



Transportation of Hazardous Materials Biennial Report

for biennium

2015-2016

and biennium

2017-2018

Under Title 49 United States Code Section 5121(h)

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Section I

Introduction



1. Introduction

This Report satisfies the Secretary of Transportation’s obligation to report biennially on six items.

The six items are required by 49 U.S.C. § 5121(h) are:

- A statistical compilation of accidents and casualties related to the transportation of hazardous material (or hazmat);
- A list and summary of applicable Government regulations, criteria, orders, and special permits;
- A summary of the basis for each special permit;
- An evaluation of the effectiveness of enforcement activities relating to a function regulated by the Secretary under § 5103(b)(1) and the degree of voluntary compliance with regulations;
- A summary of outstanding problems in carrying out the requirements of 49 U.S.C. ch. 51¹ in order of priority; and
- Recommendations for appropriate legislation.

Table 1.1 pairs each statutory requirement with the report section satisfying that requirement.

Statutory Requirement	Statute	Location
A statistical compilation of accidents and casualties related to the transportation of hazardous material	49 U.S.C. § 5121(h)(1)	Section 3
A list and summary of applicable Government regulations, criteria, orders, and special permits	49 U.S.C. § 5121(h)(2)	Section 4, Appendix A, Appendix B
A summary of the basis for each special permit	49 U.S.C. § 5121(h)(3)	Section 4, Appendix A
An evaluation of the effectiveness of enforcement activities relating to a function regulated by the Secretary under § 5103(b)(1) and the degree of voluntary compliance with regulations	49 U.S.C. § 5121(h)(4)	Section 5
A summary of outstanding problems in carrying out the requirements of 49 U.S.C. ch. 51 in order of priority	49 U.S.C. § 5121(h)(5)	Section 6
Recommendations for appropriate legislation	49 U.S.C. § 5121(h)(6)	Section 7

¹ 49 U.S.C. § 5101 (stating the purpose of “49 U.S.C. Chapter 51. TRANSPORTATION OF HAZARDOUS MATERIALS” to protect against the risks to life, property, and the environment that are inherent in the transportation of hazardous material in intrastate, interstate, and foreign commerce).

Section II

*About PHMSA and Hazardous
Materials Transportation*



2. About Hazardous Materials Transportation Regulation

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 hazardous materials (hazmat). Federal hazmat law also 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 Hazardous Material Safety Administration (PHMSA), pursuant to 49 CFR § 1.97.

PHMSA is an agency within the U.S. Department of Transportation (DOT) whose mission is to protect people and the environment by advancing the safe transportation of energy and other hazardous materials that are essential to our daily lives. Hazardous materials are transported by every mode of transportation and PHMSA regulates the transport of hazmat by all modes (air, rail, highway, and water) and pipelines, including:

- More than 1.2 million shipments daily,
- 1.6 billion tons shipped annually by all modes,
- Over 34 million containers entering U.S. ports annually,
- Over 12% of all freight tonnage shipped annually, and
- Overseeing the nation's pipeline infrastructure, which accounts for 64% of the energy commodities consumed in the United States.

Thus, PHMSA is tasked with helping to safeguard people, property, and the environment from the risks inherent in hazardous materials transportation and helping to mitigate these risks with a focus on reducing high-consequence incidents.

PHMSA has full partnership with other DOT modal agencies and the Department of Homeland Security. In particular, PHMSA's Office of Hazardous Materials Safety (OHMS) works with the four agencies listed below to help administer their hazardous materials safety programs. Each of these agencies has authority delegated by the Secretary of Transportation to enforce the provisions of hazardous materials law and the regulations promulgated thereunder in 49 CFR Parts 171-180, known as the Hazardous Materials Regulations (HMR):



• **Federal Aviation Administration (FAA)** enforces regulations governing the transportation of hazmat by air.



• **Federal Railroad Administration (FRA)** enforces regulations governing the transportation of hazmat by railroad.



• **Federal Motor Carrier Safety Administration (FMCSA)** enforces regulations governing transportation of hazmat by highway.



• **U.S. Coast Guard (USCG)** enforces regulations governing certain transportation of hazmat by water

Within PHMSA, the Office of Pipeline Safety (OPS) oversees the nation’s natural gas and hazardous liquid pipeline transportation system and certain liquefied natural gas (LNG) facilities, and the Office of Hazardous Materials Safety (OHMS) oversees the modal transport of hazmat (air, highway, rail, water). OPS and OHMS collaborate to jointly achieve PHMSA’s overall safety mission and often employ a “one PHMSA” approach; however, this report focuses on the transportation of hazardous materials by air, highway, or rail, which is the primary responsibility of OHMS.

Specifically, OHMS:

- Evaluates safety risks;
- Develops and enforces standards for transporting hazardous materials in commerce,
- Educates shippers, carriers and other members of the regulated community,
- Investigates incidents and accidents, in particular when they involve hazmat packaging failures,
- Conducts and sponsors research, and
- Provides outreach and grants to improve emergency response.

OHMS evaluates safety risks by analyzing incident, commodity flow, and test data; participating in technical standards committees and Federal advisory committees; contributing to and sponsoring research and development (R&D); studying changes in packaging and transportation technology; and reviewing National Transportation Safety Board (NTSB) recommendations, stakeholder petitions, and requests for special permits and approvals from the regulated community.

OHMS develops the standards in the HMR, pursuant to the requirements of the Administrative Procedure Act (APA), 5 U.S.C. § 553.² Under normal circumstances, OHMS begins the rulemaking process by issuing a notice of proposed rulemaking and, after considering public comments, publishes final rules.

² Administrative Procedure Act, 5 U.S.C. §§ 500-596 (2020).

However, in rare instances where “good cause” exists under the APA, OHMS may forgo the proposed rule stage. OHMS staff diligently develop and manage complex rulemaking projects that often implement regulatory changes with technical breadth and depth. OHMS focuses its rulemaking activities in areas that maximize safety benefits while minimizing economic burdens and reducing barriers market entry whenever possible. Rulemaking documents can be found published in the Federal Register or uploaded to www.regulations.gov or the PHMSA website.³ OHMS rulemaking activities are also summarized in the Unified Agenda managed by the Office of Information and Regulatory Affairs within the Office of the Management and Budget (OMB).⁴

To enforce standards in the HMR, OHMS enforcement personnel conduct field inspections of shipper and carrier transportation facilities, packaging manufacturing, requalification, repair and reconditioning facilities, cargo vessel ports, rail freight yards, motor carrier and air cargo terminals, and chemical and explosive manufacturing plants. PHMSA has available a full range of enforcement tools to ensure that the hazmat transportation industry takes appropriate and timely corrective actions for violations, responds appropriately to incidents, and employs preventive measures to preclude future failures and non-compliant operations. Having a number of enforcement tools to use for noncompliance, the enforcement program may issue Letters of Warning and Tickets for less serious violations.⁵ However, the program refers more serious matters to PHMSA’s Office of the Chief Counsel for appropriate sanctions, which include Notices of Probable Violation⁶ and Corrective Action⁷ and Compliance Orders.⁸ The Federal hazardous materials transportation law authorizes the Office of Chief Counsel to assess civil penalties, ranging from a minimum of \$502 to a maximum of \$194,691 for violations that result in death, serious illness, or severe injury to any person or substantial destruction of property, and to refer matters for criminal prosecution.⁹ These penalties are listed in an annual report posted on the PHMSA website.¹⁰

While enforcement is important for ensuring safety and compliance with the HMR, education, outreach, and training are also important. OHMS educates the regulated community, emergency responders, and the public by developing and disseminating training and outreach materials like the Emergency Response Guidebook¹¹; hosting webinars, public meetings, and town halls; publicizing awareness campaigns such as “Check the Box”¹²; funding a diversity of grants aimed at emergency response; and engaging hazmat businesses, both large and small, through face-to-face outreach and field compliance assistance by the Hazardous Materials Safety Assistance Team.¹³ OHMS also supports the Hazardous Materials Information Center (HMIC), which provides live, one-on-one assistance by answering calls and

³ PHMSA, <https://www.phmsa.dot.gov/>.

⁴ Current Regulatory and Deregulatory Actions, <https://www.reginfo.gov/public/do/eAgendaMain/>.

⁵ 49 CFR § 107.309 and § 107.310.

⁶ 49 CFR § 107.311.

⁷ 49 CFR, Appendix A to Subpart D of Part 107—Guidelines for Civil Penalties.

⁸ 49 CFR § 107.307(a)(3).

⁹ Revisions to Civil Penalty Amounts. 1/11/2021. <https://www.federalregister.gov/documents/2021/01/11/2020-25236/revisions-to-civil-penalty-amounts>.

¹⁰ Operational Guidance and Policies, <https://www.phmsa.dot.gov/field-operations/operational-guidance-policies>

¹¹ Hazardous Materials Outreach & Training, <https://www.phmsa.dot.gov/training/hazmat/hazardous-materials-outreach-engagement>.

¹² Check the Box, <https://www.transportation.gov/check-the-box>.

¹³ Hazardous Materials Safety Assistance Team, <https://www.phmsa.dot.gov/training/hazmat/hazardous-materials-safety-assistance-team-hmsat>.

e-mails from the public regarding the HMR and PHMSA programs.¹⁴ In addition, OHMS publishes to its website broadly-applicable guidance clarifying HMR requirements and identifying permissible compliance strategies, and Letters of Interpretations to address specific requests by stakeholders to clarify technical aspects of the HMR.¹⁵

When hazmat incidents unfortunately occur, the shippers and carriers involved may be required to file incident reports to OHMS, using the PHMSA Incident Report Form 5800.1 and specifying the facts and circumstances of the incident and causes of the incident to the extent they are known.¹⁶ After these reports are reviewed and validated, they are made publicly available through the Hazmat Incident Report Search Tool¹⁷ on the PHMSA website and within the Hazmat Intelligence Portal (HIP).¹⁸

In rare cases, serious incidents do occur, involving death or major injury, or public evacuations. OHMS deploys investigators from five different regions across the country (Eastern, Central, Western, Southern, Southwest), and also employs an Accident Investigation Team (AIT), to investigate these incidents in cooperation with Federal, state, and local partners.¹⁹ In particular, OHMS launched the AIT in 2017 as a pilot program to investigate and analyze the probable and root causes of serious incidents, improve data collection on low-probability, high-consequence events, and share recommendations, lessons learned, and other information with stakeholders such as DOT modal partners.²⁰ The AIT is now a permanent branch within the OHMS Field Operations division.

While many factors may contribute to serious incidents, OHMS has substantial subject matter expertise to contribute to the investigation and analysis of hazmat packaging failures. This is because the HMR upholds the fundamental Federal requirements for packaging specifications that ensure the containment of bulk and non-bulk quantities of hazardous materials. Bulk packagings include cargo tanks used to transport hazmat via highway and rail tank cars that transport hazmat via rail. Non-bulk packagings include, for example, United Nations (UN) specification steel drums and jerricans, glass receptacles, and fiberboard boxes. Separate from bulk and non-bulk packagings, the HMR also contains packaging specifications for aerosol containers, cylinders, and intermediate bulk containers (IBCs). Taken together, OHMS regulates this wide diversity of specification packagings and promotes a comprehensive safety system for the manufacturing, fabrication, marking, maintenance, reconditioning, repair, or test of multi-modal containers marked, certified, or sold for use in the transportation of hazmat.²¹

This comprehensive safety system and oversight would not be possible without the efforts and expertise of PHMSA sciences and engineering staff, who analyze the performance of existing design criteria for packaging such as rail tank cars, cylinders, cargo tanks, and IBCs, as well as innovative designs (e.g.,

¹⁴ Hazardous Materials Information Center, <https://www.phmsa.dot.gov/standards-rulemaking/hazmat/hazardous-materials-information-center>.

