	**200**	**169**	**118**	**126**	**132**	**121**	**134**	**133**	**90**	**85**	**1764**

As stated above, just prior to 2011, PHMSA completed a series of process improvements. In addition, there was an increase in applications as a result of improved oversight in the field. This resulted in a number of applications in queue at the beginning of 2011 and 2012 as reflected below. The numbers of approvals PHMSA processed and received were roughly the same during the past 2 years. The number of approvals in queue fluctuated during this same timeframe, ending in 2012 slightly lower than it started in 2011. **(Figures IV-3 and IV-4 and Table IV-4 and IV-5).**

Following the implementation of the process improvements, PHMSA redirected its resources and processed more approvals than it received for both CY11-12, successfully reducing the number of applications in queue. **(Figure IV-4).**

Figure IV-3: Status of Approvals CY11–12



Similarly, as with special permits, PHMSA utilized focused resources to process more approvals than it received for both CY11-12 in an effort to address backlogs from previous years. **(Figure IV-4).**

Figure IV-4: Numbers of Approvals Received and Processed CY11–12

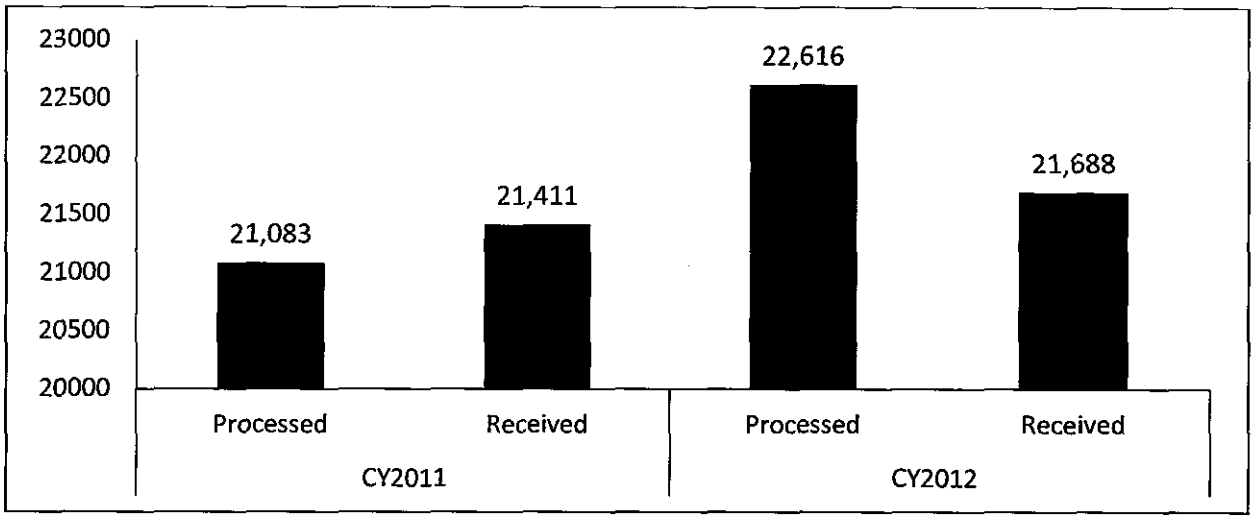


Table IV-4 and **Table IV-5** outline the types of approvals PHMSA processed in 2011 and 2012 on a monthly basis. The overwhelming majority of these approvals during this time period were firework approvals. PHMSA monitors the aging of fireworks applications weekly to prevent applications from exceeding 180 days.

Table IV-4: CY 2011 Approvals Processed by Type

	January	February	March	April	May	June	July	August	September	October	November	December	
Competent Authority	41	171	71	95	85	71	63	64	52	47	49	57	
Explosives	171	223	328	196	149	153	202	251	340	189	210	189	
Fireworks	1,765	1,731	2,140	2,778	1,537	1,365	984	939	1,660	817	1,011	746	
Package Manufacturers	6	14	15	18	2	31	16	12	11	5	6	6	
Requalifier	92	79	88	65	48	55	74	75	48	54	52	72	
Visual[8]	81	53	66	99	149	69	57	75	35	53	122	24	
Grand Total	2,156	2,271	2,708	3,251	1,970	1,744	1,396	1,416	2,146	1,165	1,450	1,094	22,767

Table IV-5: CY 2012 Approvals Processed by Type

	January	February	March	April	May	June	July	August	September	October	November	December	
Competent Authority	110	52	69	44	56	35	62	62	63	48	49	66	
Explosives	124	169	178	169	217	128	217	277	209	178	182	148	
Fireworks	806	1,177	3,644	1,187	1,445	1,013	1,214	2,449	1,719	1,293	1,546	1,160	
Package Manufacturers	7	4	22	25	6	100	5	17	86	42	34	3	
Requalifier	60	75	78	71	69	78	59	74	49	49	46	48	
Visual[2]	60	16	58	44	101	95	82	44	57	73	57	89	
Grand Total	1,167	1,493	4,049	1,540	1,894	1,449	1,639	2,923	2,183	1,683	1,914	1,514	23,448

[8] "Visual" refers to a Visual RIN holder which is approved in accordance with the provisions authorized under 49 CFR 180.209(g) *Visual Inspections*. This section authorizes requalification of a DOT specification cylinder, in designated service of one of the materials identified in the section, in lieu of performing a full hydrostatic test as required by 180.205. It consists of a visual inspection of the outside of the cylinder and the valve area for corrosion, fire damage, or indentations, or damage. Additional guidance of how to perform a visual inspection is available by the Compressed Gas Association (CGA) pamphlets incorporated by reference in 49 CFR Part 171.7 (CGA pamphlets 6, 6.1, 6.2, and 6.3).

V. Highlights and Evaluation of Hazardous Materials Regulations Enforcement and Voluntary Compliance Activities

This section of the report highlights enforcement and compliance activities relating to a function regulated by the Secretary under the Federal hazmat law section 5103(b)(1) and the degree of compliance with the regulations. As illustrated in **Table V-1,** as well as discussed below, each DOT operating administration has performed a variety of enforcement and compliance activities.

Table V-1: Enforcement Activities by Agency, CY11-12

Agency	Activity	Transaction Year	
		2011	2012
FAA[9]	INSPECTIONS	8,702	8,756
	VIOLATIONS	2,028	1,672
	PENALTIES	470	388
PHMSA[10]	INSPECTIONS	2,389	1,994
	VIOLATIONS	2,279	2,015
	PENALTIES	624	800
FMCSA[11]	INSPECTIONS	205,905	203,219
	VIOLATIONS	38,820	35,934
	PENALTIES	64	202
FRA[12]	INSPECTIONS	12,258	12,485
	DEFECTS	21,934	23,644
	VIOLATIONS	911	765
USCG[13]	INSPECTIONS	25,405	25,549
	VIOLATIONS	2,763	2,437
	PENALTIES	31	91

[9] Number of FAA violations reflects number of actual reports containing violations. Each report may have multiple violations cited, but this number only counts the first violation (for example, 1 report may have up to 100 violations, but this number will only count 1 violation). Source: FAA's Enforcement Investigation System

[10] Number of PHMSA inspections represents number of Field Operations Performance-Related Activities. Performance-Related Activities include Facility Inspections, Observation Inspections, and Investigations.

Number of PHMSA penalties includes the sum of tickets and cases. Source: Hazardous Materials Information Portal (HIP), as of May 15, 2013

[11] FMCSA violations result from roadside inspections, reviews, and complaints. FMCSA penalties are a result of investigations and do not include penalties associated with roadside inspections. Not all penalties are related to the Hazardous Materials Regulations. Source: Inspections, Reviews, Safety Audits and Violations: Motor Carrier Management Information System (MCMIS) as of March 18, 2013. *This information is available through the FMCSA Analysis and Information (A&I Online website, through the Safety Programs link (http://ai.fmcsa.dot.gov/SafetyProgram/home.aspx).* Source: Penalties/Enforcement Cases: Enforcement Management System (EMIS) as of May 1, 2013

[12] Defects are identified nonconforming issues. Violations are those defects that an inspector believes are a risk to safety or a chronic issue. Source: FRA's Railroad Inspection System – Personal Computer (RISPC) database as of February 25, 2013

[13] Source: Marine Information for Safety and Law Enforcement (MISLE) System through the use of the Coast Guard Business Intelligence (CGBI) Cubes, as of March 8, 2013

The same data are displayed below in **Figures V-2, V-3,** and **V-4**. From 2011 to 2012, each operating administration conducted approximately the same number of inspections and issued the same number of violations and penalties. The greatest number of inspections and violations found were in highway mode, which is not surprising given that the highway mode includes hazmat inspections conducted by thousands of enforcement officers under the Motor Carrier Safety Assistance Program. The greatest number of violations found given the number of inspections was in rail mode—FRA issued nearly twice as many violations as inspections conducted. PHMSA issued the highest percentage of penalties given both the number of violations and inspections it conducted—about 25 percent in 2011 and 40 percent in 2012.

Figure V-2: Number of Inspections by Agency Authority

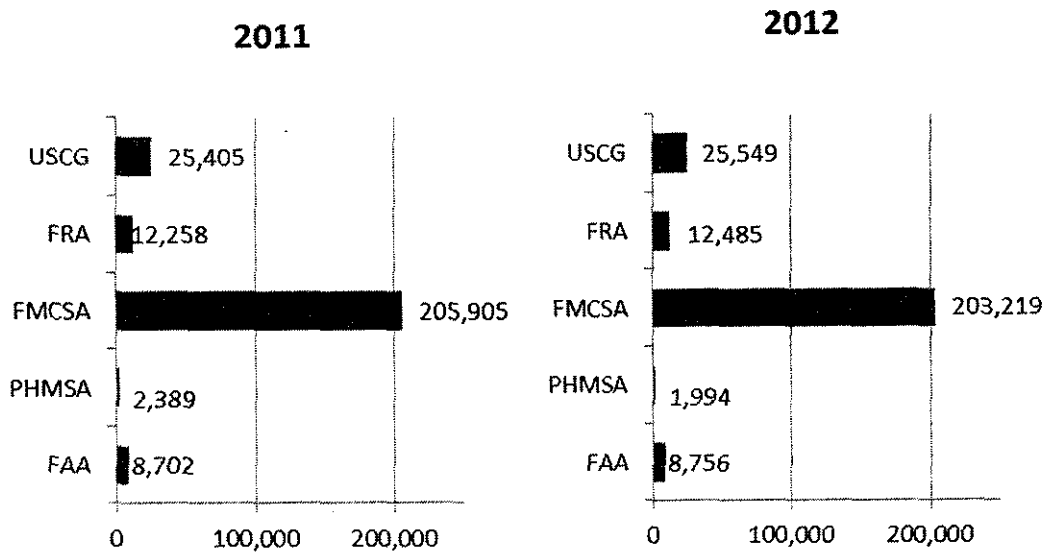


Figure V-3: Number of Violations Issued by Agency Authority

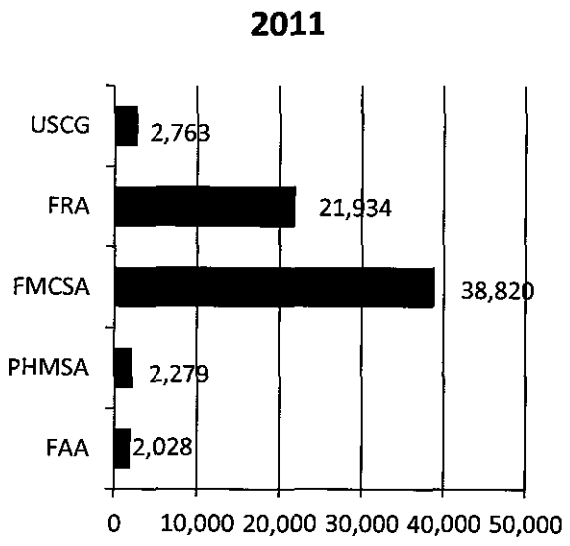
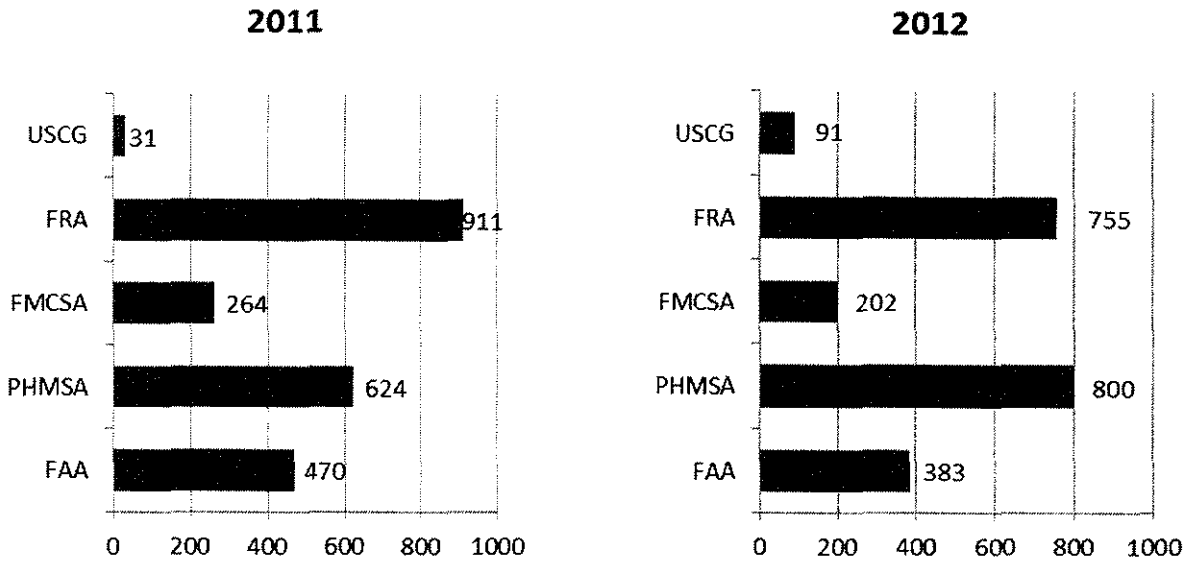


Figure V-4: Number of Penalties Issued by Agency Authority



FAA

The 2011-2012 biennial cycle marks an important milestone for the FAA's HMSP. During this period, FAA developed and began implementing significant risk-based approaches to support the oversight of both air carriers and shippers of hazmat. These approaches include the development and piloting of a systemic approach for air carrier oversight, in which FAA fused hazmat compliance requirements into the overall oversight of participating air carriers. As for air mode shippers, FAA implemented a risk-ranking functionality in the HIP database that is providing the agency with leads on higher-risk shippers.

In addition to planned inspections, an important feature of FAA's hazmat compliance and enforcement program is the **special emphasis inspection (SEI),** a focused inspection activity that is performed during a discrete time period by a majority of FAA field personnel. In 2011 and 2012, SEIs were conducted on the following types of activities:

- Covert testing of selected passenger air carrier cargo acceptance procedures at selected airports to determine compliance with the HMR;
- Evaluation of the extent to which assemblers and distributors of e-cigarettes, containing lithium batteries, complied with U.N. testing requirements for offering in the air mode;
- Focused inspection of foreign air carriers;
- Concentrated inspection effort covering freight forwarders; and
- Review of lithium battery competent authority applications and fitness determinations.