¹⁵ PHMSA Guidance, <https://www.phmsa.dot.gov/guidance>.

¹⁶ Hazardous Materials Incident Report, Form DOT F 5800.1 (01-2004), <https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/IncidentForm010105.pdf>.

¹⁷ Incident Statistics, <https://www.phmsa.dot.gov/hazmat-program-management-data-and-statistics/data-operations/incident-statistics>.

¹⁸ PHMSA Portal, <https://portal.phmsa.dot.gov/>.

¹⁹ About PHMSA, <https://www.phmsa.dot.gov/about-phmsa/offices>.

²⁰ Accident Investigation Team Pilot Program, <https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/news/57491/ait-outreach-brochure.pdf>.

²¹ 49 U.S.C. § 5103.

satellite shipping containers, spacecraft cooling panels), and packaging materials (e.g., ferrous and non-ferrous alloys, fiberglass, graphite-epoxy composites). Engineering staff members bring specialized knowledge of non-destructive testing, metallurgy, failure analysis, finite element analysis, and welding techniques, and contribute to development of voluntary consensus standards in collaboration with, for example, the Compressed Gas Association (CGA), American Society of Mechanical Engineers (ASME), Institute of Makers of Explosives (IME), International Organization for Standardization (ISO), and American Pyrotechnics Association.²²

OHMS staff also promotes the development of standards and U.S. policy positions with respect to the International Civil Aviation Organization's Technical Instruction for the Safe Transport of Dangerous Goods by Air (ICAO TI, Annex 18); the International Maritime Organization's International Maritime Dangerous Goods Code (IMDG Code); and the United Nations (UN) Model Regulations. In fact, OHMS provides the U.S. Head of Delegation to the UN Sub-Committee of Experts for the Transportation of Dangerous Goods²³ and sponsored a Mansfield Fellowship Program fellow in an international exchange program for Federal employees with the government of Japan.²⁴ OHMS also acts as the national competent authority and issues National Competent Authority Certificates for the international movement of radioactive materials; and serves as a U.S. Member of the International Atomic Energy Agency Transport Safety Standards Committee.²⁵

As such, the standards, technologies and knowledge surrounding hazardous materials transportation continue to evolve, making research a critical component of PHMSA's safety mission. To this end, OHMS funds and conducts numerous research and development (R&D) projects. PHMSA's R&D investments in hazardous materials help to shape the future of the organization with an effective, efficient, and aggressive focus on initiatives that produce the most successful safety solutions, especially to address emerging risks. These investments support laboratory testing, pilot programs, and field implementation, as well as white papers, reports, and training manuals.²⁶

Completed R&D reports include: Fire Performance of a UN-T75 Portable Tank; Lithium Ion Battery Thermal Runaway Measurement Techniques; Energetic Properties of Thermite; Risk Assessment of HazMat Transport by Unmanned, Autonomous Vehicles; Risk Assessment of Surface Transport of Liquid Natural Gas; Crude Oil Testing. On-going R&D projects include: Development of Annual Hazmat Packaging and Commodity Flow Data with the U.S. Census Bureau; Solidification of Natural Gas Hydrates for Transportation with the Colorado School of Mines; Metal Foams Manufacturing for Railcars with iOS and Powdermet; Development and Testing of New Materials for Improving Thermal Protection Systems to Mitigate Rail Transport Risk of Flammable Liquids with Rutgers University; Performance Specification of Fiber-Reinforced Plastic Materials for Highway Cargo Tank Packaging with the Volpe Transportation Center; and many others.²⁷

²² 49 CFR § 171.7.

²³ List of Head of Delegation, SUB-COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS, Economic and Social Council, United Nations, https://www.unece.org/fileadmin/DAM/trans/doc/2020/dgac10c3/list-HoD_TDG_November2019.pdf.

²⁴ The 24th Class, Mike Mansfield Fellowship Program, <https://mansfieldfellows.org/about-the-fellowship/the-24th-class-of-mike-mansfield-fellows/>.

²⁵ TRANSSC Members - Term 2018 – 2020, International Atomic Energy Agency, <http://www-ns.iaea.org/committees/transsc/default.asp?fd=1898&dt=0>.

²⁶ R&D Reports, <https://www.phmsa.dot.gov/hazmat/reports/rd-reports>.

²⁷ R&D Ongoing Projects, <https://www.phmsa.dot.gov/hazmat/reports/ongoing-projects>.

In addition to funding research, OHMS manages and funds a variety of grants for emergency responders. The Hazardous Materials Grants Program is comprised of the following grants:

- Hazardous Materials Emergency Preparedness (HMEP);
- Assistance for Local Emergency Response Training (ALERT);
- Hazardous Materials Instructor Training (HMIT);
- Supplemental Public Sector Training (SPST); and
- Community Safety (CS).

The HMEP grant program was first authorized in 1990 and has funded approximately \$20 million on an annual basis to grantees from U.S. States, Territories, and Native American Tribes to train public-sector hazardous materials responders.²⁸ Funded activities include: developing or revising emergency plans; conducting commodity flow studies to determine the frequency and quantity of hazmat shipments being transported through local communities; and training emergency responders to respond appropriately to incidents involving bulk shipments of energy products and other hazmat.

The ALERT grant specifically promotes hazmat response training on the transportation of crude oil, ethanol, and other flammable liquids by rail, consistent with National Fire Protection Association (NFPA) standards; and HMIT grants fund non-profit organizations that demonstrate expertise in conducting “train-the-trainer” programs. SPST grants funding to national, non-profit fire service organizations for the purpose of training individuals with statutory responsibility to respond to hazardous materials accidents and incidents; and CS grants fund on a competitive basis to non-profit organizations that develop best practice guidance for hazardous materials response.

This section provided an overview of some of the diverse ways that OHMS contributes to PHMSA’s safety mission. Much more information is available through the PHMSA website – www.phmsa.dot.gov, which has contact information for OHMS programs and staff – and the HMIC (1-800-HMR-4922; infocenter@dot.gov).

The remainder of this report is dedicated to the statutory requirements specified in Table 1.1.

²⁸ 2020 Pipeline and Hazmat Safety Grants, <https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2020-08/PHMSA%20FY20%20Comprehensive%20Grants%20List.pdf>.

Section III

*Statistical Compilation
of Accidents*



3. Statistical Compilation of Accidents



PHMSA uses reported incident data provided on DOT Form 5800.1 to assess safety trends and guide the development of new initiatives to enhance hazardous materials transportation safety.²⁹ DOT Form 5800.1 captures relevant data about each reported incident, including the location, cause, and consequences of the hazmat release.³⁰ The data collected is specific to OHMS’s regulatory authority and primarily focuses on the material, packaging, and consequences of a package failure.³¹

3.1 Hazmat incidents with death or major injury (targets vs. actual)

For 2015-2018, PHMSA used the number of hazardous material incidents with death or major injury as its main performance indicator and how the agency measures the effectiveness of its programs. PHMSA reported these numbers to the Secretary on the Department of Transportation’s quarterly scorecard. For 2015-2018, the maximum target for incidents with death or major injury was 20-31.³²

Figure 3.1 shows the 2015-2018 target goals and actual number of incidents with death or major injury. In 2015, the number of incidents with death or major injury exceeded PHMSA’s target maximum, but from 2016-2018, this number receded to below the target maximum.

Figure 3.1: Performance Indicator Targets vs. Actual

Number of hazardous materials incidents involving death or major injury	2015	2016	2017	2018 ³³
Target	20-31	20-31	20-31	20-31
Actual	39	27	18	30
	 Target met	 Target not met		

²⁹ Docket 2137-0039, supporting statement A (describing how, by whom, and for what purpose the information on the DOT Form F 5800.1 is used).

³⁰ *Id.*

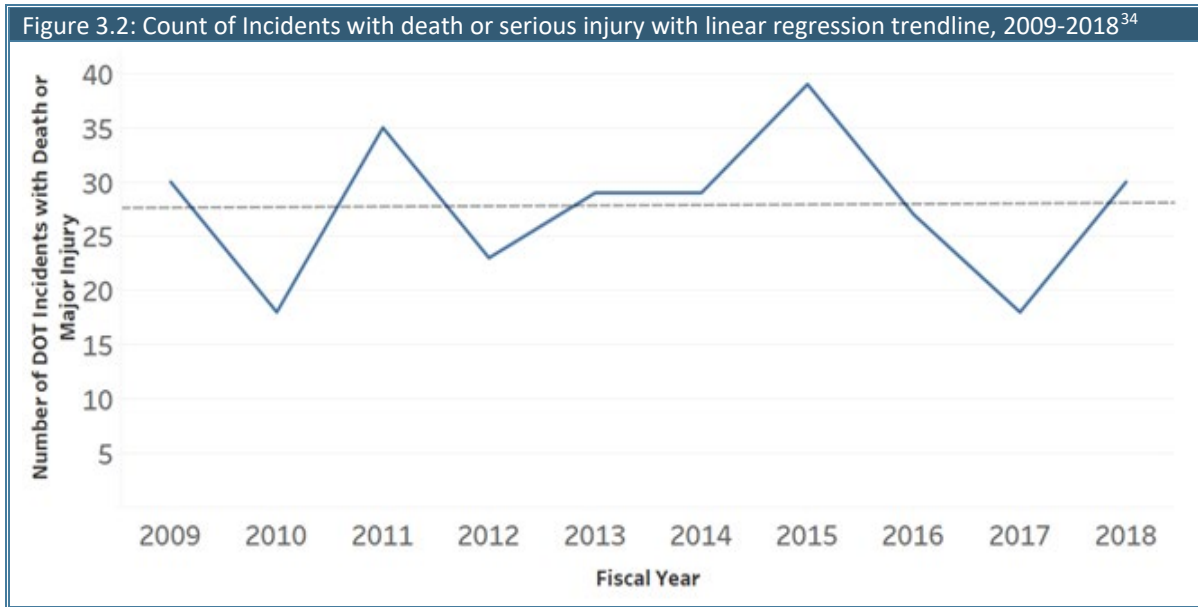
³¹ Docket 2137-0039, supplementary document, Response to OMB to Evaluate Single Electronic Reporting System describing how, by whom, and for what purpose the information on the DOT Form F 5800.1 is used).

³² PHMSA FY 2015-2018 Performance Report and Performance Plan, <https://www.transportation.gov/budget>.

³³ For the purposes of this report, PHMSA is presenting the 2018 performance target as 20-31 to represent the target range of hazardous materials incidents involving death or major injury. However, in 2018, PHMSA began using a new performance measure target of 25 to account for fatalities caused by the transport of hazardous materials by all modes, including pipelines. Switching from a count of incidents with fatalities or major injuries to a count of fatalities metric more closely aligns to actual consequence, as an incident with multiple fatalities will increase the fatality count proportionally. Previously, the metric counted incidents and an incident with many fatalities would increase the count equal to an incident with one fatality or major injury.