Through particular SEIs, the FAA partnered with the U.S. Transportation Security Administration (TSA), the U.S. Postal Service, and PHMSA in an effort to further improve cooperation among stakeholders.

In connection with hazmat enforcement activity, the FAA collected approximately $12 million during CY11-12.

FMCSA

FMCSA utilizes both Federal and State partners to carry out the agency's hazmat program. Through roadside inspections of commercial motor vehicles and a variety of motor carrier reviews, FMCSA's field staff, and the approximately 10,000 motor carrier inspectors in the Motor Carrier Safety Assistance Program effectively oversee highway transportation of hazmat. FMCSA has also taken on the responsibility for motor carrier hazmat security through its Security Sensitivity Visits and Security Compliance Reviews. Finally, FMCSA and State personnel have been active in the Hazardous Materials Package Inspection Program (HM PIP),

the conduct of joint operations known as **Multi-Agency Strike Force Operations (MASFOs)**, and its oversight of cargo tank manufacturing and inspection facilities.

FRA

In 2011 and 2012, FRA audited the Class I railroads for compliance with the security and routing regulations. The audits consisted of reviewing the railroads' security plans, security or risk assessments, personnel security, unauthorized access of facilities and systems, in-route security, intermodal security, training, and routing. The deficiencies identified were related to **training** and **updating security plans** to reflect personnel changes. Relative to compliance with the routing regulations, inconsistencies in routing analyses were the primary identified deficiencies. In 2013, FRA will continue its audit efforts, as well as work with the Class II and Class III railroads in their development of software to quantify risk based on the 27 factors outlined in 49 CFR Part 172 Appendix D.

In 2012, FRA conducted **focused inspections** at rail intermodal facilities. Thirteen of these inspections were multi-agency endeavors covering several facilities in major transportation hubs throughout the nation. Partnering with FRA in these endeavors were PHMSA, FMCSA, DHS and various State and local entities. The goal of these inspections was to support government oversight of containerized shipments by inspecting for undeclared hazmat shipments, packaging, blocking and bracing, hazmat communication, shipping papers, and emergency response information, while developing closer working relationships and cross-modal program consistency for hazmat regulatory compliance. Findings included: leaking non-bulk packages, missing and incorrect placarding, failure to block and brace shipments, failure to mark or label hazmat shipments, shipping paper errors, and incorrect emergency telephone numbers.

In 2010, FRA created a **tank car facility Quality Assurance Team**. The team is comprised of four Quality Assurance Specialists and assisted by two packaging engineers from the Hazardous Materials Division. The Specialists have a broad range of expertise, including non-destructive evaluation, welding, engineering, as well as experience in the construction, repair, and inspection of tank cars. The objective of the team is to audit all Association of American Railroads (AAR) registered and certified tank car facilities and evaluate both the quality assurance program as well as the technical execution of the qualification and maintenance program. The goal of the team is to audit each of the approximate 325 facilities once every three years. Approximately 250 facilities have been audited. In addition, in 2013 the team will initiate an effort to audit tank car owners to determine compliance with the requirements for developing and managing a qualification and maintenance program that ensures the design level of reliability and safety of tank cars transporting hazmat. The Quality Assurance Team often partners with regional personnel to leverage resources, perform a more comprehensive audit, and improve the competencies of the field inspectors.

USCG

The USCG conducts inspection activities on containerized hazardous cargo for compliance with regulations found in 49 Code of Federal Regulations and general cargo containers for compliance with the International Safe Container Act. USCG units routinely conduct **random targeting of containers for inspection**, and execute MASFOs. The USCG is typically the lead agency during a MASFO, and participants include State and local law enforcement, CBP, PHMSA, FRA, FMSCA, and TSA. The combined number of inspected containers during a large-scale MASFO can total upwards of 600 Twenty-foot Equivalent Units (TEU's). Notably, in August 2011, the USCG led the first MASFO conducted on the island of St. Thomas. The local unit along with CBP, U.S. Drug Enforcement Agency, U.S. Immigration and Customs Enforcement, and Virgin Islands Police Department inspected more than 121 containers for compliance with U.S. regulations and international standards.

Pipeline and Hazardous Materials Safety Administration (PHMSA)

To ensure that all the requirements of issued special permits and approvals are followed and all related hazmat movements are safe, PHMSA employs a number of enforcement and compliance strategies, including frequent field inspections. Keeping hazmat contained in approved packages is often the most basic safety management practice. PHMSA understands that low probability hazmat accidents can lead to high consequence incidents, so it leverages its staff of 55 hazmat enforcement professionals.

The agency's field investigators are technical experts in multimodal packaging, special permits, approvals, explosives, radioactive materials, cylinders, shippers, and transporters. Additionally, PHMSA's safety assistance team provides direct outreach and guidance to organizations involved in the hazmat transportation system and support to the hazmat emergency response community. During the past 2 years, PHMSA conducted more than 4,000 inspections of regulated companies and provided hazmat outreach to more than 35,000 stakeholders.

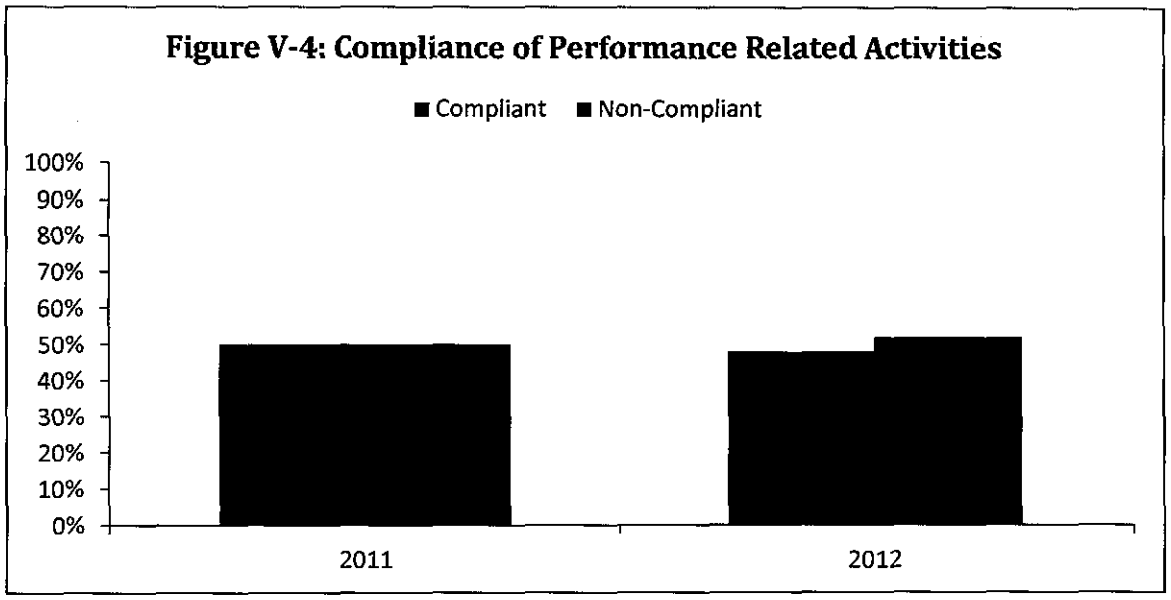
PHMSA has primary jurisdiction over approximately 300,000 unique hazmat shippers, carrier and testing entities, as well as exclusive jurisdiction over the design and manufacture of hazmat packaging, including cylinders related to design standards, maintenance and testing. Its current staff of less than 57 inspectors can only conduct 2.1 inspections per thousand entities, and cannot effectively cover the entire regulated community at any meaningful rate providing for a significant gap in safety. The new staffing and travel funds will result in an increase to 6.4 per thousand.

PHMSA utilizes several tools to maximize the outcomes of its resources and activities. The agency leverages its resources by conducting joint activities with other Federal, State, and local law enforcement personnel. PHMSA conducted 9 MASFOs in 2011 and 16 MASFOs in 2012.

These MASFOs brought a number of regulatory and law enforcement agencies together from across the nation.

These efforts focused on **risk-based inspections** of containerized and portable tank cargoes, and risks posed by trucks, trailers, and chassis that may have not been fully in compliance with safety standards. The joint efforts in the past 2 years resulted in the safety inspection of 6,067 hazmat containers, resulting in 209 containers being placed out-of-service/on hold. These efforts also produced 1,266 total truck inspections, resulting in 108 trucks being placed out of service.

Figure V-4 shows the percentage of **compliance vs. non-compliance** for PHMSA's performance- related activities (Facility Inspections, Observation Inspections, and Investigations) in 2011 and 2012. *Compliant* includes the following action codes: Advisory Letter; No Further Action; Awaiting Test Results; See Summary. *Non-compliant* includes the following action codes: Enforcement Report; Ticket; Warning Letter.



Source: HIP, Data as of March 19, 2013

The percentage of distribution in compliance across these 2 years was approximately 50 percent compliance and 50 percent non-compliance. This indicates that approximately half of the entities that PHMSA identifies through its risk-based targeting are found to be non-compliant, necessitating enforcement actions.

In order to determine the effectiveness of PHMSA's hazmat inspection and investigation program, the agency measures **recidivism, or re-inspections** of entities previously subject to a

civil penalty case or ticket. The purpose of the re-inspection is to verify compliance by an entity known to have violated the Federal hazmat transportation law in the past. Unless directed by management, or circumstances present based on a complaint or accident warranting a shorter duration, an entity involved in a civil penalty case becomes eligible for re-inspection one year after issuance of an uncontested final order or, if contested, one year after the final dispensation. An entity receiving a ticket for noncompliance becomes eligible for re-inspection 6 months after the ticket action is closed.

Figure V-5 displays the recidivism rate for PHMSA's performance-related activities between 2011 and 2012.

Figure V-5: Recidivism Rate, CY11-12

Activity Year	# of Performance-Related Activities	# of Re-Inspections*	% Re-Inspections	# Re-Inspections with Compliance+	% of Re-Inspections with Compliance++
2011	2,389	344	14.40%	168	48.84%
2012	1,975	317	16.05%	173	54.57%

Source: HIP, Data as of March 14, 2013

**Re-Inspections* are PHMSA performance-related activities associated to a re-inspection case number.
+Re-Inspections with Compliance represents Re-Inspections that have an action code of: Advisory Letter, No Further Action, Awaiting Test Results, See Summary.
++% of Re-Inspections with Compliance is measuring: *(# of Re-Inspections with Compliance) / (# of Re-Inspections).*

Out of the 4,364 total performance-related activities in 2011 and 2012, 661 (15 percent) were re-inspections. Of the 616 re-inspections, 51.6 percent of companies were found to be in compliance with regulations during the time of the re-inspection, as a direct result of PHMSA's education efforts during the inspection and the enforcement actions taken afterward. This compliance rate is similar to those of initial inspections illustrated in **Figure V-4**. PHMSA aims to continue to increase the compliance of companies that have re-inspections.

In addition to conducting inspections and issuing violations, PHMSA has a number of **voluntary compliance programs.** For example, the Systems Integrity Safety Program (SISP) is dedicated

to addressing activities posing the greatest risk in transportation. The program focuses on industry quality assurance and integrity management principles to enhance compliance and continually improve safety. One of the tools to accomplish this task is to identify "best business practices," which may not be required but increase compliance with the HMR and may ultimately improve transportation safety. SISP addresses compliance issues for eligible shippers, manufacturers and carriers that based on their incident and or compliance history may pose a risk to transportation safety or involve very broad nationwide matters. A company successfully completing the SISP program as specified in the SISP Agreement will not be subject to PHMSA enforcement actions for probable violations discovered during the term of the Agreement. PHMSA will exercise this enforcement discretion only if the participant comes into full compliance. The participant may also develop and implement a suitable quality control plan to avoid the recurrence of similar problems.

Through an agreement with an entity, the process includes:

- a risk assessment model to identify potential unsafe operations, causes of failure, and critical control points
- developing and maintaining an integrity management plan, performance measures, and safety standards that focus on eliminating or reducing high-consequence events
- collecting and analyzing data as well as monitoring and evaluating performance

In return, entities that adopt this approach accelerate compliance and implement corrective actions to help reduce the likelihood of hazmat releases in transportation.

During CY 2011-12 PHMSA entered into or completed 6 SISP agreements. These agreements affect tens of thousands of hazmat shippers and transporters. One example of improved compliance through the SISP involved reverse logistics in the retail industry. **This initiative:**

- affected the battery, pharmaceutical, and transportation industries
- affected 50,000 shippers and carriers
- affected 1.4 million employees
- resulted in a 90% compliance rate improvement
- resulted in more than $30 million in improvement investment

In this example, the company implemented a corporate-wide hazardous materials compliance training program for employees and managers. Managers were held accountable for hazmat compliance and hired a third party to be present in every facility location in the nation to ensure proper training and compliance with the regulations. This renewed focus led to significant reductions in violations of the hazardous materials regulations.

PHMSA's voluntary compliance program focuses on activities posing the greatest risk in transportation, and focuses on industry quality assurance and integrity management principles to enhance compliance and continually improve safety. In 2011 and 2012, through employment of **alternative compliance strategies**, PHMSA completed several SISP agreements, which included an agreement with a world leader in hazmat non-bulk and intermediate bulk packaging. This effort identified high-risk probability items leading to improved manufacturing and quality control processes that affected 15 million packagings used by hundreds of high-hazard shippers.

An additional SISP involved the undeclared reverse logistics shipments of more than one million compressed gas cylinders, resulting in PHMSA collaborating with small parcel carriers to accept hazmat returns from non-hazmat entities. The compliance rates for these shipments have increased to 90 percent; an enormous step toward addressing reverse logistics compliance.

PHMSA's Alternative Validation Testing (AVT) is a second voluntary compliance program. This initiative utilizes existing authority through 49 C.F.R 178.601(i) to provide packaging manufacturers the opportunity to demonstrate UN performance testing on package designs selected by PHMSA. Testing is conducted by the packaging manufacturers with a PHMSA investigator present. Based on the success of this pilot program, PHMSA decided to make manufacturer-demonstrated compliance testing, or AVT, a permanent option. PHMSA uses AVT to promote greater package design integrity and compliance by the packaging manufacturers and, in doing so, increases hazmat transportation safety.

VI. A Summary of Outstanding Problems

There were five major issues that PHMSA focused on issues that PHMSA focused on throughout 2011 and 2012, and the agency recognizes the need to continue to address these in the future.

- Identification of Emerging and Unidentified Hidden Risks
- Continuing to Meet MAP 21 Requirements
- Streamlining the Agency's Regulatory System
- Information Technology Modernization
- National Transportation Safety Board Recommendations

The major issues are:

Identification of Emerging and Unidentified Risks

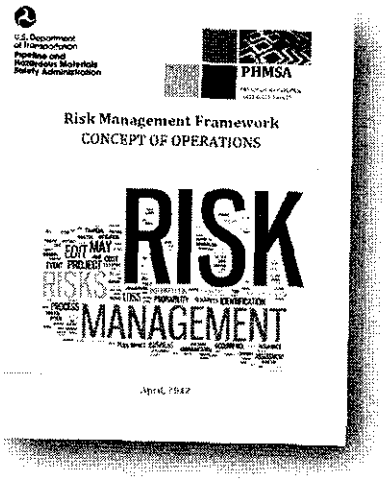
PHMSA recognizes the need to continuously identify existing and potential future risks. The risks inherent in hazmat transportation are constantly changing and measures must be taken to address those risks that may not be immediate or may have yet to manifest in the hazmat

transportation industry. In 2011, PHMSA began to implement a Risk Management Framework (RMF), an overall organizing structure that will help identify, assess, manage, and monitor hazmat transportation risks. The RMF is intended to help PHMSA identify potential safety strategies and make informative decisions by providing:

- Improved information on emerging technology,
- Improved insight on the hazmat industry,
- Information on close calls and failure mechanisms,
- Identification of high-risk commodities,
- Identification of new transportation methods,
- Identification of high-risk packaging solutions,
- Trends on industry, partner, and grantee performance,
- Analysis of special permits, petitions, stakeholder inquiries, and interpretations,
- Issuance of safety alerts, and
- Analysis of unstructured data—articles, media, reports, studies, etc.

PHMSA's OHMS has adopted a four-phased approach to risk management as listed below.

- **Identify** key hazards, risk factors, and issues,
- **Assess** the risks associated with each factor and develop mitigation strategies,
- **Manage** the risk through implementation of strategies and communication with stakeholders, and
- **Monitor** to promote compliance, course correction, and continuous improvement.



Thus far, PHMSA has created a Concept of Operations, which includes the overall concept and business requirements of the RMF, alternatives and recommendations, stakeholder and environment information, and tasks and deliverables. PHMSA also has conducted a hazmat historical analysis with a risk register and created a high-level risk model that will continue to be adapted as more information is collected. In the coming years, PHMSA plans to complete a program evaluation and develop a comprehensive risk model that can be used to guide the agency's hazmat decisions.

Continuing to Meet MAP 21 Requirements

In July 2012, the President signed legislation titled: "Moving Ahead for Progress in the 21st Century Act (MAP-21).". This legislation outlined a number of objectives PHMSA must meet during the next few years. PHMSA assigned each of these requirements to the appropriate stakeholders within the agency and used these requirements to drive its priorities for 2013.

A few of the key initiatives PHMSA began to work on in 2012, and will continue to do so in the coming years in order to meet MAP-21 requirements include:

- **Convert Special Permits Into the HMR.** From 2011-2012, PHMSA developed a methodology and approach for identifying and evaluating special permits that should be converted into regulations. Specifically, it developed a criteria and ranking tool it used to identify the special permits that were candidates to be incorporated into the HMR. PHMSA incorporated 13 existing special permits representing more than 400 permit holders into the hazmat regulations. PHMSA is planning on continuing to use this approach to meet the following MAP-21 provisions:
    - Conduct initial review and analysis of special permits that have been in continuous effect for a 10-year period to determine which ones may be converted into the hazmat regulations. Due 10/01/2013.
    - Issue regulations to incorporate into the hazmat regulations any special permits identified in the initial review and analysis that PHMSA determines are appropriate for incorporation based on the review factors. Due 10/01/2015.
    - Ongoing review and analysis of special permits. No later than 1 year after the date on which a special permit has been in continuous effect for a 10-year period, PHMSA shall conduct a review and analysis of that special permit to determine whether it may be converted into the hazmat regulations. Due 10/01/2016.
    - After completing the review and analysis of 10-year special permits, PHMSA shall either institute a rulemaking to incorporate the special permit into the hazmat regulations or publish in the Federal Register its justification for why the special permit is not appropriate for incorporation into the regulations. Final rule or notice of no rulemaking decision due by 10/01/2016.
- **Restructure Special Permit and Approval Fitness Evaluations.** During the past 2 years, PHMSA has been working to make its current Fitness Review process more effective and efficient and issue regulations that establish an SOP and objective criteria to evaluate special permits and approvals. This effort will reduce paperwork burdens, facilitate commerce, and provide timely decisions for entities requiring regulatory

flexibility to implement new technologies and processes. Throughout 2013, PHMSA will continue to work on this effort in order to meet the following MAP-21 requirement:

- PHMSA shall issue regulations that establish (1) SOP to support administration of the special permit and approval programs; and (2) objective criteria to support the evaluation of special permit and approval applications. Final Rule due 10/01/2014.

- **Hazardous Materials - Automated Cargo Communication for Efficient and Safe Shipments (HM-ACCESS).** DOT may conduct a research initiative that includes pilots to evaluate the feasibility and effectiveness of a paperless hazmat communication system to provide an equivalent level or better level of safety to the current paper requirements.

  - In CY11-12, PHMSA held four HM-ACCESS workshops with emergency responders, law enforcement, shippers, and carriers. Feedback from the workshops and stakeholder outreach efforts is accessible at:

    http://www.phmsa.dot.gov/portal/site/PHMSA/menuitem.ebdc7a8a7e39f2e55cf2031050248a0c/?vgnextoid=cd331478890d3310VgnVCM1000001ecb7898RCRD&vgnextchannel=753de8d9f73b4110VgnVCM1000009ed07898RCRD&vgnextfmt=print

  - The information gathered in the workshops identified stakeholder priorities and concerns, and revealed potential challenges and technological gaps in the implementation of paperless hazmat (e-HM) communication systems (e-systems). This information will inform the pilots mandated under MAP-21 to evaluate the feasibility and effectiveness of electronic shipping papers, with the goal of ensuring an equivalent, or better, level of safety to the current paper requirement.

- **Incident Data Assessment and Improvement Plan.** During CY11-12, PHMSA conducted a preliminary assessment of the collection, analysis, reporting, and use of incident data. As part of this analysis, PHMSA identified and prioritized initial recommendations, including adjustments to the reporting requirements, in an effort to improve the quality of incident data. PHMSA also published a Federal Register notice[14] regarding this assessment and solicited comments from interested parties. In 2013, PHMSA will continue to build upon this initial analysis in order to meet the following MAP-21 requirements:

[14] Assessment of Hazardous Materials Incident Data Collection, Analysis, Reporting, and Use; 77 FR 69925.

- PHMSA, in consultation with USCG (as appropriate), must conduct an assessment to improve the collection, analysis, reporting, and use of data related to accidents and incidents involving the transportation of hazmat. The assessment shall review PHMSA's methods for collecting, analyzing, and reporting accidents and incidents involving the transportation of hazmat.
- Develop an action plan and timeline for improving the collection, analysis, reporting, and use of data by PHMSA, including revising the database of PHMSA, as appropriate. PHMSA submitted this plan to congress in August 2013.

- **Resumption Package Rule**. MAP-21 mandates that the Secretary of Transportation take all actions necessary to finalize a regulation, not later than one year after the date of enactment (October 1, 2013), to address the resumption of transportation of perishable hazmat; the means by which non-compliant packages are placed out-of-service or moved to their final destination; appropriate training and equipment for inspectors; and the proper closure of packaging in accordance with the HMR. Congress provided the Department twelve months to augment 49 CFR Part 109. PHMSA published the NPRM in May of 2013 under HM-258B (Hazardous Materials: Enhanced Enforcement Procedures—Resumption of Transportation, RIN 2137-AE98), allowing 60 days for the public to comment. PHMSA will work diligently to evaluate comments and finalize the action in accordance with the October 1, 2013, deadline established by MAP-21.

  The MAP-21 mandate directly relates to a March 2, 2011, final rule issued by PHMSA under Docket No. PHMSA-2005-22356 (PHM-7), "Hazardous Materials: Enhanced Enforcement Procedures." 76 FR 11570. The final rule became effective on May 2, 2011. The rule implemented enhanced inspection, investigation, and enforcement authority conferred on the Secretary of Transportation by the Hazardous Materials Transportation Safety and Security Reauthorization Act of 2005 (HMTSSRA). In the nearly 2 years that the enhanced inspection and enforcement authority procedures have been in effect, PHMSA reports that the negative impacts predicted by industry and other stakeholders as a result of the March 2, 2011, final rule have not occurred.

Streamlining the Agency's Regulatory System

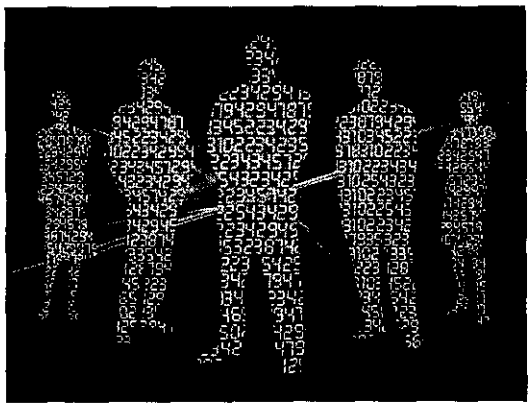
In an effort to align with the principles of Executive Order 13563 and DOT's retrospective regulatory review, PHMSA is dedicated to improving and streamlining its regulatory system. Specifically, PHMSA is focused on clarifying the regulations and enhancing public participation in the regulatory process. To streamline its regulatory system in the long term, OHMS's regulatory mission must be focused. Yet, regulators are responsible for a wide range of regulatory and non-regulatory deliverables that support the overall mission of OHMS. With limited resources, OHMS prioritizes regulatory and non-regulatory responsibilities to maximize

effectiveness. On the regulatory front, OHMS recognizes that regulatory changes have the potential to pose significant burdens to the public, including the regulated industry, the agency, and the Federal government as a whole.

As part of its effort to align with the principles of Executive Order 13563, and thus streamline its regulatory system, PHMSA has worked to identify those areas where the regulations should be changed to eliminate redundancies, ambiguity, and unnecessary burdens. The agency continues to explore areas that potentially can be harmonized, both domestically and internationally, to limit the regulatory burden while maintaining or enhancing the level of safety. OHMS staff have also worked and will continue to work closely across Divisions, the regulated industry, other government agencies (USCG, EPA, OSHA, ATF, etc.,) and DOT's operating administrations (FAA, FMCSA, FRA) to identify and prioritize the safety and security risks based on research and development and incident data analysis. OHMS has implemented changes to ensure that regulatory changes are thoroughly evaluated from both a technical and economic perspective and are in compliance with the Administrative Procedures Act and Departmental Rulemaking Requirements. This risk- based evaluation and decision-making ensures that only those issues that warrant regulatory action are placed on the regulatory agenda. A sound policy analysis sets the groundwork for a sustainable and streamlined regulatory life cycle that might result in a variety of actions, some of which include outreach, training, inspections, investigations, and rulemaking.

While OHMS began to implement the Policy Analysis process in 2012, it is crucial that it continue to integrate this approach to all regulatory related decisions. This will require the resources necessary to ensure that the process continues to flourish.

Information Technology Modernization



Continued funding for PHMSA's IT Modernization initiative is vital to improve the quality, quantity, and interoperability of hazmat data to strengthen decision support and risk management activities; these needs are reflected in the President's FY 2014 budget request. In order for PHMSA to truly become a risk-based, data-driven organization, improvement and expansion of its IT architecture and capability is imperative.

National Transportation Safety Board Recommendations

Since January 2011, PHMSA has successfully closed 10 NTSB recommendations. PHMSA and its modal partners utilize a variety of approaches to acceptably address these recommendations. As of March 2013, PHMSA had 25 remaining open NTSB recommendations. The remaining recommendations are being addressed through a mix of: (1) Regulatory Action (2) Outreach; (3) Research; and (4) Internal policy review. The summary below provides the status, as of March 2013, of these open NTSB recommendations:

Regulatory Action:

The rulemaking actions for improving the safe transportation of hazmat address 11 recommendations dealing with: (1) lithium batteries transported aboard aircraft; (2) unprotected piping on cargo tank motor vehicles; (3) the bulk loading and unloading of hazmat; (4) railroad tank car transportation and (5) international harmonization. The summary below provides the status as of March 2013 for the four significant rulemakings that will address NTSB recommendations:

A. Revisions for the Transportation of Lithium Batteries

Docket Number: PHMSA-2009-0095

RIN: 2137-AE44

Stage: Final Rule

Abstract: The rulemaking would impose more effective safeguards, including enhanced packaging, hazard communication, and operational measures for various types and sizes of lithium batteries.

Prompting action: NTSB Recommendations; Congressional Interest

Legal Deadline: None

Current Status: PHMSA is evaluating comments from a supplemental notice published on January 7, 2013. The comment period closed March 8, 2013.

PHMSA anticipates publishing a final rule in November 2013.

Associated NTSB Recommendations: A-07-107, A-07-108 and A-07-109

B. Safety Requirements for External Product Piping on Cargo Tanks Transporting Flammable Liquids (Wetlines)

Docket Number: PHMSA- 2009-0303

RIN: 2137-AE53

Stage: Final Rule (On Hold) Not included in Spring Agenda.

Abstract: This rulemaking aims to eliminate risks associated with the retention of hazmat in external product piping on cargo tanks.

Prompting action: NTSB Recommendation; Congressional interest

Legal Deadline: Government Accountability Office (GAO) evaluation and report due October, 1, 2013.

Current Status: The MAP-21 Hazardous Materials Transportation Safety Improvement Act of 2012 mandates that the GAO evaluate and report on the safety of wetlines prior to regulatory action. PHMSA is coordinating with GAO and awaiting results of the GAO report.

Associated NTSB Recommendations: H-98-27

C. Loading and Unloading of Bulk Packaging

Docket Number: PHMSA-2007-28119

RIN: 2137-AE37

Stage: TBD Not included in Spring Agenda

Abstract: PHMSA's data show that the most dangerous part of cargo tank motor vehicle transportation occurs when hazmat is being transferred by hose or pipe between the holding facility and the cargo tank. PHMSA has proposed a rule that would require additional training for employees and new safety requirements for motor carriers and facilities that transfer hazmat to and from cargo tank motor vehicles.

Prompting action: NTSB Recommendations

Legal Deadline: None

Current Status: PHMSA is currently conducting a policy analysis before pursing further regulatory action.

Associated NTSB Recommendations: I-02-01, I-02-02 and H-12-3

D. Rail Petitions and Recommendations to Improve the Safety of Railroad Tank Car Transportation

Docket Number: PHMSA-2012-0082

RIN: 2137-AE91

Stage: Advanced Notice of Proposed Rulemaking (ANPRM)

Abstract: This rule responds to petitions for rulemaking and an NTSB recommendation that are associated with the petitions. These amendments would identify elements of non-conformity that do not require a movement approval from the FRA; correct an unsafe condition associated with pressure relief valve on rail cars transporting carbon dioxide, refrigerated liquid; revise outdated regulations applicable to the repair and maintenance of DOT Specification 110, 106, and ICC 27 tank car tanks; except rupture discs from removal if the inspection itself damages, changes, or alters the intended operation of the device; and enhance the standards for DOT Specification 111 tank cars used to transport Packing Group I and II hazmat.