3.2 Hazmat incidents with death or major injury over time

Figure 3.2 shows the historical context for the annual number of incidents with death or major injury, which has ranged from 18 to 39 incidents per year between 2009 and 2018. Despite year-to-year variance, the long-term, multi-year trend is stable.

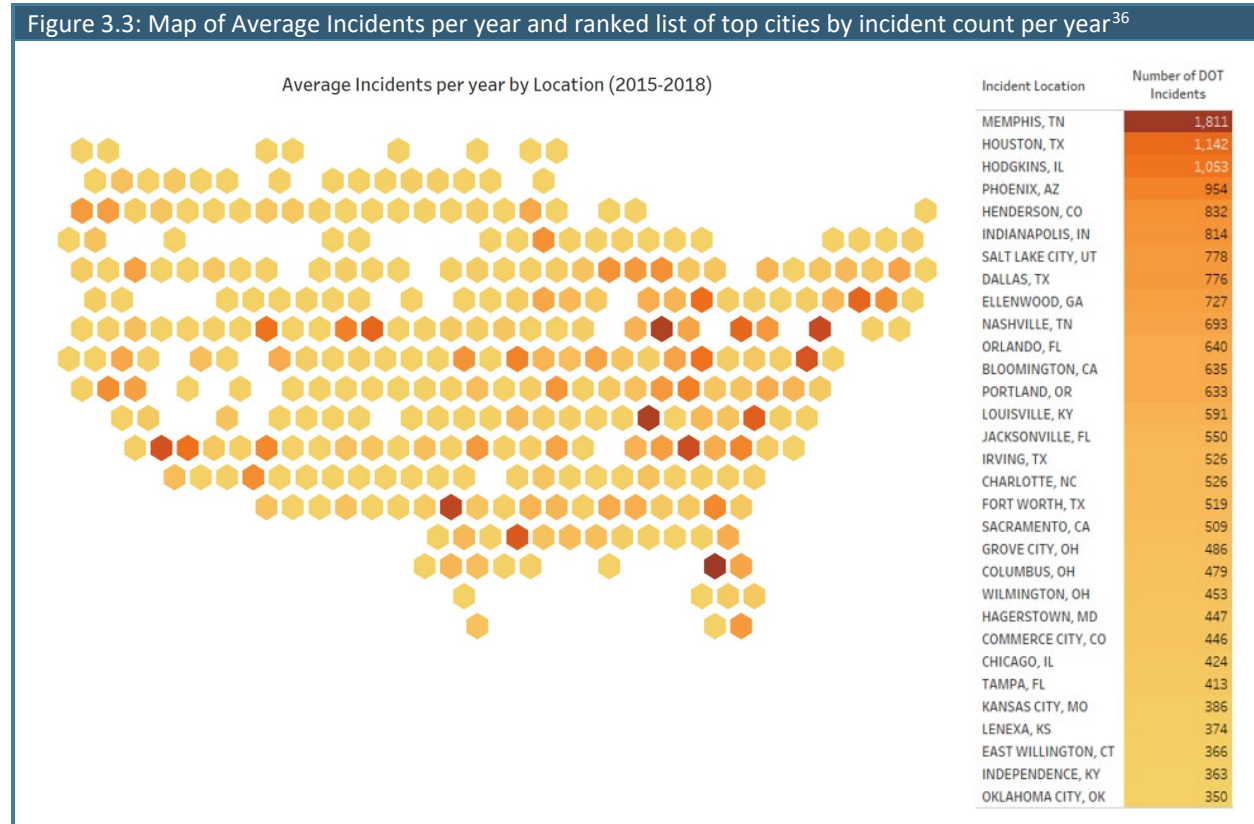


³⁴ PHMSA Hazmat Incident Database, available online at [The Hazmat Library for Incident Data Statistics](#) [hereinafter PHMSA Incident Database] (counting unique Report Numbers where Total_Hazmat_Hosp_Injuries > 0 OR Total_Hazmat_Fatalities > 0 for each year from 2009 to 2018).

3.3 Hazmat incidents with respect to geography

Every year, approximately 15,000-19,000 incidents involving hazardous materials are reported to PHMSA. While these incidents occur across all 50 states, they primarily occur in major metropolitan areas or hubs of commerce.³⁵

Figure 3.3 shows where hazmat incidents tend to occur in the U.S. From 2015-2018, the greatest number of hazmat incidents occurred in Memphis, TN; Houston, TX; and Hodgkins, IL.



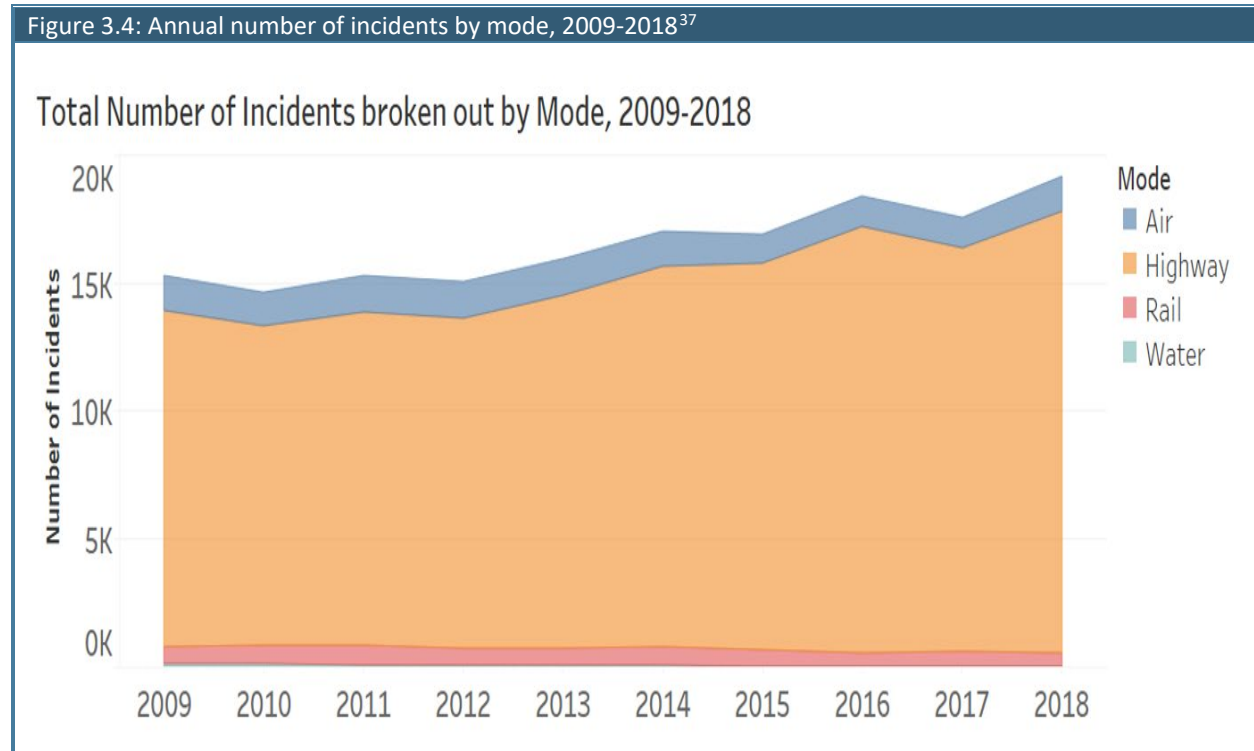
³⁵ PHMSA Incident Database (mapping incidents using Incident Postal Code to group incidents within areas represented by 80km-wide hexagons). See generally Hexagonal Binning available online at [Hexagonal Binning](#) citing D.B.Carr et al. Scatterplot Matrix Techniques for large N, Journal of the American Statistical Association, No. 389 pp 424-436.

³⁶ PHMSA Incident Database.

3.4 Hazmat incidents differentiated by mode of transportation (air, highway, rail, water)

Figure 3.4 shows that the modal distribution of incidents from 2009-2018 conforms to historical norms.

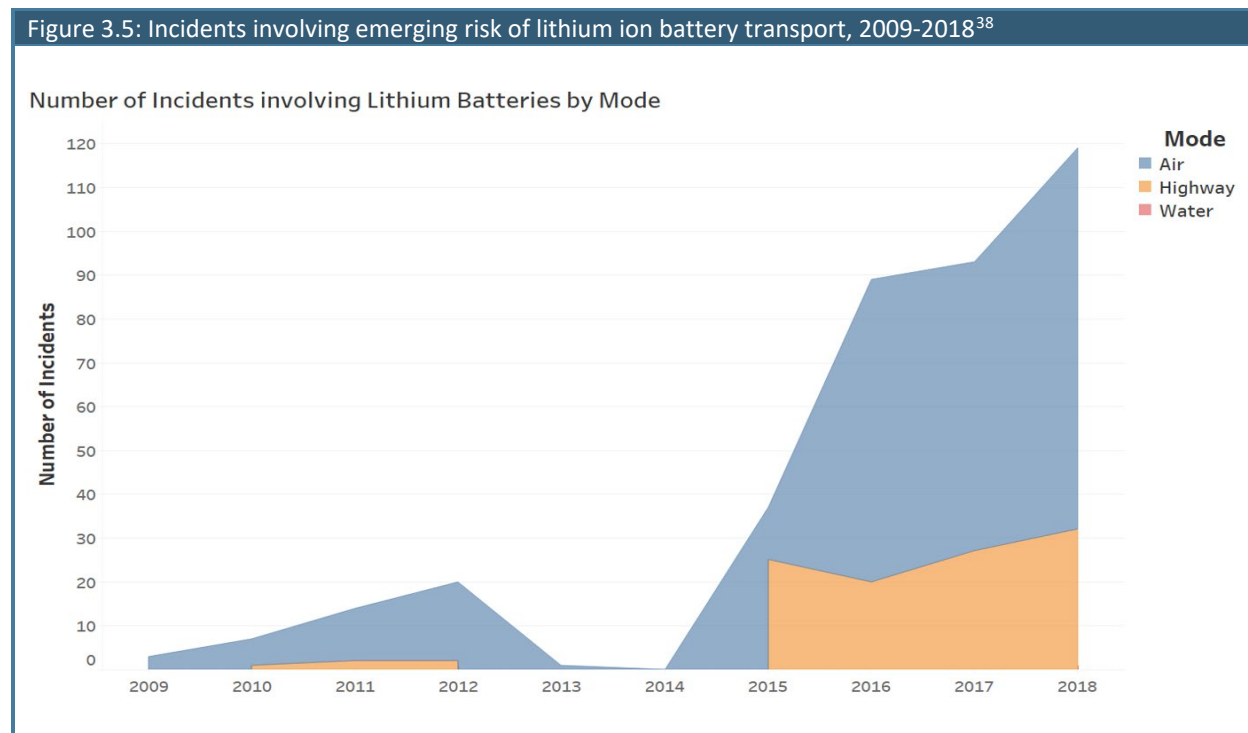
The highway mode of transportation comprises by far the greatest number of incidents, whereas the water mode comprises the least. In fact, water incidents tend to be so few each year that they are only barely visibly represented in Figure 3.4 relative to the annual totals for air, highway, and rail incidents.



³⁷ PHMSA Incident Database (counting unique report numbers by mode_of_transportation for each year from 2009-2018).

3.5 Incident data and emerging hazmat risks

Using incident data, PHMSA has also identified emerging hazmat risks including the transportation of lithium ion batteries. Figure 3.5 demonstrates the substantial increase in the number of lithium battery incidents over the reporting period (2015-2018) relative to preceding years.



Given their prevalence in consumer technology and broad application and use, the transportation of lithium batteries is likely to continue to pose safety risks. For this reason, PHMSA, FAA, and the Office of the Secretary of Transportation are leading new initiatives, such as the Lithium Battery Air Safety Advisory Committee, to identify and reduce these safety risks.³⁹ Specifically, Section 333(d) of the FAA Reauthorization Act of 2018 mandated the Secretary of Transportation to establish this Federal advisory committee, composed of representatives of the Federal Government as well as representatives of lithium battery and product manufacturing industries, air carriers, and shippers, among other industries.⁴⁰

OHMS is also addressing these risks by targeting revisions to lithium battery regulations in the HMR through rulemakings, including Harmonization With International Standards (HM-2150)⁴¹ and Enhanced

³⁸ PHMSA Incident Database (counting unique report numbers where identification_number = UN3481).

³⁹ Lithium Battery Air Safety Advisory Committee, <https://www.phmsa.dot.gov/hazmat/rulemakings/lithium-battery-air-safety-advisory-committee>.

⁴⁰ FAA Reauthorization Act of 2018, Pub. L. No. 115-254, <https://www.congress.gov/115/bills/hr302/BILLS-115hr302enr.pdf>.

⁴¹ Hazardous Materials: Harmonization with International Standards, <https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=202004&RIN=2137-AF32>.

Safety Provisions for Lithium Batteries Transported by Aircraft (HM-224I), which was mandated by the FAA Reauthorization Act of 2018.⁴²

Unlike lithium batteries, some emerging hazmat risks are not represented in PHMSA's incident data, such as the possible future transport of LNG by rail. Historically, the HMR prohibited the transport of LNG by rail, but there was also a lack of demand and business opportunity to justify doing so.⁴³ Thus, there have been no incidents involving LNG transported by rail reported to PHMSA.⁴⁴ Yet, in the case of LNG transported by rail, PHMSA identified this emerging hazmat risk based on (1) its issuance in December 2019 of a special permit⁴⁵ authorizing transport LNG by rail by a special permittee in existing DOT113C120W tank cars between Wyalusing, PA, and Gibbstown, NJ, and (2) adopting in July 2020 amendments to the HMR authorizing transportation of LNG by Rail in DOT113C120W9 tank cars.⁴⁶

3.6 Top consequence hazardous materials and the normalized hazard rating

In addition to emerging hazmat risks, PHMSA has also identified the hazardous materials that have been linked to the most serious consequences in terms of deaths and major injuries relative to exposure. OHMS periodically reviews the incident data to explore, develop and refine methodologies that illustrate which hazardous materials are most likely to be involved in death and major injury relative to how much is transported and how far they are transported. Similar (but not identical) reporting, covering the periods of 2005-2009 and 2010-2014, is available on the PHMSA website.⁴⁷ The specific methodology presented here has limitations, but it provides one potential indicator for identifying these "top consequence" hazardous materials.

This indicator is called the "normalized hazard rating," and is calculated in a few steps. DOT's 2016 guidance on the economic Value of a Statistical Life (VSL) uses a coefficient of 0.266 for the injury class of MAIS 4, "Severe," so 0.266 is used to weight the severity of major injuries downward relative to the severity of deaths, which has a coefficient of 1.⁴⁸ First, calculate the product of 0.266 and the total number of major injuries for each hazardous material. Second, add this product to the total number of deaths for each hazardous material. Third, to normalize by exposure, divide the resulting sum by U.S. Census Commodity Flow Survey (CFS) estimates for million ton-miles transported. Lastly, multiply by 1000 as a neutral way to change the scale of the normalized hazard rating. Please note, the normalized hazard rating is not an index where figures are relative to 1, 10, 100 or some other index baseline.

⁴² Hazardous Materials: Enhanced Safety Provisions for Lithium Batteries Transported by Aircraft, <https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=202004&RIN=2137-AF20>.

⁴³ Hazardous Materials: Liquefied Natural Gas by Rail, Docket No. PHMSA-2018-0025 (HM-264), <https://www.federalregister.gov/documents/2020/07/24/2020-13604/hazardous-materials-liquefied-natural-gas-by-rail>.

⁴⁴ PHMSA Incident Database (query including "Rail" for mode_of_transportation and "1972" for identification_number).

⁴⁵ DOT-SP 20534, <https://www.regulations.gov/document?D=PHMSA-2019-0100-3006>.

⁴⁶ Liquefied Natural Gas by Rail, 85 FR 44994 (July 24, 2020), <https://www.govinfo.gov/content/pkg/FR-2020-07-24/pdf/2020-13604.pdf>.

⁴⁷ Top Consequence Reports, <https://www.phmsa.dot.gov/hazmat-program-management-data-and-statistics/risk-and-regulatory-analysis/reports-and-research>.

⁴⁸ Revised Departmental Guidance on Valuation of a Statistical Life in Economic Analysis, U.S. Department of Transportation (August 8, 2016), <https://www.transportation.gov/office-policy/transportation-policy/revised-departmental-guidance-on-valuation-of-a-statistical-life-in-economic-analysis>.

Limitations of this methodology are identified in the 2017 report, “Top Consequence Hazardous Materials by Commodities & Failure Modes, 2010-2014,”⁴⁹ and they also apply here. These limitations include:

- The formula used to weight “major injuries” assumes that major injuries are 26.6% of the severity of a death, based on the Maximum Abbreviated Injury Scale (MAIS) coefficient for “severe” injuries, per DOT policy in 2016. Different weighting systems could produce different results.
- Ranking hazmat commodities may give a false impression that the commodity itself is a causal factor for a death or major injury in a given incident. Incident data are self-reported, and in some cases, may be misreported. In particular, incident reporting does not indicate that a root cause analysis was conducted.
- The rankings do not incorporate factors that readily indicate risks to the environment; these rankings focus on safety risks as expressed by the prevalence of death and major injury.
- The Commodity Flow Survey (CFS) data used to normalize the hazmat incident data do not cover all of the commodities involved in hazmat incidents. The CFS excluded estimates for commodities that did not meet U.S. Census publication standards. When a certain commodity lacks estimates in the CFS, OHMS also excludes that commodity from being ranked. In addition, OHMS exclude commodities for which their CFS estimate of ton-miles rounds to zero. Further, OHMS excludes commodities that fall below the 10th percentile of the distribution of the CFS estimation for million ton-miles in the 2015-2018 ranking to ensure the ranking favors commodities with high hazard ratings. Otherwise, this list would be dominated by commodities with high normalized hazard ratings driven by the smallest possible volume and one major injury.
- A four or five-year period of analysis is “short” and may be susceptible to overrepresentation of low-probability, high-consequence events, including events which have very little precedent in the overall incident record.

Because of these considerations, PHMSA urges stakeholders to exercise care in interpreting the aggregated results. In particular, PHMSA cautions against equating a commodity’s ranking with safety risk; a commodity’s ranking may not be indicative of the extent of the risks associated with the transport of that commodity. Further, the commodity is just one of many factors to be considered as influencing the occurrence or severity of an incident. PHMSA also cautions against using the rankings as a driver for policy or business decisions.

In Figure 3.6 below, OHMS presents the hazardous materials with the ten highest, normalized hazard ratings over 2015-2018, sorted in descending order. Higher ratings may suggest which hazardous materials have a greater potential for death and major injury consequences, relative to other hazardous materials with lower ratings.

Figure 3.6: Top Consequence Hazardous Materials, Ranked by Normalized Hazard Rating (2015-2018)				
Proper Shipping Name ⁵⁰	Normalized Hazard Rating ⁵¹	Deaths ⁵²	Major Injuries ⁵³	Million Ton-Miles ^{54, 55}

⁵⁰ Proper shipping name is derived from the HMT in 49 CFR § 172.101 and may be abbreviated.

Acrylonitrile, stabilized	47.59	0	56	313
Tetramethylammonium hydroxide solution	6.19	0	1	43
Corrosive liquids, toxic, n.o.s.	5.15	0	6	310
Hydrofluoric acid	3.64	0	1	73
Hydrocarbons, liquid, n.o.s.	2.99	0	1	89
Potassium hydroxide, solution	2.56	2	2	990
Ammonia solution	1.48	1	1	857
Corrosive liquid, basic	1.32	0	2	402
Petroleum gases, liquefied	0.89	3	12	6929
Hypochlorite Solutions	0.69	0	4	1541

As seen in Figure 3.6, from 2015-2018, the hazardous material with the highest, normalized hazard rating was Acrylonitrile, stabilized, a Class 3 flammable liquid with a toxic subsidiary hazard (6.1). The incident data for 2015-2018 also shows that this material was only involved in one incident with death or major injury, which occurred in Maryville, Tennessee on July 1, 2015 as a result of a derailment. However, that one incident resulted in 56 major injuries, which was the greatest number of major injuries in any one incident during the reporting period.

As previously noted, this finding illustrates the potential overrepresentation of low-probability, high-consequence events in this ranking system. The normalized hazard rating for Acrylonitrile, stabilized is more than seven times higher than the second-ranked hazardous material, Tetramethylammonium hydroxide solution.

⁵⁰ Proper shipping name is derived from the HMT in 49 CFR § 172.101 and may be abbreviated.

⁵¹ Normalized Hazard Rating = $1,000 \times [(Fatalities + Major\ Injuries \times 0.266) / \text{Million Ton-Miles}]$. Major injuries are weighted by a factor of 0.266 to align with the U.S. Department of Transportation’s Revised Departmental Guidance 2016. Treatment of the Value of Preventing Fatalities and Injuries in Preparing Economic Analyses, indicating the fraction of the value of a statistical life (VSL) corresponding to “severe” injuries on the Maximum Abbreviated Injury Scale (MAIS), also known as MAIS Level 4.

⁵² PHMSA Incident Database (aggregating Total_Hazmat_Fatalities for each hazardous material listed), using the Hazmat Incident Report Search Tool available at: <https://www.phmsa.dot.gov/hazmat-program-management-data-and-statistics/data-operations/incident-statistics>.

⁵³ *Id.* (aggregating Total_Hazmat_Hosp_Injuries for each hazardous material listed).

⁵⁴ BUREAU OF TRANSPORTATION STATISTICS, U.S. DEPARTMENT OF TRANSPORTATION AND U.S. CENSUS BUREAU, U.S. DEPARTMENT OF COMMERCE, 2017 COMMODITY FLOW SURVEY – HAZARDOUS MATERIALS (2020), Dataset: CFSHAZMAT2017, TableID: CF1700H03, <http://data.census.gov>.