Prompting action: Petition for Rulemakings, NTSB recommendation

Legal Deadline: None

Current Status: PHMSA anticipates publishing this ANPRM in September 2013.
Associated NTSB Recommendations: R-07-4, R-12-5, R-12-6, and R-12-7

E. International Air Cargo Standards Harmonization

Docket Number: PHMSA-2012-0027

RIN: 2137-AE87

Stage: Final Rule (Completed)

Abstract: This rulemaking adopted amendments to HMR to incorporate most recent changes to international standards including authorization to use the 2013-14 International Civil Aviation Organization Technical Instructions (ICAO TI); therefore, this rulemaking would permit the shipment of lithium batteries prepared in accordance with the 2013-14 ICAO TI.

Prompting action: International Harmonization

Legal Deadline: None

Current Status: This rulemaking was published on January 7, 2013.

Associated NTSB Recommendations: A-07-108 and A-07-109

Outreach:

PHMSA's outreach efforts for improving the safe transportation of hazmat address four recommendations dealing with: (1) lithium batteries safety; (2) cargo tank rollovers; (3) rail tank car unloading and (4) cargo tank hose assemblies. The summary below provides the status as of March 2013 for these outreach initiatives:

A. Lithium Battery Safety Outreach

Action: PHMSA is continuing its ongoing focus to educate the public on the safe use and handling of batteries and battery-powered devices through the SafeTravel Website. PHMSA plans on continuing this and other outreach efforts and coordination with FAA.

Associated NTSB Recommendations: A-08-1 and A-08-2

B. Safety Advisory Guidance: Heating Rail Tank Cars to Prepare Hazardous Materials for Unloading or Trans-loading

Action: PHMSA developed and published on July 12, 2013, a safety Advisory guidance (Safety Advisory Guidance: Heating Rail Tank Cars to Prepare Hazardous Materials for Unloading or Transloading , Notice No. 13-6) that provided safety precautions and recommended guidance for persons responsible for unloading or trans-loading hazmat from rail tank cars, specifically those persons heating a rail tank car to prepare its hazmat contents for unloading or trans-loading. PHMSA issued this notice in coordination with the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA), and in consultation with the FRA.

Associated NTSB Recommendations: R-04-10

C. Safety Advisory Guidance: DOT Specification Cargo Tank Motor Vehicle Cargo Hose Assembly Testing and Recordkeeping Requirements

Action: PHMSA is revising a previously issued safety notice that provides clarifying guidance to motor carriers and registered inspectors on the testing and recordkeeping requirements for a cargo hose assembly that is part of a DOT specification cargo tank in liquefied compressed gas service. This notice is offered in order to help ensure that these cargo hose assemblies are annually tested for leaks on an annual basis. PHMSA anticipates publication in early 2014.

Associated NTSB Recommendations: H-12-6

Research:

PHMSA's research initiatives for improving the safe transportation of hazmat address eight recommendations dealing with: (1) nurse tanks; (2) rail tank car design; (3) electronic shipping data; (4) cargo tank rollovers and (5) railcar bottom outlet valves. The summary below provides the status as of March 2013 for these research projects:

A. Nurse Tank Study

Action: PHMSA established a joint effort with FMCSA that will examine various aspects of non-destructive testing on nurse tanks. FMCSA contracted with academic institutions to research nurse tank safety. The research was completed in July 2013 and a briefing of the findings is scheduled for August 2013.

Associated NTSB Recommendations: H-04-23

B. Rail Tank Car Design Study

Action: FRA, with assistance from PHMSA, is conducting a research project on rail tank car design with DOT's Volpe Center and a manufacturer of the rail tank car. Based on the results of the project, PHMSA, FRA, and the tank car manufacturer will identify and evaluate design modifications that will prevent such a failure from reoccurring.

Associated NTSB Recommendations: R-12-7

C. HM-ACCESS Pilot Program

Action: MAP-21 included a requirement for DOT to conduct pilot projects to evaluate the feasibility and effectiveness of using paperless hazard communications systems. DOT will submit a final report to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives' Committee on Transportation and Infrastructure containing the results of the pilot projects within 2 years of the MAP-21's enactment.

Associated NTSB Recommendations: R-07-4

D. Cargo Tank Rollover – Special Study

Action: PHMSA is conducting a special study on PHMSA incident data related to cargo tank motor vehicles. This study is designed to improve the quality of incident data related to cargo tank rollovers that can be used to respond to open NTSB recommendations and determine if rulemaking is needed to develop options to current specification requirements.

Associated NTSB Recommendations: H-92-1, H-11-4, H-11-5 and H-11-6

E. Rail Task Force

Action: PHMSA and FRA are represented on an AAR task force charged with developing action items to prevent loss of lading from a bottom outlet valve in both accident and non-accident conditions.

Associated NTSB Recommendations: R-12-6

Internal policy review:

PHMSA has evaluated its internal procedures in an effort to improve the safe transportation of hazmat and address four recommendations dealing with: (1) lithium batteries incident investigation SOP; (2) mobile acetylene standard incorporation; and (3) retrospective regulatory review of the rail requirements. The summary below provides the status as of March 2013 for these collaborations:

A. Lithium Battery Incident Investigation SOP

Action: PHMSA formalized its special investigation process for lithium battery incidents by detailing this procedure into a written SOP. This special investigation process for lithium battery incidents was designed to obtain specific information regarding the material being shipped; the condition of the package or article involved in an incident; and a determination of whether to retain a failed battery item to conduct further analysis. This information was sent to the NTSB on June 26, 2013.

Associated NTSB Recommendations: A-07-107

B. Mobile Acetylene Standard Incorporation

Action: PHMSA is considering the incorporation of an industry recognized standard which addresses the risks associated with mobile acetylene trailers under accident conditions and during unloading operations.

Current Status: Currently in consideration for inclusion in a future rulemaking.

Associated NTSB Recommendations: H-09-01 and H-09-02

C. Rail Regulatory Review

Action: The FRA, in coordination with PHMSA, are conducting a retrospective regulatory review of Part 174 of the HMR, including potential amendments to section 174.85, "Position in Train of Placarded Cars Transporting Hazardous Materials," the car buffer standard associated with unit trains. The initial review was completed in the second quarter of 2013. In addition, in August 2013, PHMSA and FRA conducted a public meeting to gather input from the regulated community on this issue. PHMSA, in coordination with the FRA is evaluating the need to publish an NPRM proposing any changes needed to Part 174.

Associated NTSB Recommendations: R-08-13

VII. Recommendations for Appropriate Hazardous Materials Program Legislation

PHMSA suggests the following recommendations for appropriate re-authorization legislation.

Grants

PHMSA has several suggestions on how its Grants program can better maximize internal resources and processes related to grant funding and the registration program. Specifically, PHMSA recognizes the need to:

(1) Broaden allowable uses of grant funds to develop, improve, and carry out emergency plans; to decide on the need for a regional hazmat emergency response team; and to train public sector employees to respond to accidents and incidents involving hazmat.

(2) Ensure greater accountability of grantees. The agency proposes that:

- Grant applicants certify that State or Indian tribe certifies expenditure levels and that the training provided under the grant consists of acceptable course materials, and
- States certify that it complies with emergency planning and community right-to-know requirements

(3) Expand the registration requirements to a person who performs, or is responsible for performing a regulated function and is also subject to the hazmat training requirements.

(1) Develop a clear definition of what constitutes an "unexpended balance." This will remove the current ambiguity of the Federal Hazardous Materials Transportation Law (49 U.S.C 5101 et seq.) that refers to the unexpended balance in the grants account, which can be found at Section 5108 (g)(2)(B). This language directs PHMSA to adjust the amount being collected to reflect any unexpended balance in the HMEP fund. By establishing a threshold amount that will constitute an unexpended balance, PHMSA can better monitor this account and take appropriate action as needed. In addition to developing a clear definition of "unexpended balance," PHMSA believes that expanded authority to publish registration fees, rather than establish them through rulemaking, would save time and resources generally required for rulemakings.

(2) Institute an electronic system to manage both sides of the grants program.

(3) Broaden allowable uses of grant funds. PHMSA needs greater accountability on behalf of grantees. The agency proposes that:

- Local jurisdictions—e.g., cities, municipalities, townships, counties, and parishes—in addition to local emergency planning committees (LEPCs), are eligible for subgrants, and
- Subgrantees are required to have an accounting system that is auditable.

(4) Increase the grant performance period from one year to multi-year use.

Special Permits & Approvals

PHMSA recommends:

(1) Providing the Secretary the flexibility to grant appropriate regulatory relief through a special permit without a filed application, to address challenges related to emergencies or natural disasters. The ability to forego a special permits application would allow for PHMSA and
State and Federal authorities the ability to respond to these situations as quickly, appropriately, and safely as possible.

(2) Expanding the authority under the HM-74 program to require all international companies requesting an approval or special permit to finance any agency costs associated with inspections. To ensure the safe manufacturing of U.S. DOT cylinders, the HM-74 program currently requires that all cylinder manufacturers wishing to manufacture, inspect, or service U.S. DOT cylinders must be approved to do so under the HM-74 Inspection Program. Section 107.807 of 49 CFR requires that the cost of these inspections be covered by the applicants.

(3) The collection of fees from companies and individuals involved in the transport of hazmat seeking special permits or approvals under the HMR. The fees will relieve PHMSA's costs associated with the special permit and approval processes. Additional information about this proposal can be found in Section 1 of the Administrative Provisions of the 2014 budget, which is available at:
http://www.dot.gov/sites/dot.dev/files/docs/PHMSA_FY2014_Budget_Estimates.pdf

Regulatory Applicability

Add a general duty requirement for the safe transportation of a hazardous material to require a person to take all reasonable measures and precautions to properly classify, describe, package, mark and label, and ensure proper condition for transportation of a hazardous material, as well as comply with Federal hazmat law and regulations.

As PHMSA considers changes to increase the effectiveness of the hazmat program, it will seek opportunities through reauthorization to **reduce regulatory burdens** by focusing on enhancing the capability for risk-based decisions that maximize safety and efficiency of transportation systems. The agency looks to the upcoming reauthorization cycle to improve **system resilience, safety performance, and regulatory compliance**. Key

initiatives include: 1) developing Federal procedures to ensure the movement of essential hazmat to areas affected by National emergencies; 2) enhancing system performance through a risk management framework capable of predicting, detecting, assessing, and controlling hazmat transportation risks; 3) developing hazmat applications and electronic resources to foster compliance with the regulations among the regulated community and promote the exchange of information during emergency response; 4) establishing a resilient paperless hazard communications architecture that promotes better exchange of shipment data between the regulated community and emergency responders; and 5) ensuring public safety by allowing grant expenditures to purchase devices, software, training, and support to equip emergency response personnel with the tools and knowledge to effectively and efficiently respond to hazmat transportation incidents in the 21st Century.

To improve PHMSA's Enforcement program, PHMSA recommends the following re-authorization legislation:

(1) Authority under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 and the Superfund Amendments and reauthorization Act of 1986 (SARA) to allow OHMS to direct the immediate removal of hazmat abandoned in commerce or released into the environment.

(2) Authority to establish a hazmat enforcement training center to consolidate the development and preparation of federal personnel providing oversight in the safe movement of hazmat.

(3) Increase the maximum civil penalties amounts for violations of the HMR from $75,000 to $250,000 or for a violation that results in death, serious illness, or severe injury to any person or substantial destruction of property, from $175,000 to $500,000.

(4) Authority for the Secretary to order operation controls, restrictions and prohibitions if upon investigation, testing, or research, the Secretary determines that an unsafe condition or practice, or a combination of unsafe conditions and practices, or activity existing within a regulated entity or industry, related to the transportation of hazardous materials in commerce, causes an emergency situation involving a threat to life, personal injury, or harm to property or the environment.

Appendix A: Report on Regulation of Methamphetamine Byproducts in Transportation

This section satisfies requirements under 49 U.S.C. S 5103, to provide the Committee on Transportation and Infrastructure of the House of Representatives, and the Senate Committee on Commerce, Science, and Transportation, information concerning the designation of all by-

products of the methamphetamine-production process as hazmat for purposes of 49 U.S.C. Chapter 51.

On March 9, 2006, the President signed into law the USA PATRIOT Improvement and Reauthorization Act of 2005, Public Law No. 109-177, 120 Stat. 192 (2006) (USA PATRIOT Act). Public Law No. 109-177 extends and modifies provisions in the USA PATRIOT ACT and is divided into seven titles.

Title VII, the "Combat Methamphetamine Epidemic Act of 2005," sets forth provisions relating to: (1) the domestic and international regulation of precursor chemicals; (2) enhanced criminal penalties for methamphetamine production and trafficking; (3) enhanced environmental regulation of methamphetamine byproducts; and (4) various additional programs and activities.

DOT designates materials that pose an unreasonable risk to health and safety or property when transported in commerce as hazmat for purposes of the Federal hazmat law and the HMR. These include materials that are specifically listed by name in the Hazardous Materials Table (49 CFR 172.101), materials that meet hazard classification criteria set forth in the HMR, such as for flammability, toxicity and corrosivity, and materials that are hazardous wastes under regulations promulgated by the EPA. Based on the information available to us, DOT believes all hazardous by-products of methamphetamine production are regulated as hazmat under the HMR.

TABLE A-1. Cyanides

Substance	Form	ID Number	Hazard Class	Exposure
Sodium Cyanide	Solid	UN1689	6.1	Skin, Eyes, Ingestion
Potassium Cyanide	Solid	UN1680	6.1	Skin, Eyes, Ingestion
Benzyl Cyanide	Liquid	UN2810	6.1	Skin, Eyes, Inhalation, Ingestion
Hydrogen Cyanide	Gas, Liquid	UN1051	6.1	Inhalation

*Refer to 40 CFR 261.33 for listings, as well as 40 CFR 261.23 (characteristic of reactivity) for cyanide–bearing waste.

Health Effects:

If solid cyanide salts come in contact with acid, hydrogen cyanide gas will be released.

Inhalation of hydrogen cyanide may result in rapid progression of symptoms to respiratory failure, coma, and death. Ingestion of the salts may also lead to these symptoms, but hydrogen cyanide gas poses the greater exposure risk.