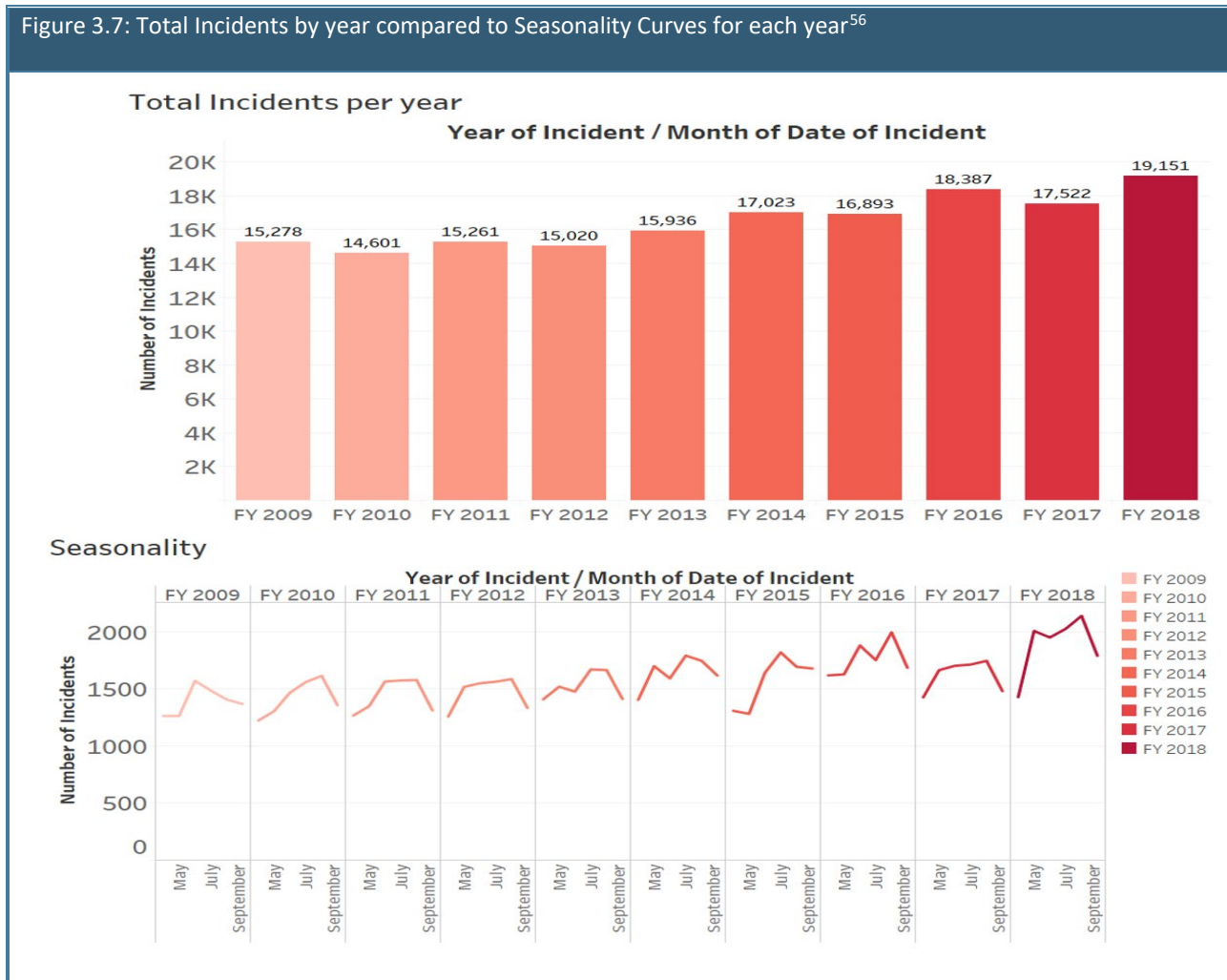
⁵⁵ Hazardous materials with values below the 10th percentile of the distribution for Million Ton-Miles were excluded. In addition, hazardous materials with values for Million Ton-Miles that round to zero or did not meet U.S. Census publication standards were excluded.

3.7 Hazmat incidents by year and seasonality

Figure 3.7 shows the total number of hazardous material incidents by year compared to the seasonality when the incidents occurred.

The upper graph displays the number of incidents by year and illustrates a moderate upward trend. Year to year, the number of incidents varies between 14,601 and 19,151 over a 10-year period. There are various potential factors behind the upward trend that are apparent over the last 5 years. Among the possible reasons are: growing economic activity and greater engagement of the transportation industry in providing incident data to PHMSA. The lower graph identifies the time of year in which the greatest number of incidents have occurred. The historical data shows that summer months tend to have higher numbers of incidents.

Figure 3.7: Total Incidents by year compared to Seasonality Curves for each year⁵⁶



⁵⁶ PHMSA Incident Database (counts of unique incidents by year and counts of unique incidents by the month of date_of_incident).

Section IV

*Hazardous Materials Regulations,
Criteria, Orders, and Special
Permits Summary*



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



4.1 Overview of PHMSA's Hazmat Regulatory Program

From 2015-2020, different legislation and Executive Orders have shaped PHMSA's hazmat regulatory program. In 2015 and 2016, PHMSA's hazmat regulatory program focused its efforts on addressing congressional mandates from the FAST Act,⁵⁷ the PIPES Act of 2016,⁵⁸ the Hazardous Materials Safety Improvement Act of 2012,⁵⁹ and the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011.⁶⁰

In early 2017, the President issued three executive orders that directed agencies to take certain actions targeted at implementing regulatory reform. See Executive Order (EO) 13771, "Reducing Regulation and Controlling Regulatory Costs;" EO 13777, "Enforcing the Regulatory Reform Agenda;" and EO 13783, "Promoting Energy Independence and Economic Growth." In order to implement the President's regulatory reform agenda, PHMSA (as part of broader DOT effort) engaged the public to help identify rulemaking efforts that would alleviate unnecessary regulatory burdens, spur economic activity, and foster innovation, in a manner that is consistent with PHMSA's safety mission. In April 2019, the President issued EO 13868, "Promoting Energy Infrastructure and Economic Growth," which directed PHMSA to, consistent with applicable law and subject to the availability of appropriations, issue a final rule authorizing the transportation of liquefied natural gas by rail. Additionally, in October 2018, the FAA Reauthorization Act of 2018⁶¹ mandated requirements for PHMSA regulation on the transport of lithium batteries by air to harmonize with the ICAO TI.⁶² During the COVID-19 crisis, PHMSA has continued to alleviate unnecessary regulatory burden in a manner consistent with EO 13924, "Regulatory Relief to Support Economic Recovery."

In addition to congressional mandates and Executive Orders, PHMSA also promulgated regulations in response to NTSB Recommendations; the "conversion" of long-standing special permits into the HMR; streamlining and harmonizing regulations; and addressing emerging safety risks such as the increased transportation of energy products.

Further, PHMSA works closely with the Office of the Secretary of Transportation to ensure that PHMSA's regulatory program complies with the APA and Departmental rulemaking requirements at 49 CFR part 5. PHMSA monitors the safety performance of the transportation system, including incident and accident reports, and international regulatory developments. PHMSA also evaluates requests for new or amended regulations received from stakeholders through petitions for rulemaking in accordance with the 49 CFR §§ 106.95 and 106.100, the regulated industry, other government agencies (USCG, EPA, OSHA, Bureau of Alcohol, Tobacco, and Firearms (ATF), etc.) and DOT's operating administrations (e.g.,

⁵⁷ The Fixing America's Surface Transportation (FAST) Act of 2015, <https://www.phmsa.dot.gov/legislative-mandates/fixing-americas-surface-transportation-fast-act>.

⁵⁸ Protecting our Infrastructure of Pipelines Enhancing Safety (PIPES) Act of 2016, <https://www.phmsa.dot.gov/pipes-act>.

⁵⁹ Moving Ahead for Progress in the 21st Century and HAZMAT Safety Improvement Act of 2012, <https://www.phmsa.dot.gov/legislative-mandates/map-21-and-hazmat-safety-improvement-act-2012>.

⁶⁰ Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, <https://www.phmsa.dot.gov/legislative-mandates/pipeline-safety-act/pipeline-safety-regulatory-certainty-and-job-creation-act>.

⁶¹ FAA Reauthorization Act of 2018, Pub. L. No. 115-254, <https://www.congress.gov/115/bills/hr302/BILLS-115hr302enr.pdf>.

⁶² Technical Instructions for The Safe Transport of Dangerous Goods by Air (Doc 9284). ICAO, <https://www.icao.int/safety/dangerousgoods/pages/technical-instructions.aspx>.

FAA, FMCSA, FRA). Appendix B includes a comprehensive list of rulemaking actions submitted to the Federal Register since 2015.

4.2 Special permits

A special permit sets forth alternative requirements, or variances, to the requirements in the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Federal hazardous materials transportation law (Federal hazmat law; 49 U.S.C. § 5101 et seq.) authorizes the US Department of Transportation (DOT) to issue such variances in a way that achieves 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. PHMSA's procedures governing applications for and issuance of special permits are set forth in 49 CFR Part 107, Subpart B.

The Special Permits Program also aims to ensure that holders of special permits are "fit" to conduct the activity allowed under the special permit.

On each Special Permit issued, PHMSA lists the application as the basis of that permit. Each successful application for a special permit contains all information required in 49 CFR 107.105 including the legal basis under 49 CFR 107.105(d).

A comprehensive list of Special Permits issued in 2015-2018 can be found in Appendix A of this document. For each special permit, PHMSA maintains a public record of the permit, along with any required mitigations or other conditions of transport on its web site.⁶³ Further, as every special permit is based on a public record that begins with publication of a petition from the prospective special permit holder, additional information can be obtained using PHMSA's applications portal.⁶⁴ While Appendix A explains briefly the basis for each special permit, a full examination of the special permit conditions and supporting materials may be necessary to fully understand how PHMSA was able to make a determination regarding safety. 49 U.S.C. 5117 requires that in order to issue a special permit, the safety level of transportation under the special permit will be at least equal to the safety level required by Federal hazmat law, or consistent with public interest and with Federal hazmat law, if a required safety level does not exist.

63 <https://cms7.phmsa.dot.gov/approvals-and-permits/hazmat/special-permits-search>.

64 <https://portal.phmsa.dot.gov/PHMSAPortal2>.



Section V

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



5. 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

5.1 Overview

This section 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 HMR. PHMSA works closely with the FAA, FMCSA, FRA, and USCG to extend enforcement capabilities and reach, as well as to engage in outreach with various stakeholders and regulated entities.

OHMS provides an overview of PHMSA inspections and inspection results, such as tickets and warning or advisory letters, in the Figure 5.1 below. In section 5.2, OHMS provides a summary of the PHMSA / VOLPE Enforcement Effectiveness Assessment, and in section 5.3, a summary of Multi-Agency Strike Force Operations (MASFOs). In sections 5.4, 5.5, 5.6, and 5.7, respectively, OHMS provides a summary of enforcement actions from FAA, FMCSA, FRA, and USCG. In section 5.8, OHMS discusses the facilitation of voluntary compliance.