TABLE A-2. Irritants and Corrosives

Substance	Form	ID Number	Hazard Class	Exposure
Acetic Acid[a]	Liquid	UN2789	8	Skin, Eyes, Inhalation
Acetyl Chloride	Liquid	UN1717	3	Skin, Eyes, Inhalation
Ammonia (anhydrous)	Gas	UN1005	2.2	Skin, Eyes, Inhalation
Ammonium Hydroxide	Liquid	UN3318	2.2	Skin, Eyes, Inhalation
Benzyl Chloride[a]	Liquid	UN1738	6.1	Skin, Eyes, Inhalation
Dimethylsulfate	Liquid	UN1595	6.1	Skin, Eyes, Inhalation
Formaldehyde	Gas, Liquid	UN1198	3	Skin, Eyes, Inhalation
Formic Acid	Liquid	UN1779	8	Skin, Eyes, Inhalation
Hydrogen Chloride/Hydrochloric Acid	Gas, Liquid	UN1789	8	Skin, Eyes, Inhalation
Hydrobromic Acid	Liquid	UN1788	8	Skin, Eyes, Inhalation
Hydriodic Acid	Liquid	UN1787	8	Skin, Eyes, Inhalation
Hydroxylamine[a,b]	Liquid, Solid	UN2811	6.1	Skin, Eyes, Inhalation
Methylamine[a]	Gas, Liquid, Solid	UN1235	3	Skin, Eyes, Inhalation

TABLE A-2. Irritants and Corrosives

Substance	Form	ID Number	Hazard Class	Exposure
Methylene Chloride[a] (dichloromethane, methylene dichloride)	Liquid	UN1593	6.1	Skin, Eyes, Inhalation
Methyl Methacrylate	Liquid	UN1247	3	Skin, Eyes, Inhalation
Nitroethane[a,b]	Liquid	UN2842	3	Skin, Eyes, Inhalation
Oxalylchloride[b]	Liquid	UN2922	8	Skin, Eyes, Inhalation
Perchloric Acid[e]	Liquid	UN1873	5.1	Skin, Eyes, Inhalation
Phenylmagnesium Bromide[a,b]	Liquid	UN3399	4.3	Skin, Eyes, Inhalation
Phosphine[a]	Gas	UN2199	2.3	Eyes, Inhalation
Phosphorous Oxychloride	Solid	UN1810	6.1	Skin, Eyes, Inhalation
Phosphorous Pentoxide	Solid	UN1807	8	Skin, Eyes
Sodium Amide (Sodamide)[b]	Solid	UN3131	4.3	Skin, Eyes, Inhalation
Sodium Metal[a,b]	Solid	UN1428	4.3	Skin, Eyes
Sodium Hydroxide	Liquid, Solid	UN1823	8	Skin, Eyes
Sulfur Trioxide	Liquid, Solid	UN1829	8	Skin, Eyes, Inhalation
Sulfuric Acid[f]	Liquid	UN1831	8	Skin, Eyes, Inhalation
Tetrahydrofuran[a,b]	Liquid	UN2056	3	Skin, Eyes, Inhalation
Thionyl Chloride	Liquid	UN1836	8	Skin, Eyes, Inhalation

* Refer to 40 CFR 261.33 for a detailed listing.

a Flammable	c Flashpoint <141 degrees F	e >50% but □ 72% strength
b Explosive	d Uninhibited	f Unspent

Health Effects:

Vapors of volatile corrosives may cause eye irritation, lacrimation, conjunctivitis, and corneal injury. Inhalation may cause irritation of mucous membranes of the nose and throat, and lung irritation resulting in cough, chest pain, and shortness of breath. Pulmonary edema, coughing up of blood, and chronic lung disease may occur in severe cases. High concentrations of vapor may cause skin irritation. Additional symptoms of vapor inhalation may include headache, nausea, dizziness, and anxiety. Phosphine may detonate, and has the odor of decaying fish. Direct contact with corrosives may result in severe eye or skin burns. Methylmethacrylate skin exposure may result in contact dermatitis and sensitization. Formaldehyde is a suspected human carcinogen. Formic acid ingestion or inhalation may result in kidney or liver damage. Sodium metal reacts violently with water. Tetrahydrofuran and Perchloric Acid can form explosive crystals.

TABLE A-3. Solvents

Substance	Form	ID Number	Hazard Class	Exposure
Acetone[a]	Liquid	UN1090	3	Skin, Eyes, Inhalation
Acetonitrile[a]	Liquid	UN1648	3	Skin, Eyes, Inhalation
Aniline	Liquid	UN1547	6.1	Skin, Eyes, Inhalation
Benzene[a]	Liquid	UN1114	3	Skin, Eyes, Inhalation
Benzylchloride[a]	Liquid	UN1738	6.1	Skin, Eyes, Inhalation
Carbon Tetrachloride	Liquid	UN1846	6.1	Skin, Eyes, Inhalation
Chloroform	Liquid	UN1888	6.1	Skin, Eyes, Inhalation
Cyclohexanone[a,d]	Liquid	UN1915	3	Skin, Eyes, Inhalation

TABLE A-3. Solvents

Substance	Form	ID Number	Hazard Class	Exposure
Dioxane[a]	Liquid	UN1165	3	Skin, Eyes, Inhalation
Ethanol[a]	Liquid	UN1170	3	Skin, Eyes, Inhalation
Ethyl Acetate[a]	Liquid	UN1173	3	Skin, Eyes, Inhalation
Ethyl Ether[b,c]	Liquid	UN1155	3	Skin, Eyes, Inhalation
Freon 11 (trichloromonofluoromethane)	Liquid	UN3082	9	Skin, Eyes, Inhalation
Hexane[a]	Liquid	UN1208	3	Skin, Eyes, Inhalation
Isopropanol[a]	Liquid	UN1219	3	Skin, Eyes, Inhalation
Methanol[a]	Liquid	UN1230	3	Skin, Eyes, Inhalation
Methylene Chloride (dichloromethane, methylene dichloride)	Liquid	UN1593	6.1	Skin, Eyes, Inhalation
Petroleum Ether[a]	Liquid	UN1993	3	Skin, Eyes, Inhalation
Pyridine[a]	Liquid	UN1282	3	Skin, Eyes, Inhalation
Toluene[a]	Liquid	UN1294	3	Skin, Eyes, Inhalation
o-Toluidine[a,b]	Liquid	UN1708	6.1	Skin, Eyes, Inhalation

* Refer to 40 CFR 261.31 and 40 CFR 261.33 for detailed listings.

a Flammable
b Explosive
c Ethers may form explosive peroxides
d □50% peroxide

Health Effects:
Inhalation of vapors at low concentrations may result in mild eye, nose, and throat irritation. Symptoms of intoxication (drowsiness and loss of coordination) or loss of consciousness may occur at high concentrations. Liver and kidney impairment may also occur at high doses, or with prolonged exposure. Benzene is a known human carcinogen. Chloroform, carbon tetrachloride, dioxane, o-toluidine, and methylene chloride are probable human carcinogens. Spilling of Freon on the skin may result in freezing injury. Ingestion of small amounts of methanol may lead to permanent damage to vision. Aniline can be readily absorbed through the skin and may cause mental confusion and decreased blood hemoglobin by all exposure routes. O-Toluidine is highly toxic when absorbed through the skin, inhaled as a vapor, or ingested, causing possible kidney injury.

TABLE A-4. Metals/Salts

Substance	Form	ID Number	Hazard Class	Exposure
Aluminum Chloride	Solid	UN1726	8	Skin, Eyes
Magnesium[a,d]	Solid	UN1418	4.3	Skin, Eyes
Palladium	Solid	UN3089	4.1	Skin, Eyes
Red Phosphorus[b]	Solid	UN1338	4.1	Skin, Eyes
Iodine	Solid	UN1759	8	Skin, Eyes
Mercuric Chloride	Solid	UN1624	6.1	Skin, Eyes
Lead Acetate	Solid	UN1616	6.1	Skin, Eyes
Lithium Aluminum Hydride[a,b]	Solid	UN1410	4.3	Skin, Eyes
Lithium Hydroxide	Solid	UN2680	8	Skin, Eyes
Potassium Hydroxide	Solid	UN1813	8	Skin, Eyes
Raney Nickel[a,b]	Solid	UN3178	4.1	Skin, Eyes
Sodium Hydroxide	Solid	UN1427	4.3	Skin, Eyes
Sodium Metal[a,b]	Solid in kerosene	UN1428	4.3	Skin, Eyes
Potassium Metal[a,b]	Solid in kerosene	UN2257	4.3	Skin, Eyes

TABLE A-4. Metals/Salts

Substance	Form	ID Number	Hazard Class	Exposure
Thorium Salts[c]	Solid	UN2976	Entry removed effective 10/1/04	Skin, Eyes

*Other than lead acetate, none of these possess EPA Waste Numbers under 40 CFR 261.33; however, chemicals may exhibit one or more characteristics of hazardous waste. Refer to 40 CFR 261.21-.24 for characteristics (i.e., ignitability, corrosivity, reactivity, and/or toxicity).
a Flammable c Radioactive
b Explosive d Magnesium metal (powder, pellets, turnings on ribbon)

Health Effects:

Most metals and salts are stable solids with minimal potential for exposure unless ingested or the metal is present in the air as dust or fumes, if heated. Sodium and potassium metal, and sodium and lithium hydroxides are extremely corrosive in the presence of moisture. Lithium aluminum hydride, and sodium, magnesium, and potassium metals are extremely reactive with air and water and can ignite or explode. (Hydrogen gas may be liberated, which is explosive.) Thorium is an alpha-emitting radioactive material. Flu-like symptoms and possible lung damage may result from breathing metal fumes. Acute overexposure to lead or mercury salts may lead to nausea and vomiting, and long-term exposure can affect the central nervous system. Hematologic and neurologic complications and kidney damage may occur with chronic exposure to mercury salts. Red phosphorous, if contaminated with white phosphorous, may explode on contact, or with friction or heat, but is relatively nontoxic by ingestion.

TABLE A-5. Miscellaneous

Substance	Form	ID Number	Hazard Class	Exposure	Health Effects
Cyclohexanone	Liquid	UN1915	3	Skin	Irritant
Fentanyl	Solid	UN2811	6.1	Inhalation, Skin, Eyes	Narcotic drug product causing respiratory failure at extremely low doses (i.e., equivalent to a few grains of dust)

TABLE A-5. Miscellaneous

Substance	Form	ID Number	Hazard Class	Exposure	Health Effects
Hydrogen	Gas	UN1954	2.1	Inhalation	Flammable, Explosive
Lysergic Acid Diethylamide	Powder	UN2811	6.1	Ingestion, Inhalation	Hallucination at extremely low doses
MPTP, MPPP[a]	Solids	UN2811	6.1	Inhalation, Skin	By-product or intermediates of alphaprodine laboratories. (*Extremely low doses may cause irreversible Parkinson's disease.*)
Methylfentanyl	Solid	UN2811	6.1	Inhalation, Skin, Eyes	See "Fentanyl"
Phenylacetic Acid	Solid	Not DOT regulated	N/A	Skin, Eyes	Irritant
Phenyl-2-Propanone (phenylacetone)	Liquid	No Data	N/A	Skin, Inhalation	Irritant; few toxicity data available
Piperidine	Liquid	UN2401	8	Skin, Inhalation	Irritant; few toxicity data available

[a] MPTP (1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine); MPPP (1-methyl-4-phenyl-4-propionoxypiperidine)

Appendix B: Regulations

49 U.S.C. § 5121 (h)(2) – a list and summary of applicable Government regulations, criteria, orders, and exemptions

Rulemaking and Notice Actions, 2011-2012

Docket	RIN	Citation	Rulemaking and Notice Actions	Action	Date
Notice 97-11	N/A	62 FR 52876	Safety Advisory: Unauthorized Marking of Compressed Gas Cylinders	Notice	1/12/2011
Notice 98-7	N/A	Notice 98-7	Safety Advisory: Unauthorized Marking of Compressed Gas Cylinders	Notice	1/12/2011
Notice 99-3	N/A	64 FR 15394	Safety Advisory: Unauthorized Marking of Compressed Gas Cylinders	Notice	1/12/2011
HM-218	AD16	64 FR 53166	Hazardous Materials; Miscellaneous Amendments	NPRM	7/20/2011
Notice 99-14	N/A	64 FR 69492	Safety Advisory: Unauthorized Marking of Compressed Gas Cylinders	Notice	1/12/2011
Notice 99-15	N/A	64 FR 69590	Safety Advisory: Unauthorized Marking of Compressed Gas Cylinders	Notice	1/12/2011
HM-218	AD16	65 FR 50250	Hazardous Materials; Miscellaneous Amendments	Final Rule	7/20/2011
Notice 01-09	N/A	66 FR 46679	Safety Advisory: Unauthorized Marking of Compressed Gas Cylinders	Notice	1/12/2011
Notice 02-01	N/A	67 FR 9778	Safety Advisory: Unauthorized Marking of Compressed Gas Cylinders	Notice	1/12/2011
Notice 02-2	N/A	67 FR 10254	Safety Advisory: Unauthorized Marking of Compressed Gas Cylinders	Notice	1/12/2011
Notice 02-06	N/A	67 FR 45183	Safety Advisory: Unauthorized Marking of Compressed Gas Cylinders	Notice	1/12/2011
Notice 02-07	N/A	67 FR 45582	Safety Advisory: Unauthorized Marking of Compressed Gas Cylinders	Notice	1/12/2011
HM-218B	AD73	68 FR 2734	Hazardous Materials; Miscellaneous Amendments	NPRM	7/20/2011
Notice 03–5	N/A	68 FR 37893	Safety Advisory: Unauthorized Marking of Compressed Gas Cylinders	Notice	1/12/2011
HM-218B	AD73	68 FR 28562	Hazardous Materials; Miscellaneous Amendments	Final Rule	7/20/2011
Notice 04-05	N/A	69 FR 53497	Safety Advisory: Unauthorized Marking of Compressed Gas Cylinders	Notice	1/12/2011

Docket	RIN	Citation	Rulemaking and Notice Actions	Action	Date
Notice 04-05	N/A	69 FR 68212	Safety Advisory: Unauthorized Marking for Compressed Gas Cylinders	Notice	1/12/2011
Notice 04-09	N/A	70 FR 3976	Safety Advisory: Unauthorized Marking of Compressed Gas Cylinders	Notice	1/12/2011
HM-218C	AD87	70 FR 34066	Hazardous Materials; Miscellaneous Amendments	Final Rule	7/20/2011
Notice 04	N/A	70 FR 54444	Safety Advisory: Unauthorized Marking of Compressed Gas Cylinders	Notice	1/12/2011
HM-218D	[illegible]	70 FR 55597	Hazardous Materials; Miscellaneous Amendments	NPRM	7/20/2011
Notice 06-6	N/A	71 FR 77437	Safety Advisory: Unauthorized Marking of Compressed Gas Cylinders	Notice	1/12/2011
HM-233B	AE73	76 FR 34398	Hazardous Materials; Transportation; Revisions of Special Permits Procedures	NPRM	7/26/2011
HM-238	AE06	75 FR 43906	Hazardous Materials: Requirements for the Storage of Explosives During Transportation	NPRM	6/7/2011
HM-256	AE65	76 FR 5497	Hazardous Materials; Limiting the Use of Electronic Devices by Highway	NPRM	2/28/2011
HM-218F	AE46	75 FR 60017	Hazardous Materials; Miscellaneous Amendments	NPRM	7/20/2011
HM-233B	AE73	76 FR 454	Hazardous Materials; Revisions of Special Permits Procedures	Final Rule	1/5/2011
Notice 10-3	N/A	75 FR 51520	Agency Information Collection Activities; Proposals, Submissions, and Approvals	Notice	9/14/2011
Notice 10-8	N/A	75 FR 66185	Agency Information Collection Activities; Proposals, Submissions, and Approvals	Notice	9/14/2011
HM-213D	AE52	76 FR 4847	Hazardous Materials; Safety Requirements for External Product Piping on Cargo Tanks Transporting Flammable Liquids (Wetlines)	NPRM	3/17/2011
HM-255	AE69	76 FR 5120	Railroad Rail Grade Crossings Safe Clearance	NPRM	3/30/2011
HM-245	AE56	76 FR 5483	Hazardous Materials: Incorporation of Certain Cargo Tank Special Permits into Regulations	Final Rule	2/1/2011
HM-256	AE65	76 FR 10774	Hazardous Materials; Limiting the Use of Electronic Devices by Highway	Final Rule	2/28/2011