In this report, PHMSA does not present enforcement data comparatively due to differences that discourage direct comparisons, such as different terminology, authorities, and practices in enforcement programs across PHMSA, FAA, FMCSA, FRA, and USCG. Nevertheless, the greatest number of inspections and violations found were in highway mode due to the inclusion of hazmat inspections conducted by thousands of enforcement officers under the Motor Carrier Safety Assistance Program (MCSAP).^{65,66}

Figure 5.1 PHMSA Enforcement Numbers (2015-2018)⁶⁷

	2015	2016	2017	2018
Inspections	2,008	2,457	2,471	2,292
Results (Warning or Advisory Letter, Ticket)	697	688	612	675

5.2 PHMSA / VOLPE Enforcement Effectiveness Assessment

In 2015, PHMSA initiated an Enforcement Effectiveness Assessment with the aim of understanding the efficacy of PHMSA enforcement actions as a means of ensuring compliance with safety rules. In order to conduct the assessment, PHMSA convened a working group with diverse representation from across the

⁶⁵ Motor Carrier Safety Assistance Program (MCSAP) Grant, Federal Motor Carrier Safety Administration, <https://www.fmcsa.dot.gov/grants/mcsap-basic-incentive-grant/motor-carrier-safety-assistance-program-mcsap-grant>.

⁶⁶ PHMSA does not tabulate civil penalties; a list of civil penalties issued can be found at <https://www.phmsa.dot.gov/field-operations/operational-guidance-policies>.

⁶⁷ Hazmat Intelligence Portal, <https://portal.phmsa.dot.gov/>.

agency and analytical support from DOT's Volpe National Transportation Systems Center (Volpe). The working group presented their findings in March 2018.⁶⁸

Over the ten-year study period (2005-2014), the number of annual hazmat inspection activities fluctuated by over 50%, with a minimum in 2007 and a maximum in 2011. There was a general decline in the percent of inspections resulting in cases or tickets since 2005, with a steep, steady decline in the percent of inspections resulting in cases. On average, over half of hazmat inspections resulted in an enforcement action (i.e., letter, ticket, or case),⁶⁹ implying that a significant proportion of facilities are not in complete compliance with regulations. However, warning letters and tickets for violations that PHMSA considers low risk comprise ~75% of all enforcement actions over the 10-year period included in this study.

To assess the degree to which hazmat enforcement practices may be inconsistent across PHMSA, the study compared patterns of enforcement among regions and citation categories over time. Differences in observed trends could suggest that either changes in industry behavior differed among regions or that enforcement activities are not consistent among regions. Substantial changes in the relative proportion of tickets vs. cases in a single region, but not others, may suggest changes in enforcement processes in that region. For example, there were large variations in the percent of inspections resulting in tickets or cases in the Western region from 2005-2014. Consistent with this observation, the Western region had significant changes in staffing levels over the study period. For some specific regulatory requirements changes in the number of enforcement actions may demonstrate a change in industry behavior. For example, there was a decline in violations related to security plans (new in 2005) over time, suggesting that outreach and training efforts related to this requirement were successful.

OHMS also introduced new regulations during the 10-year study period that may have influenced the observed trends in enforcement actions. The difference between mean Notice of Probable Violation (NOPV) and Order penalties since 2007 has declined, suggesting that changes have in fact decreased penalty adjustments over time.

A more in-depth study will be necessary to evaluate how industry behavior and differences in PHMSA enforcement procedures contribute to other observed differences in enforcement patterns among regions and citation categories. Volpe's analysis of repeated hazmat inspections over time showed that across all inspections, rates of clean inspections decreased slightly with repeated inspections of the same facility. In addition, there was no significant relationship between the number of inspections of a facility during the study period and the size of the penalties; penalty amounts did not decline if facilities were inspected more frequently. Facilities tend to have similar inspection outcomes over time, suggesting that those with violations are likely to have additional violations on repeated inspections.

5.3 Multi-Agency Strike Force Operations

Multi-Agency Strike Force Operations (MASFOs) are a surge enforcement activity involving multiple agencies with varying jurisdictions, authorities, and resources. MASFOs prompt interagency cooperation and information sharing which synergistically enhance each agency's safety and security missions. The

⁶⁸ Hazmat Enforcement Effectiveness Presentation (March 2018).

⁶⁹ PHMSA Office of Hazardous Materials Safety Inspection, Investigation and Enforcement Manual, Field Operation, https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/field-operations/operational-guidance/28551/inspection-investigation-and-enforcement-manual-ver-2-1_0.pdf (providing a more detailed discussion of different enforcement actions).

Coast Guard is typically the lead agency during a MASFO, and participants include federal, state, and local law enforcement, U.S. Customs and Border Protection (CBP), PHMSA, FRA, FMSCA, and TSA.

During CY 2015-2016, USCG’s Container Inspection Training and Assistance Team (CITAT) supported six MASFOs across the country resulting in 1,040 containers inspected during these operations. During CY 2017-2018 USCG continued to support these operations through MASFOs in Houston, TX, Jacksonville, FL, and Baltimore, MD.

5.4 FAA Hazmat Enforcement Summary

FAA uses risk-based approaches to support the oversight of both air carriers and shippers of hazmat. These approaches include the development and implementation of a certificate-based safety management system for oversight of air carriers to identify systemic problems and ensure that air carriers resolve them. For oversight of air shippers, FAA has developed a risk-based, pre-inspection module to effectively screen hazmat shippers and identify high-risk inspectional targets, while continuing to use the HIP and other data sources to develop inspection leads.

FAA publishes a quarterly compilation of the enforcement actions against regulated aviation entities that are closed with either a civil penalty or issuance of a certificate suspension or revocation. This compilation is based on data from FAA’s Enforcement Information System (EIS). For purposes of this reporting, a regulated aviation entity is one that holds a certificate issued by the FAA (e.g., air carrier operating certificate, repair station certificate, pilot school certificate, airport operating certificate) or is a foreign air carrier or other aviation entity regulated under Part 129 of the Federal Aviation Regulations (14 CFR Part 129).

In particular, the following table presents the number of civil penalties assessed for calendar years, 2015-2018, for FAA enforcement action involving hazmat safety. Please note, hazmat safety is only one component of FAA’s broader enforcement authority; these 46 actions represent just 7% of penalty actions reported in FAA quarterly enforcement reports.⁷⁰ PHMSA uses FAA’s quarterly reports and sums the number of quarterly penalty actions and amounts across quarters to calculate the annual number of actions and amount for each year in the reporting period.

	2015	2016	2017	2018
No. Penalty Actions	30	8	3	5
Penalty Amount (\$)	\$1,239,649	\$200,425	\$9,933	\$73,325

5.5 FMCSA Enforcement Summary

FMCSA utilizes both Federal and state partners to carry out the agency’s hazmat enforcement program. Motor Carrier Safety Assistance Program or MCSAP Inspectors conduct roadside inspections on

⁷⁰ FAA Enforcement Quarterly Reports, https://www.faa.gov/about/office_org/headquarters_offices/agc/practice_areas/enforcement/reports/.

commercial motor vehicles and drivers to check that they are in compliance with the Federal Motor Carrier Safety Regulations (FMCSRs) and/or Hazardous Materials Regulations (HMRs). From 2015 to 2018, MCSAP Inspectors conducted roughly 800,000 roadside inspections.

Over the past four years, FMCSA has cited over 150,000 hazmat violations while conducting their roadside inspections. These violations have lead FMCSA to issue over 1,000 Hazardous Material Shipper and or Carrier Enforcement Cases from 2015 to 2018.

The table below breaks down the number of roadside inspections, number of hazmat violations, and number of enforcement cases from 2015 to 2018.

The data was compiled from FMCSA's Motor Carrier Management Information System and FMCSA's Enforcement Management Information System. FMCSA's data is organized in summary reports to give an overview of state and national statistics.

Figure 5.3 FMCSA Enforcement Numbers (2015-2018)⁷¹

	2015	2016	2017	2018
Roadside Inspections	191,730	200,513	197,987	201,368
HM Violations	41,863	38,876	37,904	39,975
HM Enforcement Cases	284	278	281	256

5.6 FRA Enforcement Summary

FRA's Hazardous Materials Division administers a safety program that oversees the movement of hazardous materials (including dangerous goods), throughout the Nation's rail transportation system.

The Office of Railroad Safety promotes and regulates safety throughout the railroad industry. The office executes its regulatory and inspection responsibilities through a diverse staff of railroad safety experts.

The table presents all of FRA inspections from 2015 to 2018. It also presents the number of hazmat violations cited by FRA inspectors and number of cases and violations with civil penalties.

Figure 5.4 FRA Enforcement Numbers (2015-2018)⁷²

	2015	2016	2017	2018
Total Inspections	63,885	68,337	70,150	71,569
HM Violations	1,670	1,880	2,390	3,026
Civil Penalty for HM Shippers	1,352	1,328	1,889	1,722

⁷¹ FMCSA Enforcement Program Data, <https://ai.fmcsa.dot.gov/SafetyProgram/Home.aspx>.

⁷² FRA Enforcement Report FY 2015, 2016, 2017, and 2018, https://railroads.dot.gov/elibrary-search?f%5B0%5D=document_series%3A14836.

FRA compiles an annual civil penalty report summarizing FRA’s civil penalty claims for violations of Federal railroad safety and hazardous materials statutes and regulations. FRA’s annual report also includes: a summary of rail safety and hazmat compliance inspections and audits that FRA or State inspectors conducted, and the enforcement actions FRA recommended; a summary of FRA civil penalty enforcement actions sorted by type of alleged violation and type of respondent, including railroads, hazmat shippers, contractors, and individuals; a discussion of the relationship between inspections and enforcement actions, the number and rate of reportable accidents and incidents, and railroad safety; an analysis of locomotive engineer certification cases brought before FRA; and a list of civil penalty cases FRA closed.

5.7 USCG Enforcement Summary

The U.S. Coast Guard (USCG) inspects cargoes and containers for compliance with the Federal Hazardous Materials Transportation Law (FHMTL), 49 U.S.C. 5101-5127, and the International Safe Container Act of 1977 (ISCA), 46 U.S.C. 80501-80509. Regulations implementing the FHMTL are codified in 49 CFR 107-180. Regulations implementing the ISCA can be found in 49 CFR 450-453. Additionally, USCG inspects containers of general cargo to ensure hazardous materials are not being shipped illegally. This is generally referred to as “undeclared” hazardous materials. Undeclared hazardous material shipments are a leading cause of transportation incidents. In addition, all containers are inspected for structural serviceability. The table below shows the number of USCG inspections and deficiencies for the years of 2015 to 2018.

	2015	2016	2017	2018
Inspections	18,175	17,914	18,424	20,048
Deficiencies	21,855	20,627	21,629	25,324

Note: The number of Inspections and Deficiencies are for the entire US Domestic Fleet.

The USCG publishes a Domestic Annual Report. The report summarizes the statistics and information regarding inspections and enforcement of regulations on U.S. flagged vessels. Included in the report are deficiency and detention rates for each type of inspected domestic vessel, as well as performance metrics for Recognized Organizations that perform work on the U.S. Coast Guard’s behalf. The USCG Marine Information Safety and Law Enforcement (MISLE) database stores vessel population, inspections conducted, and deficiencies issued for the respective calendar years.

5.8 Facilitating Voluntary Compliance with Regulations

Over the past 10 years, PHMSA has engaged in a voluntary systems integrity approach⁷⁴ to work collaboratively with global corporations that have struggled to comply with the hazardous material

⁷³ Flag State Control in The United States, 2019 Domestic Annual Report, <https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/CG-CVC/CVC1/AnnualRpt/2019DomesticAnnualReport.pdf>.

⁷⁴ Systems Integrity Safety Program Introduction, Guidelines and Eligibility Criteria (February 2008), https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/SISP_Policy_Memo_Final.pdf.

regulations based on repeated violations and a substantially high percentage of incidents leading to deaths, injuries, and environmental releases. This voluntary action, in lieu of traditional enforcement actions, has substantially improved compliance, obtained a high level of safety, and leveraged limited investigator resources to significantly enhance the safe transportation of hazardous materials.

PHMSA investigators have established liaisons with senior company officials at organizations such as Walmart, O'Reilly Auto Parts, and Harsco Chemical (major distributor and manufacturer of industrial and specialty chemicals) to correct persistent issues including leaking packages, mixed incompatible materials, unsecured and damaged packages, and undeclared hazardous materials. For example, PHMSA worked closely with senior Walmart officials to review how they prepare and ship over 26,000 regulated hazardous materials involving a network of over 2,100 suppliers across their vast network of stores and distribution centers. Walmart has shipped approximately 195,000 hazardous items in more than 17,000 shipments per week in their reverse logistics operations alone.

Current agreements are in place with large companies to assist their officials to develop corrective actions, establish policies, and track progress over the next several years. PHMSA currently manages the program with just 5 persons. During 2015-2016, PHMSA identified up to 135 corporations that are strong candidates for enrollment in the program, which will have the potential to improve the safety for tens of thousands of other companies and hundreds of thousands of employees.

Section VI



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

6. A summary of outstanding problems in carrying out this chapter in order of priorities

6.1 Overview

This section summarizes outstanding problems in carrying out PHMSA's hazardous materials safety program.

These include challenges in implementing a Risk Management Framework (RMF), out-of-business inspections, job safety during field investigations, timely implementation of Congressional mandates, as documented by the U.S. DOT Office of the Inspector General (OIG), and findings from the Government Accountability Office (GAO). These issues are discussed in sections 6.2-6.6, respectively.

6.2 Risk Management Framework Challenges

OHMS has instituted a Risk Management Framework (RMF). The RMF is an overall organizing structure that will help identify, assess, manage, and monitor hazmat transportation risks. The RMF better positions OHMS as a risk-based, data-driven organization where data is strategically used to help drive program priorities, detect emerging risks, target prevention activities, and evaluate the effectiveness of programs to ensure continuous improvement.

However, PHMSA continues to face challenges in implementing its RMF due to data limitations that affect the timeliness, accuracy, and availability of data regarding hazardous materials transportation. For example, data on the commodity flow of hazardous materials are often considered proprietary, commercially sensitive, and/or security sensitive, and may not be available to PHMSA, or may not be available until the data is collected in official surveys, processed, aggregated, and published, a process which can require multiple years. In addition, incident data, such as data collected in PHMSA's 5800.1 form, is self-reported by the entity in physical possession of the hazardous materials at the time of the incident and may at times be misreported. These data limitations affect the capacity to properly characterize hazmat transportation risk dynamics in space and time; to anticipate emerging risks and prepare to treat those risks; and to define a level of acceptable risk for planning and regulatory purposes.

PHMSA is addressing these challenges by leveraging its Office of Planning and Analytics (OPA) to explore the development of a hazmat transportation risk model, including analysis based on Geographic Information Systems (GIS). In addition, the Office of Hazardous Materials Safety is conducting cognitive research⁷⁵ to improve the accuracy of incident data submitted in the PHMSA 5800.1 form and working to expand the hazmat-specific data collection of the U.S. Census / U.S. DOT Bureau of Transportation Statistics (BTS) Commodity Flow Survey (CFS) to include new hazmat packaging information and annual reporting, rather than reporting just once every five years.

OHMS is also considering an internal re-organization to better align business processes and implement quality management systems for some OHMS programs that currently lack such systems or proper documentation of them.

⁷⁵ Cognitive research is scientific testing, usually through structured interviews, to determine whether questions elicit anticipated and accurate responses.

6.3 Out-of-Business Inspections

Nearly 10% of OHMS inspection visits result in no inspection performed because the location is either out of business, has moved, or does not ship hazardous materials.⁷⁶ Out-of-business inspections result in an inefficient allocation of enforcement resources and high opportunity costs.

PHMSA is currently attempting to remedy this issue by exploring alternative, more up-to-date data sources for business addresses. However, it is not clear which data sources would most effectively reduce out-of-business inspections or be most cost-effective.

6.4 Field Investigations Job Safety

OHMS Field Investigators inspect entities that manufacture or transport hazardous materials, or that rebuild, repair, recertify, recondition, or retest packaging used to transport hazardous materials (other than cargo tanks and tank cars).

Inspections occur at company locations across the country that are remote from the DOT office environment, and often place Field Investigators in proximity to hazardous materials and other safety hazards.

PHMSA performed a comprehensive review of the OHMS Field Operations Manual and identified five key risks⁷⁷:

- Manual states that safety practices are “provided as guidance” that are “to be given due consideration” when working in a hazardous materials environment, and are therefore suggestions rather than mandatory requirements.
- Manual lacks guidance on the identification of hazards or steps to take if hazards are observed when onsite during facility inspections in the field.
- Manual has insufficient emphasis on driving hazards and no clear limits established regarding fatigued driving.
- Manual contains redundant and possibly conflicting Personal Protective Equipment (PPE) requirements.
- Manual does not provide clear guidance on checking atmospheres before entering a confined space.

PHMSA is currently updating the OHMS Field Operations Manual to mitigate these risks.⁷⁸

⁷⁶ PHH Enforcement Inspections and Results, https://portal.phmsa.dot.gov/analytics/saw.dll?Dashboard&PortalPath=%2Fshared%2FPHH%20Enforcement%2F_portal%2FPHH%20Enforcement%20Processing&page=Inspections%20and%20Results.

⁷⁷ OHMS Field Operations Inspection, Investigation and Enforcement Manual, https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/field-operations/operational-guidance/28551/inspection-investigation-and-enforcement-manual-ver-2-1_0.pdf.

⁷⁸ Id.

6.5 Government Accountability Office (GAO) findings

In December 2015, the President signed the FAST Act, which included a provision requiring GAO to conduct an independent evaluation of electronically controlled pneumatic (ECP) brake systems, pilot program data, and the Department's research and analysis on the costs, benefits, and effects of ECP brake systems. Pub. L. 114-94, § 7311. As part of this evaluation, the GAO urged the DOT in October 2016 to provide more information about how modeling results were calculated for the ECP brake requirement analysis in PHMSA's 2015 High-Hazard Flammable Train (HHFT) final rule. The GAO subsequently followed up in a later report⁷⁹ (GAO-17-122) urging the DOT to acknowledge uncertainties in the initial economic analysis; collect more data from railroads using the ECP brakes; publish additional information—e.g., data inputs, assumptions, formulas and simulation results—that would allow a third party to fully assess and replicate the analysis; and ultimately conduct a retrospective analysis of the ECP brakes requirement that could help inform any potential future actions.

In September 2017, DOT finalized an updated report on its computer-based modeling of ECP brakes. It included information on data inputs, formulas, and simulation results that would allow a third party to replicate the analysis. In October 2017, DOT issued an updated RIA. As a result, GAO noted that industry stakeholders and the public can have increased confidence in the updated cost and benefit estimates provided in DOT's updated RIA supporting the 2015 rule. In December 2017, DOT announced that it would rescind the electronically-controlled pneumatic (ECP) brake rule because the updated RIA estimated that the rule's costs would exceed its benefits. DOT subsequently rescinded the ECP brake rule in September 2018. As a result of these connected actions, two recommendations from GAO's 2016 report have been closed, while two remain open due to DOT's rescission of the ECP braking requirement.⁸⁰

In July 2016, GAO issued report GAO-16-715 suggesting PHMSA improve its oversight of the explosives classification process. GAO recommended that the Secretary of Transportation should (1) direct the PHMSA Administrator to develop and implement a systematic approach for improving the guidance PHMSA provides test labs and (2) develop a written plan describing information requirements for PHMSA's new data system. In 2018, the GAO closed these recommendations once it confirmed that PHMSA had developed and implemented a systematic approach to test labs guidance and developed a written data plan.⁸¹ Specifically, PHMSA officials provided GAO with documentation that PHMSA developed and implemented guidance, which was distributed for feedback and comment to explosives test labs. PHMSA also continues to use annual and quarterly meetings with the test labs to determine the need for further guidance. In addition, PHMSA provided its draft software specifications for the Approvals Module as well as the accompanying data dictionary.

⁷⁹ GAO-17-122-19, DOT's Rulemaking on Electronically Controlled Pneumatic Brakes Could Benefit from Additional Data and Transparency (October 2016), <https://www.gao.gov/assets/690/680408.pdf>.

⁸⁰ GAO-17-122, Recommendations for Executive Action DOT's Rulemaking on Electronically Controlled Pneumatic Brakes Could Benefit from Additional Data and Transparency (October 2016), <https://www.gao.gov/products/GAO-17-122>.

⁸¹ GAO-16-715, Recommendations for Executive Action, Better Guidance and Planning Could Enhance DOT's Explosives Classification Oversight (July 2016), <https://www.gao.gov/products/GAO-16-715>.

In November 2016, following PHMSA’s publication of a rule proposing that oil spill response plans be required for HHFTs carrying liquid petroleum oil, GAO issued a recommendation to improve state and local emergency preparedness for rail accidents involving hazardous materials. Specifically, GAO recommended that the Secretary of Transportation develop a process for regularly collecting information from state emergency response commissions (SERCs) on the distribution of the railroad-provided, hazardous-materials-shipping information to local planning entities.⁸²

In February 2019, DOT published the Oil Spill Response Plans and Information Sharing for High-Hazard Flammable Trains final rule.⁸³ As of September 2020, PHMSA indicated to GAO that PHMSA planned to add two questions to the Hazardous Materials Emergency Preparedness grant application asking SERCs whether they receive information on High-Hazard Flammable Train operations and whether they are disseminating this information to local planning entities.⁸⁴ OMB has reviewed and approved the additional information request; however, the recommendation remains open until PHMSA implements the new application form and provides a copy to GAO.⁸⁵

⁸² GAO-17-91, Recommendation for Executive Action, Emergency Responders Receive Support, but DOT Could Improve Oversight of Information Sharing (November 2016), <https://www.gao.gov/products/GAO-17-91> [hereinafter GAO 17-91].

⁸³ PHMSA-2014-0105-0374, Oil Spill Response Plans and Information Sharing for High-Hazard Flammable Trains (February 2019), <https://www.regulations.gov/document?D=PHMSA-2014-0105-0374>.

⁸⁴ See GAO 17-91.

⁸⁵ OMB Control No: 2137-0586, Hazardous Materials Public Sector Training & Planning Grants. Revision of a currently approved collection, 202007-2137-004 (July 2020), https://www.reginfo.gov/public/do/PRAViewICR?ref_nbr=202007-2137-004.

Section VII

*Recommendations for appropriate
legislation*



7. Recommendations for appropriate legislation

PHMSA's mission is to protect people and the environment by advancing the safe transportation of energy and other hazardous materials that are essential to our daily lives. To do this, PHMSA evaluates safety risks, develops and enforces standards, educates shippers, carriers, and other members of the regulated community, and conducts and sponsors research to prevent and mitigate incidents. PHMSA also provides outreach and grants to improve emergency response if an incident does occur.