Docket	RIN	Citation	Rulemaking and Notice Actions	Action	Date
HM-241	AE58	76 FR 11191	Hazardous Materials; Adoption of ASME Code Section XII and the National Board Inspection CodeHM-241	ANPRM	3/1/2011
PHMSA-2005-22356	AE93	76 FR 11570	Hazardous Materials; Enhanced Enforcement Authority Procedures	Final Rule	3/2/2011
HM-247	AE37	76 FR 13313;	Hazardous Materials; Cargo Tank Motor Vehicle Loading and Unloading Operations	NPRM	5/11/2011
HM-218D	AE52	76 FR 4643	Hazardous Materials; Safety Requirements for External Product Piping on Cargo Tanks Transporting Flammable Liquids (Petroleum)	Other	3/17/2011
HM-255	AE69	76 FR 17615	Highway-Rail Grade Crossing; Safe Clearance	Other	3/30/2011
Notice III-2	N/A	76 FR 17743	Agency Information Collection Activities; Proposals, Submissions, and Approvals	Notice	3/31/2011
PHMSA-2006-26275	N/A	76 FR 19182	Petition for Rulemaking-Classification of Polyurethane Foam and Certain Finished Products Containing Polyurethane Foam as Hazardous Materials	Other	4/6/2011
Notice III-1	N/A	76 FR 17751	Hazardous Materials; Request for U.S. Competent Authority Approval of International Atomic Energy Agency Special Arrangement CDN/5255/X-96 (Rev. 0) Concerning Transport of Steam Radioactively Contaminated Steam Generators From Bruce Power Inverton, Ontario to the Studsvik Facility in Studsvik, Sweden via the Great Lakes	Notice	3/30/2011
HM-256A	AE65	76 FR 23923	Hazardous Materials: Restricting the Use of Cellular Phones by Drivers of Commercial Motor Vehicles in Intrastate Commerce	NPRM	4/29/2011
HM-247A	AE87	76 FR 27600	Hazardous Materials; Cargo Tank Motor Vehicle Loading and Unloading Operations	Other	5/11/2011
2011-13183	N/A	76 FR 30551	Specifications for Packagings	Corrections	5/26/2011
HM-233	AE06	76 FR 32367	Hazardous Materials; Requirements for the Storage of Explosives During Transportation	Final Rule	6/7/2011

Docket	RIN	Citation	Rulemaking and Notice Actions	Action	Date
Notice 11-4	N/A	76 FR 33023	Safety Advisory; Unauthorized Marking of Compressed Gas Cylinders	Notice	6/7/2011
HM-145O	AE74	76 FR 37288	Hazardous Materials; Revision to the List of Hazardous Substances and Reportable Quantities	Final Rule	6/27/2011
Notice 11-5	N/A	76 FR 37661	Notification of Anticipated Delay in Administrative Appeal Decisions	Notice	6/28/2011
Notice 10-9	N/A	76 FR 38053	Clarification of the Fireworks Approvals Policy	Other	6/29/2011
HM-218F	AE46	76 FR 43510	Hazardous Materials; Miscellaneous Amendments	Final Rule	7/20/2011
HM-233B	AE73	76 FR 44496	Hazardous Materials; Transportation; Revisions of Special Permits Procedures	Final Rule	7/26/2011
HM–250	AE38	76 FR 50332	Hazardous Materials; Compatibility With the Regulations of the International Atomic Energy Agency (RRR)	NPRM	8/12/2011
HM-216B	AE55	76 FR 51324	Hazardous Materials; Incorporating Rail Special Permits Into the Hazardous Materials Regulations	NPRM	8/11/2011
Notice 11–7	N/A	76 FR 53999	Safety Notice: Transportation of DOT Special Permit Packages in Commerce	Notice	8/30/2011
HM-244D	AE77	76 FR 56304	Hazardous Materials; Minor Editorial Corrections and Clarifications	Final Rule	9/13/2011
Notice 11-8	N/A	76 FR 55736	Safety Advisory: Unauthorized Marking of Compressed Gas Cylinders	Notice	1/12/2011
	N/A	76 FR 57008	Office of Secretary; Smoking of Electronic Cigarettes on Aircraft	NPRM	9/14/2011
Notice 11-6	N/A	76 FR 59769	Clarification on the Division 1.1 Fireworks Approvals Policy	Notice	2/21/2012
Notice 11-9	N/A	76 FR 56872	Agency Information Collection Activities; Proposals, Submissions, and Approvals	Notice	9/14/2011
PHMSA-2011-0294	N/A	76 FR 70220	New Jersey Regulations on Transportation of Regulated Medical Waste	Notice	11/10/2011
Notice 11-10	N/A	76 FR 71124	Safety Advisory: Unauthorized Marking of Compressed Gas Cylinders	Notice	1/12/2011
HM-256A	AE65	76 FR 75470	Hazardous Materials: Limiting the Use of Mobile Telephones by Highway	Final Rule	12/2/2011
Notice 11-14	N/A	76 FR 75950	Hazardous Materials; Emergency Restriction/Prohibition Order	Notice	12/5/2011

Docket	RIN	Citation	Rulemaking and Notice Actions	Action	Date
HM-218F	AE84	76 FR 81396	Hazardous Materials; Miscellaneous Amendments; Response to Appeals; Corrections	Final Rule	12/28/2011
HM-215K	AE76	76 FR 82166	Hazardous Materials; Harmonization with the United Nations Recommendations on the Transport of Dangerous Goods (Model Regulations), International Maritime Dangerous Goods Code, International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air	Final Rule	12/30/2011
Notice 11-13	N/A	49 CFR 173	Clarification and Further Guidance on the Fireworks Approvals Policy	Notice	1/5/2012
HM-215K	AE76	76 FR 83081	Hazardous Materials; Harmonization with the United Nations Recommendations on the Transport of Dangerous Goods (Model Regulations), International Maritime Dangerous Goods Code, International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air	Final Rule	1/19/2011
Notice 11-15	N/A	77 FR 1975	Safety Advisory: Unauthorized Marking of Compressed Gas Cylinders	Notice	1/12/2011
Notice 12-1	N/A	77 FR 4398	Safety Advisory Notice: Return of Radioactively Contaminated Pipe to Broken Turnaround Point Bed Bain and Beyond	Notice	1/27/2012
Notice 11-6	N/A	77 FR 9865	Clarification on the Division 1.1 Fireworks Approvals Policy	Notice	2/21/2012
HM-254	AE62	77 FR 17394	Hazardous Materials; Approval and Communication Requirements for the Safe Transportation of Air Bag Inflators, Air Bag Modules, and Seat Belt Pretensioners (RRR)	NPRM	3/26/2012
Notice 12-4	N/A	77 FR 17569	United States-Canada Regulatory Cooperation Council (RCC)—Transportation—Dangerous Goods Working Group	Notice	3/26/2012
HM-224F	AE44	77 FR 21794	Hazardous Materials; Reasons to Requirements for the Transportation of	NPRM	4/11/2012

Docket	RIN	Citation	Rulemaking and Notice Actions	Action	Date
[illegible]	[illegible]	[illegible]	Limited Batteries [illegible]	[illegible]	[illegible]
HM-231A	AE32	77 FR 22504	Hazardous Materials: Packages Intended for Transport by Aircraft	Final Rule	4/16/2012
HM-218G	AE78	77 FR 24883	Hazardous Materials: Miscellaneous Amendments (RRR)	NPRM	4/26/2012
HM-219	AE79	77 FR 30976	Hazardous Materials: Miscellaneous Petitions for Rulemaking (RRR)	NPRM	5/24/2012
HM-215K	AE76	77 FR 31274	Hazardous Materials: Harmonization with the United Nations Recommendations on the Transport of Dangerous Goods, Model Regulations, International Maritime Dangerous Goods Code, and the International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air (RRR)	NPRM	5/25/2012
HM-234	AE80	77 FR 31551	Hazardous Materials; Miscellaneous Amendments Pertaining to DOT Specification Cylinders (RRR)	ANPRM	5/29/2012
HM-242	AE52	77 FR 31810	Hazardous Materials: Regulations for Combustible Liquids	Other	5/30/2012
HM-216B	AE82	77 FR 37961	Hazardous Materials: Incorporating Rail Special Permits Into the Hazardous Materials Regulations	Final Rule	6/25/2012
PD-91(R)	N/A	77 FR 39667	Competent Authority Claims Concerning Design and Marking of DOT Specification 39 Compressed Gas Cylinders	Other	7/6/2012
Notice 12-5	N/A	77 FR 39798	Clarification Policy on Initial Fitness Review for Classification Approvals	Notice	7/5/2012
HM-263	AE81	77 FR 39662	Hazardous Materials: Reverse Logistics (RRR)	ANPRM	7/5/2012
HM-215L	AE87	77 FR 49167	Hazardous Materials: Harmonization with International Standards (RRR)	NPRM	8/15/2012
HM-257	AE70	77 FR 52686	Hazardous Materials: Revision to Reverse Logistics Regulations (RRR)	NPRM	8/30/2012
2012-24294	N/A	77 FR 60056	Shippers General Requirements for Shipments and Packagings	Final Rule	10/2/2012

Docket	RIN	Citation	Rulemaking and Notice Actions	Action	Date
HM-244F	AE90	77 FR 69935	Hazardous Materials: Minor Editorial Corrections and Clarifications (RRR)	Final Rule	11/5/2012
Notice 12-7	N/A	77 FR 64590	Safety Advisory: Unauthorized Marking of Compressed Gas Cylinders	Notice	10/22/2012
HM-233C	AE82	77 FR 61450	Hazardous Materials: Incorporation of Certain Special Permits and Competent Authorities into Regulations (RRR)	NPRM	10/22/2012
Notice 12-11	N/A	77 FR 69927	Safety Advisory Notice: Safety Advisory for Shippers and Carriers of Air Bags	Notice	11/21/2012
Notice 12-10	N/A	77 FR 69925	Assessment of Hazardous Materials Incident Data Collection, Analysis, Reporting, and Use	Notice	11/21/2012
Notice 12-12	N/A	77 FR 69926	Advisory Notice: Notice of Intent To Provide Compliance Date Extension for Air-Passenger Notification of Hazardous Material Restrictions	Notice	11/21/2012

Appendix C: Special Permits

49 U.S.C. § 5120 (h)(2) – a summary of the basis for each Special Permit

The following new special permits were issued during the preceding two-year period. As required by 49 CFR 107.105(d), all special permits are granted on one of the following bases:

- The special permit provides a level of safety at least equal to that required by regulation, or
- If a required safety level does not exist, issuing a special permit is consistent with the public interest.

Hazardous Materials Special Permits, 2011-2012[15]

Permit Number	Special Permit Summary
14839	To authorize the transportation in commerce of certain DOT Specification 3A and 3AA cylinders containing Division 2.2 gases that have been tested every 15 years instead of every 10 years.
14945	To authorize the transportation in commerce of certain Class 3 PG III and Class 9 hazmat across a public road within the Macon Quarry without shipping papers, marking, labeling or placarding.
14951	To authorize the manufacture, marking, sale, and use of a non-DOT specification fully wrapped fiber reinforced composite gas cylinder for the transportation of certain compressed gases.
14992	To authorize the transportation in commerce of Division 6.2 infectious and biological substance materials in alternative packaging (freezers).
14994	To authorize the transportation in commerce of certain 1-gallon plastic drums that are reused without meeting the minimum thickness requirement on corners and undercut areas.
15028	To authorize the transportation in commerce of certain DOT specification cargo tank motor vehicles that have been tested using alternative methods for the internal visual inspection.
15036	To authorize the manufacture, marking, sale and use of non-DOT specification tank cars for transportation in commerce of certain hazardous materials toxic by inhalation.
15088	To authorize the transportation in commerce of certain materials toxic by inhalation, Hazard Zone A and B, in alternative packaging by motor vehicle.
15096	To authorize the transportation in commerce of certain DOT 3A, 3AA, 3AX, 3AAX and 3T cylinders that have been retested every ten (10) years instead of every five (5) years by acoustic emission and ultrasonic examination (AE/UT) in place of the internal visual inspection and the hydrostatic retest required by §180.205.
15110	To authorize the manufacture, marking, sale and use of non-DOT specification cylinders (fire extinguishers) that are used as components on US Army tactical vehicles and commercial buses.
15126	To authorize the transportation of certain forbidden explosives and other hazmat by helicopter in remote areas of the U.S. only, without being subject to hazard communication requirements and quantity limitations.

[15] Approvals: https://hazmatonline.phmsa.dot.gov/ApprovalsSearch/search.aspx

Special Permits: http://phmsa.dot.gov/hazmat/regs/sp-a/special-permits/search

Permit Number	Special Permit Summary
15129	To authorize the transportation in commerce of certain Class 1 explosive materials that are forbidden for transportation by air, to be transported by cargo aircraft within and around the State of Alaska when other means of transportation are impracticable or not available.
15130	To authorize the transportation in commerce of gasoline in 55 gallon drums attached to or suspended from an aircraft by Part 133 Rotorcraft External Load Operations, in remote areas of the U.S.
15131	To authorize the manufacture, marking, sale, and use of DOT Specification 113A90W tank cars for the transportation in commerce of certain non-flammable cryogenic liquids. The tank car is excepted from the requirement to replace the rupture disc every year, rather they must be replaced every five years.
15132	To authorize the transportation in commerce of certain Division 2.1 and 2.2 gases in alternative packaging when transported by motor vehicle.
15136	To authorize the manufacture, marking, sale, and use of a non-DOT specification fully-wrapped carbon fiber composite cylinder with a seamless aluminum liner designed, manufactured, and tested in accordance with ISO 11119 part 2.
15141	To authorize the manufacture, marking, sale, and use of non-DOT specification metal containers containing Boron Trifluoride, classed as Division 2.3 for use in radiation detectors.
15143	To authorize the transportation in commerce of cylinders containing oxidizing gases without outer packaging capable of passing the Flame Penetration and Resistance Test and the Thermal Resistance Test when no other practical means of transportation exist.
15156	To authorize the manufacture, marking, sale, and use of a non-specification plastic pressure vessel for transportation of non-flammable compressed gases.
15161	To authorize the transportation in commerce of lead batteries from more than one shipper without voiding the exception in § 173.159(e).
15162	To authorize the transportation in commerce of certain explosives that are forbidden for transportation by cargo aircraft in alternative packaging when transported in Part 133 sling load operations.
15163	To authorize the transportation in commerce of cylinders containing oxidizing gases without outer packaging capable of passing the Flame Penetration and Resistance Test and the Thermal Resistance Test when no other practical means of transportation exist.
15164	To authorize the transportation in commerce of cylinders containing oxidizing gases without outer packaging capable of passing the Flame Penetration and Resistance Test and the Thermal Resistance Test when no other practical means of transportation exist.
15166	To authorize the transportation in commerce of gasoline in non-DOT specification containers when transported in sling load operations.

Permit Number	Special Permit Summary
15181	To authorize the transportation in commerce of certain hazmat by external load on helicopters in remote areas of the U.S. without being subject to hazard communication requirements and quantity limitations where no other means of transportation is available.
15182	To authorize the transportation in commerce of an Oxidizing solid, water-reactive as an excepted quantity.
15187	To authorize the transportation in commerce of certain hazmat by cargo aircraft in remote areas of the U.S. only, without being subject to certain hazard communication requirements and quantity limitations.
15191	To authorize the transportation in commerce of UN1H1 drums as single package for certain materials toxic by inhalation transported by motor vehicle.
15198	To authorize the transportation in commerce of titanium tetrachloride between locations of the same facility in non-DOT specification packaging and without hazard communication.
15199	To authorize the transportation in commerce of up to 20,000 pounds of Division 1.1E explosives to Poland to support the foreign military sales program.
15206	To allow the transportation in commerce of electric double layer capacitors with an energy storable capacity of not more than [illegible]
15209	To authorize the transportation in commerce of steam generator lower assemblies that exceed the surface contamination limits for surface contaminated objects.
15226	To authorize the transportation in commerce of certain Class 1 explosive materials that are forbidden for transportation by air, to be transported by cargo aircraft within the State of Alaska when other means of transportation are impracticable or not available.
15227	To authorize the carriage of radioactive materials aboard cargo aircraft only, under any combination of the following conditions: when the combined transport index exceeds the authorized limit of 200 per aircraft (as specified in § 175.700(b)(2)(ii)), or the separation distance criteria of § 175.702(b) cannot be met.
15228	Authorizes the carriage of radioactive materials aboard cargo aircraft only when the combined transport index exceeds 50.0 and/or the separation criteria cannot be met.
15229	To authorize the transportation in commerce of certain DOT 106 tank cars containing chlorine that are not fitted with a pressure relief device.
15233	To authorize the transportation in commerce of certain non-DOT specification and DOT-4DA and 4DS specification cylinders, used as fire suppression systems in aircraft to be shipped, as fire extinguishers.
15234	To authorize the transportation in commerce of certain non-DOT specification and DOT-4DA and 4DS specification cylinders, used as fire suppression systems in aircraft to be shipped, as fire extinguishers.
15235	To authorize the manufacture, marking, sale and use of UN1H2 fiberboard intermediate bulk containers for use as the outer packaging for certain Class 3 waste paints and waste-paint-related material.

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15237	To authorize the transportation in commerce of certain non-DOT specification and DOT-4DA and 4DS specification cylinders, used as fire suppression systems in aircraft to be shipped, as fire extinguishers.
15238	To authorize the transportation in commerce of certain hazmat which are forbidden or exceed the quantity limitations for transportation by cargo only aircraft.
15240	To authorize the transportation in commerce of certain flammable and combustible liquids in alternative packaging having a capacity of 119 gallons or more by air.
15241	This special permit authorizes the transportation in commerce of certain Class 1 explosive materials which are forbidden for transportation by air to be transported by cargo aircraft within the State of Alaska when other means of transportation are impracticable or not available.
15243	Authorizes the carriage of gasoline in non-DOT specification polyethylene containers overpacked in plywood boxes in small, passenger-carrying aircraft within the State of Alaska to meet the needs of a passenger.
15250	To authorize the transportation in commerce of certain explosives that are tested to a revision of the Department of Defense Ammunition and Explosive Hazard Classification Procedures (TB 700-2) that has not been incorporated by reference.
15251	Authorizes the carriage of radioactive materials aboard cargo aircraft only when the combined transport index exceeds 50.0 and/or the separation criteria cannot be met.
15255	Authorizes the carriage of radioactive materials aboard cargo aircraft only when the combined transport index exceeds 50.0 and/or the separation criteria cannot be met.
15257	To authorize the transportation of perchloric acid, a short distance from one facility to another, in intermediate bulk containers not otherwise authorized.
15258	To authorize the ultrasonic testing of DOT-3AA and DOT-3AAA specification cylinders for use in transporting Division 2.1, 2.2 or 2.3 material.
15260	To authorize the manufacture, marking, sale and use of non-DOT specification fully wrapped carbon-fiber reinforced aluminum lined cylinders.
15265	To authorize the manufacture, marking, sale and use of nozzle or valve spray packages similar to aerosol containers without requiring the hot water bath test.
15267	To authorize the manufacture, marking, and sale of non-DOT specification intermodal tanks with a capacity of 150 liters for transportation of liquid bromine.
15270	To authorize the one-time transportation in commerce of waste explosive signal flares that do not have an EX number by motor vehicle in alternative packaging.
15274	To authorize the transportation in commerce of certain materials that are forbidden for transportation by air for exceed quantity limitations, to be transported by cargo aircraft within the State of Alaska when other means of transportation are impracticable or not available.
15277	To authorize the transportation in commerce of fire extinguishers to be shipped with an alternative propellant shipping name as specified in several exemptions.
15279	To authorize the transportation in commerce of Division 6.2 materials without being subject to the Hazardous Materials Regulations when transported for short distances

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	by motor vehicle (less than 2 miles).
15283	To authorize the transportation in commerce of Class 3 PG II polyester resin in a non-specification cargo tanks and UN31A intermediate bulk containers and Division 5.2 organic peroxide type D catalyst in a non-bulk non-specification polyethylene container.
15284	To authorize the transportation in commerce of anhydrous hydrogen fluoride in a DOT 112S500I car with a minimum shell thickness of 1.263" and full height headshields.
15292	Authorizes the transportation in commerce of certain hydrofluoric acid Class 8 materials contained in non-DOT specification packaging seal drums or rollagons of up to 500 gallon capacity by cargo aircraft to remote locations within the state of Alaska and Bronson Creek, British Columbia, Canada.
15304	To authorize the transportation in commerce of certain hazmat by external load on helicopters in remote areas of the U.S. without being subject to hazard communication requirements and quantity limitations where no other means of transportation is available.
15322	To authorize the transportation in commerce of DOT-3AA, 3AAX, 3AX, 3TAX and 3T cylinders used for the transportation of industrial gases on truck trailers or in modules, using modal acoustic emission (MAE) testing in lieu of hydrostatic testing.
15324	This special permit authorizes the transportation in commerce of certain liquid fuels, Class 3 materials, contained in non-DOT specification packaging seal drums or rollagons of up to 500 gallon capacity by cargo aircraft to remote locations only within the state of Alaska.
15326	To authorize the transportation of certain hazmat in DOT Specification 331 cargo tank motor vehicles that are not equipped with remote self-closing internal stop valves.
15330	This special permit authorizes the transportation in commerce of certain Class 1 explosive materials that are forbidden for transportation by air, to be transported by cargo aircraft within the State of Alaska when other means of transportation are impracticable or not available.
15334	To authorize the manufacture, marking, sale and use of 40 CFR 173.24(b)(1) transport modules, Intermodal Shipping Containers designed and based on ASME Section VIII Division 3, 2010 Edition for composite reinforced pressure vessels permanently fitted within an ISO frame.
15335	To authorize the transportation in commerce of nitric acid up to 70 percent concentration in an alternative packaging configuration.
15343	To authorize the transportation in commerce of Class 3 liquid fuels in non-DOT specification collapsible rubber containers up to 500 gallon capacity by cargo aircraft within and to only remote Alaska locations.

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15344	To authorize the transportation in commerce of certain DOT specification cylinders containing Propane, a Division 2.1 gas, which is forbidden for shipment aboard passenger carrying aircraft.
15347	To authorize the transportation in commerce of the non-DOT specification packaging, components and assemblies of guided missiles (Guidance Control Sections and Training Guidance Missiles containing explosives).
15351	To authorize certain Division 2.1 and 2.2 materials to be transported as excepted quantities.
15355	To authorize the one-time, one-way transportation in commerce of an unapproved explosive in 5-gallon plastic pails by motor vehicle for disposal.
15357	To authorize the transportation in commerce of certain Class 1 explosive materials that are forbidden for transportation by air, to be transported by cargo aircraft within and around the State of Alaska when other means of transportation are impracticable or not available.
15364	To authorize the transportation in commerce of fireworks 1.4G UN0336 in alternative packaging by motor vehicle.
15365	To authorize the one-time, one-way transportation in commerce of 10845 kg of unapproved fireworks from Carson, CA, to the Lantis Fireworks & Lasers facility in Fairfield, UT, for destruction by motor vehicle.
15368	To authorize the transportation in commerce of certain hydrocarbon mixtures as small quantities when the aerosol/liquid material exceeds 50 ml.
15370	To authorize the transportation in commerce of certain Class 1 explosive materials that are forbidden for transportation by air, to be transported by cargo aircraft within the State of Alaska when other means of transportation are impracticable or not available.
15372	To authorize the manufacture, marking, sale, and use of non-DOT specification pressure vessels for use as components of safety systems.
15373	To authorize the manufacture, mark, sale, and use of the specially designed combination packagings described herein for transportation in commerce of the materials listed in paragraph 6 without hazard labels or placards, with quantity limits not exceeding 25 grams.
15378	To authorize the carriage of radioactive materials aboard cargo aircraft only under any combination of the following conditions: when the combined transport index exceeds the authorized limit of 200 per aircraft as specified in § 175.700(b)(2)(iii), or the separation distance criteria of § 175.702(b) cannot be met.
15380	To authorize the one-way transportation in commerce of unapproved fireworks for testing.
15384	To authorize an alternative method of testing for DOT Specification 107A cylinders for use in transport equipment for non-liquefied compressed gases or mixtures.
15386	To authorize the one-time, one-way transportation in commerce of two (2) 5-gallon buckets containing wetted waste primers and three (3) 5-gallon buckets containing

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	wetted waste propellant by a contract carrier for disposal without an EX approval.
15388	To authorize the transportation in commerce of certain hazmat by cargo aircraft in remote areas of the U.S. without being subject to hazard communication requirements and quantity limitations where no other means of transportation is available.
15389	To authorize the manufacture, marking, sale, and use of non-DOT specification high-pressure longitudinal welded and drawn cylinder for transportation of compressed oxygen, flammable or non-flammable gases.
15392	To authorize the transportation in commerce of certain hazmat by cargo aircraft including by external load in remote areas of the U.S. without being subject to hazard communication requirements and quantity limitations where no other means of transportation is available.
15393	To authorize the transportation in commerce of sulfuric acid in tanks cars that have not had both sides of the rupture disc inspected prior to shipment.
15394	To authorize the transportation in commerce of a portable tank that is not filled to 80 percent capacity for trailers by motor vehicle so that the hazmat can be repackaged.
15397	To authorize the transportation in commerce of certain hazmat by cargo aircraft including by external load in remote areas of Alaska without being subject to hazard communication requirements and quantity limitations where no other means of transportation is available.
15404	To authorize the manufacture, marking, sale and use of a non-DOT specification seamless titanium pressurized breathing cylinder.
15408	To authorize the transportation in commerce of certain liquid fuels, Class 3 materials contained in non-DOT specification packaging seal drums or rollagons of up to 500 gallon capacity by cargo aircraft to remote locations within the state of Alaska and Bronson Creek, British Columbia, Canada.
15418	To authorize the transportation in commerce of life saving appliances containing a compressed gas cylinder that is filled in excess of its marked service pressure.
15420	To authorize the carriage of radioactive materials aboard cargo aircraft only, under any combination of the following conditions: when the combined transport index exceeds the authorized limit of 200 per aircraft (as specified in § 175.700(b)(2)(ii)), or the separation distance criteria of § 175.702(a)(2)(ii) cannot be met.
15424	This emergency special permit authorizes the one time transportation in commerce of certain cartridges for weapons or inert projectiles that are forbidden for transportation by cargo only aircraft.
15425	To authorize the transportation in commerce of certain hydrazine fuels on the same motor vehicle without regard to segregation requirements.
15427	To authorize the transportation in commerce of certain aerosols containing a Division 2.2 compressed gas in certain non-refillable aerosol containers that are not subject to the hot water bath test.

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15428	To authorize the transportation in commerce of certain hazmat as part of the Dragon space capsule without requiring shipping papers, marking, and labeling.
15430	To authorize the transportation in commerce of approximately 742 packages containing a Class 1 hazmat that may be mismarked regarding the year of manufacture.
15431	To authorize the transportation in commerce of 23 non-DOT specification cylinders containing a residue of Phosphine for export to Canada.
15440	To authorize the transportation in commerce of certain hazmat by cargo aircraft including by external load in remote areas of the U.S. without being subject to hazard communication requirements and quantity limitations where no other means of transportation is available.
15441	To authorize the transportation in commerce of a slurry mixture as Class 3 in alternative packaging by motor vehicle.
15442	To authorize the transportation in commerce of hydrogen fluoride, anhydrous in a non-DOT specification cylinder.
15443	To authorize the transportation in commerce of certain Class 1 hazmat by cargo aircraft including by external load in remote areas of the U.S. without being subject to hazard communication requirements and quantity limitations where no other means of transportation is available.
15445	To authorize the transportation in commerce of certain unapproved Division 1.3G fireworks to a storage facility for the purpose of destruction.
15446	To authorize the transportation in commerce of organic peroxides in packaging with labeling allowed prior to changes promulgated under HM-215I.
15448	To authorize the transportation in commerce of certain Class 1 materials under an Interim Hazard Classification.
15450	To authorize the one-time, one-way transportation in commerce of certain hazmat from damaged or structurally-impaired retail stores impacted by Hurricane Irene to a temporary warehousing facility for approximately 10 miles by motor vehicle.
15451	To authorize the transportation in commerce of certain DOT 3AA, 3AAX and 3T cylinders in Multiple Element Gas Containers that have been retested every ten (10) years instead of every five (5) years by acoustic emission and ultrasonic examination (AE/UE) in place of the internal visual inspection and the hydrostatic retest required by § 180.205.
15452	To authorize the transportation in commerce of certain DOT Specification 39 cylinders containing oxygen that have their pressure relief devices set to an alternative burst at pressure range.
15455	To authorize the emergency transportation of hazmat in support of the recovery and relief efforts to, from, and within the Hurricane Irene disaster areas of New York and New Jersey under conditions that may not meet the Hazardous Materials Regulations.
15458	To authorize the transportation in commerce of specially designed non-DOT specification cylinders containing compressed sulfur hexafluoride.

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15459	To authorize the one-time transportation in commerce of certain rockets that are forbidden for transportation by cargo-only aircraft.
15461	To authorize the transportation in commerce of non-DOT specification cylinders containing a Division 2.2 compressed gas.
15462	To authorize the one-time one-way transportation in commerce of three DOT Specification 3A cylinders containing an experimental gas by motor vehicle for destruction.
15466	To authorize the transportation in commerce of certain non-DOT specification and DOT-4DA and 4DS specification cylinders, used as fire suppression systems in aircraft to be shipped, as fire extinguishers.
15467	To authorize the transportation in commerce of certain Class 1 explosive materials that are forbidden for transportation by air to be transported by cargo aircraft within the State of Alaska when other means of transportation are impracticable or not available.
15468	To authorize the transportation in commerce of certain Class 1 explosive materials that are forbidden for transportation by air, to be transported by cargo aircraft within the State of Alaska when other means of transportation are impracticable or not available.
15470	To authorize the transportation in commerce of certain hazmat by cargo aircraft including by external load in remote areas of the U.S. without being subject to hazard communication requirements and quantity limitations where no other means of transportation is available.
15471	To authorize the transportation in commerce of a Space Shuttle Orbiter Auxiliary Power Unit subsystem fuel propellant tank containing the residue of Hydrazine, anhydrous that does not meet the requirements of 49 CFR 173.172.
15473	To authorize the transportation in commerce of certain hazmat by cargo aircraft including by external load in remote areas of the U.S. without being subject to hazard communication requirements and quantity limitations where no other means of transportation is available.
15476	To authorize the transportation in commerce of certain hazmat by external load on cargo aircraft in remote areas of the U.S. without being subject to hazard communication requirements and quantity limitations where no other means of transportation is available.
15479	To authorize the one-time transportation in commerce of certain explosives that are forbidden for transportation by cargo-only aircraft.
15483	To authorize the transportation in commerce of certain Division 2.2 compressed gases in non-DOT specification cylinders to support the International Space Station Human Research Facility Gas Delivery System.
15491	To authorize the transportation in commerce of non-DOT specification cylinders containing a Division 2.2 compressed gas for export only.
15493	To authorize the manufacture, marking, sale, and use of a non-refillable non-DOT

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	specification cylinder similar to a DOT specification 39 cylinder for use in transporting Division 2.2 non-flammable compressed gas.
15505	To authorize the transportation in commerce of a portable tank that is not filled to 80 percent capacity for a short distance by motor vehicle so that the portable tank can be topped off.
15507	To authorize the manufacture, marking, sale, and use of a non-refillable, non-DOT specification inside metal container similar to a DOT 2Q for the transportation in commerce of certain Division 2.1 and 2.2 gases.
15509	To authorize the transportation in commerce of Helium in a non-DOT specification packaging for a short distance by motor vehicle.
15510	To authorize the transportation in commerce of propane in DOT Specification 4B240, 4BA240, 4BW240 cylinders via helicopter utilizing sling loads.
15515	To authorize the transportation in commerce of a non-DOT specification cylinder further packed in an ATA-300 Category 1 outer packaging.
15516	To authorize the transportation in commerce of certain waste hazmat between Moog plants without shipping paper documentation for less than one-half mile by private motor vehicle.
15517	To authorize the transportation in commerce of certain hazmat by external load in remote areas of the U.S. without being subject to hazard communication requirements and quantity limitations where no other means of transportation is available.
15519	To authorize the transportation of IBCs used to carry UN2031 with more than 55 percent nitric acid without replacing the rigid plastic inner receptacle every 2 years.
15531	This request seeks relief from the requirement for the IV-TEPC Detectors to be DOT specification cylinders. The Detectors contain less than 0.04 grams of propane gas. Design details are provided to justify that the Detectors are constructed and packaged robustly, with multiple containment barriers. These Detectors have been deemed safe by NASA to fly onboard manned spacecraft.
15532	To authorize the one-time, one-way transportation in commerce of one irregularly shaped sodium dispersion vessels in alternative packaging.
15535	To authorize the transportation in commerce of certain forbidden explosives in sling load operations in remote areas of the U.S. without being subject to hazard communication requirements, quantity limitations, and certain loading and stowage requirements.
15536	To authorize the transportation in commerce of certain cylinders that have been alternatively ultrasonically retested for use in transporting Division 2.1, 2.2 and 2.3 materials.
15537	To authorize the transportation in commerce of certain Class 1 explosives materials that are forbidden for transportation by air, to be transported by cargo aircraft within the State of Alaska when other means of transportation are impracticable or not available.
15540	To authorize the transportation in commerce of certain non-DOT specification bulk

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	packages containing Class 3 material by cargo aircraft where no other means of transportation is practicable.
15541	To authorize the transportation in commerce of certain hazmat by cargo aircraft, including by external load in remote areas without being subject to hazard communication requirements and quantity limitations where no other means of transportation is available.
15547	To authorize the transportation in commerce of certain forbidden explosives in sling load operations in remote areas of the U.S. without being subject to hazard communication requirements, quantity limitations, and certain loading and stowage requirements.
15551	To authorize the transportation in commerce of a Division 4.1 Packing Group II material by highway that has the potential to react during transportation.
15552	To authorize the manufacture, marking, sale, and use of fiberglass reinforced plastic (GFRP) as the basic material of construction for DOT-412/407 type cargo tanks.
15555	To authorize the transportation in commerce of a toxic flammable gas in a non-DOT specification cylinder.
15556	To authorize the transportation in commerce of certain hazmat by 14 CFR Part 133 Rotorcraft External Load Operations transporting hazmat attached to or suspended from an aircraft, in remote areas of the U.S. only, without being subject to hazard communication requirements, quantity limitations, and certain loading and stowage requirements.
15558	To authorize the manufacture, marking, sale and use of service motor vehicles for use in transportation of explosive solid material in alternative packaging.
15559	To authorize the transportation in commerce of certain forbidden explosives in sling load operations in remote areas of the U.S. without being subject to hazard communication requirements, quantity limitations, and certain loading and stowage requirements.
15560	To authorize the transportation in commerce of certain hazmat by Part 133 Rotorcraft External Load Operations attached to or suspended from an aircraft in remote areas of the U.S. without meeting certain hazard communication and stowage requirements.
15562	To authorize the transportation in commerce of propane by cargo-only aircraft in packages that exceed the quantity limitation where no other means of transportation is available.
15566	To authorize the transportation in commerce of certain cylinders of compressed oxygen where no other practical means of transportation exist without their outer packaging being capable of passing the Flame Penetration and Resistance Test and the Thermal Resistance Test.
15568	To authorize the transportation in commerce soils containing solid explosive compounds (not greater than 3 percent) in bulk.
15569	To authorize the manufacture, marking, sale and use of a non-DOT specification fully-wrapped carbon fiber reinforced, seamless stainless steel-lined cylinders that meets all

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	requirements of ISO 11119-2 for use in transporting 2.2 materials.
15577	To authorize the transportation in commerce of certain Division 1.4 in non-DOT specification packagings without labels and markings to a distance not to exceed 200 yards by motor vehicle, subject to the limitations and special requirements specified herein.
15580	To authorize the positioning of placarded cars without a buffer car.
15583	To authorize the transportation in commerce of certain Class 1 explosive materials that are forbidden for transportation by air, to be transported by cargo aircraft within the State of Alaska when other means of transportation are impracticable or not available.
15584	To authorize the transportation in commerce of human and animal tissue samples in non-specification packaging.
15593	To authorize the manufacture, marking and sale of a non-DOT specification containers to be used for the transportation in commerce of UN1075.
15594	To authorize the transportation in commerce by cargo only aircraft of Class 1 explosives that are forbidden or exceed quantities presently authorized.
15599	To authorize the manufacture, mark, sale, and use of a specially designed storage device consisting of a non-DOT specification cylinder similar to a DOT 3AL cylinder for use in transporting hydrogen absorbed in metal hydride, Division 2.1.
15606	To authorize the transportation in commerce of a DOT Specification 3AA cylinder containing anhydrous ammonia that developed a leak and is equipped with a Chlorine Institute Kit "A" to prevent leakage during transportation.
15610	To authorize the transportation in commerce of certain gases in DOT 3A, 3AA, 3AX, 3AAX and 3T cylinders. The cylinders (tubes) are retested by acoustic emission and ultrasonic examination (AE/UE) described in paragraph 7 below in place of the internal visual inspection and the hydrostatic retest required in § 180.205.
15611	To authorize the transportation of UN0320 by air as hazard class 1.4S.
15612	To authorize the transportation in commerce of up to 15,000 Net Explosive Weight of Class 1 material explosives to the Philippines to support the foreign military sales program.
15615	To authorize the transportation in commerce of UN0336 Fireworks in UN4G packaging with a capacity greater than 450 liters.
15617	To authorize the transportation in commerce of waste phosgene in alternative packaging being transported to a disposal facility without meeting the segregation requirements for Division 2.3 gas Zone A materials within the transport vehicle.
15620	To authorize transportation in commerce of non-specification containers of the Division 2.2 materials authorized by this special permit.
15623	To authorize the manufacture, marking, sale, and use of multiple non-DOT specification containers, manifolded together within a frame and securely mounted on a truck chassis, for the transportation in commerce of the materials authorized by this

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	special permit.
15624	To authorize the transportation in commerce of certain Class 1 explosive materials that are forbidden for transportation by air, to be transported by cargo aircraft within the State of Alaska when other means of transportation are impracticable or not available.
15626	To authorize the transportation in commerce of certain hazmat by cargo aircraft including by external load in remote areas without being subject to hazard communication requirements and quantity limitations where no other means of transportation is available.
15628	To authorize the transportation in commerce of hazmat in tank cars with a manway housing that allows for opening on either or two sides.
15631	To authorize the transportation in commerce of Division 1.1 explosives, which are forbidden by cargo-only aircraft.
15634	To authorize the transportation in commerce of certain used DOT 3AL cylinders that contain CO2 but not necessarily in an amount qualifying them as hazmat.
15636	To authorize the transportation in commerce of certain Class 1 explosive materials that are forbidden for transportation by air, to be transported by cargo aircraft within the State of Alaska when other means of transportation are impracticable or not available.
15637	To authorize the transportation in commerce of Division 1.1 explosives, which are forbidden by cargo-only aircraft.
15642	To authorize the transportation in commerce of DOT Specification 3AL cylinders, cylinders manufactured under DOT-SP 12440, and ISO 7866 cylinders containing certain compressed gases when retested by a 100 percent ultrasonic examination in lieu of the internal visual and the hydrostatic retest.
15647	To authorize retesting of certain DOT Specification and non-DOT Specification multi-unit tank car tanks.
15652	To authorize the transportation in commerce of certain hazmat by 14 CFR Part 133 Rotorcraft External Load Operations transporting hazmat attached to or suspended from an aircraft, in remote areas of the U.S. only, without being subject to hazard communication requirements, quantity limitations and certain loading and stowage requirements.
15654	To authorize the transportation in commerce of certain hazmat by cargo-only aircraft and 14 CFR Part 133 Rotorcraft External Load Operations transporting hazmat attached to or suspended from an aircraft in remote areas of the U.S. only, without being subject to hazard communication requirements, quantity limitations and certain loading and stowage requirements.
15655	To authorize the transportation in commerce of certain waste pyrotechnic material that has not been approved under 49 CFR 173.56(b) by motor vehicle.

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15656	To authorize the one-time transportation in commerce of certain explosives that are forbidden for transportation by cargo-only aircraft.
15658	To authorize the transportation in commerce of certain Radioactive material in alternative packaging by highway. A copy of the environmental assessment can be located at: http://www.regulations.gov/#!documentDetail;D=PHMSA-2012-0165-0002
15660	To authorize a 105 year requalification period for DOT-3A/4A/4B/4BA/4D/4E/4L/4AA480 cylinders containing Division 2.1 and 2.2 materials.
15661	To authorize the one-time, one-way transportation in commerce of certain unapproved Division 1.1G fireworks to a storage facility for the purpose of destruction.
15664	To authorize the transportation in commerce of flammable petroleum gas in amounts that exceed the quantity limitations contained in 14 CFR Part 133 Rotorcraft External-Load Operations transported internally attached to or suspended from an aircraft only in the State of Alaska.
15665	To authorize the transportation in commerce of a DOT Specification 4AA cylinder containing anhydrous ammonia that developed a leak and is equipped with a Chlorine Institute Kit "A" to prevent leakage during transportation.
15666	Request to except a marine pollutant from being treated as a marine pollutant.
15667	To authorize the transportation in commerce of certain Division 1.2 explosives that are forbidden for transportation by cargo only aircraft
15671	To authorize construction under 173.304 of DOT-2P/2Q/DOT-2Q non-refillable aerosol containers using an alternative leak test in accordance with a variance.
15677	To authorize the transportation in commerce of DOT Specification 39 thirty-pound cylinders by highway, which have the potential to react during transportation.
15683	To authorize the transportation in commerce of certain 4BW240 cylinders that have been tested using an alternative testing procedure.
15685	To authorize the transportation in commerce by cargo only aircraft of Class 1 explosives that are forbidden or exceed quantities presently authorized.
15689	To authorize the discharge of Division 2.1 material from an authorized DOT specification cylinder without removing the cylinder from the vehicle on which it is transported.
15690	To authorize the transportation in commerce of test kits containing minor amounts of alkali metal dispersed in mineral oil.
15691	To authorize the transportation in commerce of certain cylinders manufactured under DOT-SP9421 and DOT-SP9909 that have passed their test date for requalification.
15696	To authorizes the one-time, one-way transportation in commerce of 2142 kg of unapproved fireworks from Carson, CA, to the Lantis Fireworks & Lasers facility in Fairfield, UT, for destruction by motor vehicle.
15698	To authorize the transportation in commerce of certain hazmat by Part 133 Rotorcraft External-Load Operations attached to or suspended from an aircraft in remote areas.

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[illegible]	of the U.S. without meeting certain hazard communication and stowage requirements.
15710	To authorize the transportation in commerce of a Duracell 600HD Portable Power Source, containing a non-spillable battery, by passenger aircraft.
15712	To authorize the air transportation in commerce of certain explosives that are forbidden for shipment by cargo-only aircraft.
15715	Authorization to transport UN0301 on-board cargo only and passenger aircraft.
15721	To authorize the transportation in commerce of a Division 2.2 gas in a non-DOT specification cylinder.
15722	To authorize the air transportation in commerce of certain explosives that are forbidden for shipment by cargo-only aircraft.
15724	To authorize the transportation in commerce of certain Division 2.2 gases in cylinders with openings not in the head or base of the cylinder.
15729	To authorize the one-time transportation in commerce of anhydrous ammonia in heat pipes, which is forbidden for transportation by cargo only aircraft.
15748	To authorize the one-time, one-way transportation in commerce of certain hazmat from [illegible] stores impacted by Hurricane Sandy to a [illegible] approximately 10 miles by motor vehicle.
15751	To authorize the use of non-DOT specification metal refueling tanks containing Class 3 liquids and the on and off loading while the container remains on the truck.
15752	To authorize the transportation in commerce of certain hazmat in support of the recovery and relief efforts in response to Hurricane Sandy.
15756	To authorize the transportation in commerce of certain hazmat in support of the recovery and relief efforts within the Hurricane Sandy disaster areas of New York and New Jersey under conditions that may not meet the Hazardous Materials Regulations.
15761	To authorize the transportation in commerce of approximately 101,000 DOT Specification 2P inner metal receptacles containing an aerosol sunscreen that were incorrectly marked DOT-SP 14429.
15766	To authorizes the one-time, one-way transportation in commerce of approximately 46,000 pounds, gross weight, of unapproved fireworks from Dayton, OH, to an approved storage bunker in Illiopolis, IL, by motor vehicle.