Specifically, PHMSA has identified five strategic goals that further the agency's mission. They are:

Promote continuous improvement in safety performance including establishment of a framework and approach for implementing Safety Management Systems (SMS);

Invest in safety innovations and partnerships by building PHMSA's innovation and analytics capabilities and through partnerships;

Build greater public and stakeholder trust through proactive and targeted outreach, engagement, responsiveness, and transparency;

Cultivate organizational excellence and a safety culture by investing in employees and key capabilities; and

Pursue operational excellence in our data, processes, and systems through consistent and efficient business processes, and by transforming how PHMSA leverages data to drive decision-making.

PHMSA recommends legislation that furthers these strategic goals and helps the agency serve its mission.

Appendix A: Comprehensive list of Special Permits

Tracking Number	SP Number	Company Name	Disposition Date	Summary
2013090758	15991	DOCKWEILER AG	2/11/2015	To authorize the manufacture, marking, sale and use of non-DOT specification cylinders similar to DOT 4BW for the transportation in commerce of certain hazardous materials.
2013091330	16001	VELTEK ASSOCIATES, INC.	3/15/2016	To authorize exceptions to specification packaging, marking and labeling requirements for certain isopropyl alcohol formulations.
2013110858	16039	UTLX MANUFACTURING INCORPORATED	1/7/2015	To authorize the manufacture, marking, sale and use of non-DOT specification tank cars for the transportation in commerce of anhydrous ammonia.
2014010150	16061	BATTERY SOLUTIONS, LLC	3/13/2015	To authorize the manufacture, marking, sale and use of non-DOT specification fiberboard boxes for the transportation in commerce of certain batteries without shipping papers, marking of the proper shipping name and identification number, or labeling, when transported for recycling or disposal.
2014030341	16118	TOYOTA MOTOR SALES USA INC	1/30/2015	To authorize the transportation in commerce of Hydrogen, compressed in non-DOT specification pressure containers.
2014040198	16137	DIVERSIFIED LABORATORY REPAIR INC.	1/8/2015	To authorize the transportation in commerce of certain infectious substances in special packaging's (freezers).
2014041224	16154	Patriot Fireworks, LLC	3/13/2015	To authorize the transportation in commerce of certain consumer fireworks in a bulk packaging consisting of an ISO-standard freight container in which authorized explosives are packed on wooden or metal shelving systems which are waived from marking and labeling.
2014060052	16181	ARC PROCESS, INCORPORATED	4/23/2015	To authorize the manufacture, marking, sale and use of certain non-DOT specification cylinders similar to a DOT 4B except for the valve protection ring.
2014060840	16188	UTLX MANUFACTURING INCORPORATED	1/7/2015	To authorize the manufacture, marking, sale and use of DOT 120J100W and 120J200W tank cars for transportation of Class 3 flammable and combustible liquids.
2014060843	16190	DIGITAL WAVE CORPORATION	7/9/2015	To authorize the transportation in commerce of certain composite overwrapped cylinders that have been alternatively pressure tested.
2014060845	16191	SOLVAY FLUORIDES, LLC.	1/30/2015	To authorize the transportation in commerce of Iodine Pentafluoride in a non-DOT specification welded, steel non-bulk



Tracking Number	SP Number	Company Name	Disposition Date	Summary
				packaging designed and constructed in accordance with Section VIII Division 1 of the ASME Code.
2014060951	16193	C.H.& I. TECHNOLOGIES, INC.	6/25/2015	To authorize the transportation in commerce of certain DOT 4BW cylinders that are requalified every 10 years instead of every 5 years when used exclusively in non-corrosive service.
2014070005	16198	FLEISCHMANN'S VINEGAR COMPANY, INC.	7/22/2015	To authorize the transportation in commerce of vinegar solution in bulk without certain hazardous communication requirements by highway and rail.
2014071537	16220	AMERICASE, INC.	2/17/2016	To authorize the manufacture, marking and sale of two specially designed packaging's intended for the transport of prototype and low production batteries and equipment containing damaged lithium cells and batteries by road, rail, and vessel.
2014070074	16199	Schlumberger Technology Corporation	3/5/2015	To authorize the transportation in commerce of a toxic flammable gas in a non-DOT specification cylinder
2014070610	16212	ENTEGRIS, INC.	9/18/2015	To authorize the transportation in commerce of certain dual hazard gases without meeting segregation requirements when transported by vessel.
2014071451	16217	FUJI ELECTRIC CO., LTD.	2/6/2015	To authorize the manufacture, mark, sale and use of a neutron radiation detector containing a Division 2.1 flammable gas.
2014082414	16231	THALES ALENIA SPACE	2/6/2015	To authorize the transportation in commerce of certain non-DOT specification containers containing certain Division 2.1, 2.2, and 2.3 liquefied and compressed gases and other certain hazardous materials.
2014082862	16238	ENTEGRIS, INC.	5/21/2015	To authorize the transportation in commerce of certain Division 4.1 and Division 4.2 hazardous materials in alternative packaging's and alternative segregation by cargo vessel.
2014082526	16232	LINDE GAS NORTH AMERICA LLC	6/24/2015	To authorize the transportation in commerce of non-DOT cylinders containing a Division 2.2 compressed gas.
2014082901	16241	LINDE GAS NORTH AMERICA LLC	5/14/2015	To authorize the transportation in commerce of hydrogen chloride, anhydrous in cylinders without pressure relief devices.
2014082871	16239	TRINITY CONTAINERS, LLC	3/12/2015	To authorize the transportation in commerce of certain cargo tank motor vehicles manufactured by Trinity Containers, LLC to the latest edition of the ASME code in effect when the cargo tanks were manufactured.

Tracking Number	SP Number	Company Name	Disposition Date	Summary
2014090390	16251	AIR LIQUIDE AMERICA SPECIALTY GASES LLC	2/6/2015	To authorize the transportation in commerce of certain non-liquefied flammable gases in non-DOT specification cylinders and certain non-liquefied flammable gases in cylinders authorized under DOT-SP 10788 with a volume not to exceed 1.6 L.
2014090808	16253	TRINITY MANUFACTURING, INC.	3/25/2015	To authorize the transportation in commerce of non-DOT specification cylinders (ADR foreign cylinders) requalified in accordance with European Standard BS EN 1803:2002 "Transportable Gas Cylinders – Periodic Inspection and Testing of Welded Carbon Steel Gas Cylinders" in lieu of the requalification requirements in 49 CFR Part 180, Subpart C.
2014091270	16261	DEXSIL CORPORATION	6/17/2015	To authorize the transportation in commerce of small quantities of certain Division 4.3 materials in specially-designed packaging's shipped without labels.
2014100189	16274	MATHESON TRI-GAS, INC.	5/28/2015	To authorize the transportation in commerce of certain Division 4.2 and 4.3 materials in specially-designed packaging's shipped without labels.
2014100184	16273	LOHMAN HELICOPTER, LLC.	1/8/2015	To authorize the transportation in commerce of certain hazardous materials by 14 CFR Part 133 Rotorcraft External Load Operations transporting hazardous materials attached to or suspended from an aircraft, in remote areas of the US only, without being subject to hazard communication requirements, quantity limitations and certain loading and stowage requirements.
2014100647	16292	STANDARD TECHNOLOGIES, LLC	5/7/2015	To authorize the manufacture, mark, sale and use of certain metal non-DOT specification tanks containing certain Class 3 liquids which may be discharged without removal from the motor vehicle.
2014100192	16275	THYSSENKRUPP BILSTEIN OF AMERICA, INC.	4/10/2015	To authorize the transportation in commerce of accumulators meeting the requirements of § 173.306(f)(2) except that the charge pressure may exceed 200 psig and the initial pressure test is waived.
2014100586	16288	C. E. KELLOGG CO., INC.	4/24/2015	To authorize the manufacture, mark, sale and use of a non-DOT specification glass fiber reinforced plastic (FRP) cargo tank similar to a DOT Specification 407/412.
2014100644	16291	PROCTER & GAMBLE DISTRIBUTING LLC	3/27/2015	To authorize the transportation in commerce of certain aerosol containers not fully conforming with specification DOT 2P.

Tracking Number	SP Number	Company Name	Disposition Date	Summary
2014101043	16302	AMETEK INC.	5/21/2015	To authorize the transportation in commerce of gases contained in glass ampules as not subject to the Hazardous Materials Regulations.
2014110152	16316	GREEN AUTO PRODUCTS INTERNATIONAL, INC.	2/6/2015	To authorize the transportation in commerce of certain used DOT 3AL cylinders that contain oxygen, but not necessarily in an amount qualifying as hazardous material.
2014110207	16318	TECHNICAL CHEMICAL COMPANY	8/7/2015	To authorize the manufacture, mark, sale and use of a non-DOT specification packaging conforming in part with specification DOT 2Q.
2014101248	16308	GENO LLC	5/21/2015	To authorize the transportation in commerce of permeation devices that are used in medical devices in lieu of use for calibrating air quality monitoring devices.
2014110404	16321	CHINA OILFIELD SERVICES LIMITED	5/13/2015	To authorize the manufacture, mark, sale, and use of certain non-DOT specification cylinders oil well sampling cylinders containing certain containing certain Class 2 and 3 hazardous materials.
2014110893	16331	AIRGAS SPECIALTY PRODUCTS, INC.	5/7/2015	To authorize the transportation in commerce of DOT specification cylinders, UN cylinders, tube trailers, and multi-element gas containers containing hydrogen chloride without pressure relief devices.
2014110523	16323	FIBRE DRUM SALES, INC.	5/20/2015	To authorize installation of a tested inner receptacle of a composite IBC without subjecting the inner receptacle to a leakproofness test after installation.
2014101227	16307	CROMAN CORP.	1/14/2015	To authorize the transportation in commerce of certain Class 3 hazardous materials contained in non-DOT specification packaging of up to 500-gallon capacity by 14 CFR Part 133 Rotorcraft External Load Operations transporting Class 3 hazardous materials attached to or suspended from a cargo aircraft when other means of transportation is not practicable.
2014111149	16334	ICL PERFORMANCE PRODUCTS LP	5/29/2015	To authorize the one-way transportation in commerce of an ISO tank with a damaged frame.
2014111374	16338	ORION POLYURETHANES SP. Z O.O. S.K.A	5/13/2015	To authorize the transportation in commerce of Division 2.1 hazardous materials in certain DOT Specification 2Q non-refillable inside containers which have been tested by an alternative method in lieu of the hot water bath test.
2014111327	16337	VOLKSWAGEN GROUP OF AMERICA, INC.	1/25/2016	To authorize the transportation in commerce of certain lithium ion batteries



Tracking Number	SP Number	Company Name	Disposition Date	Summary
				each with a net weight greater than 35 kg by cargo aircraft only.
2014120169	16346	FIBA TECHNOLOGIES, INC.	8/7/2015	To authorize the manufacture, mark, sale and use of a non-DOT specification hoop-wrapped carbon fiber reinforced composite gas cylinder with seamless steel liner that meets the ISO Standard 11515, except as specified herein, for the transportation in commerce of certain hazardous materials.
2014120011	16343	DIGITAL WAVE CORPORATION	4/30/2015	To extend the service life of certain permitted cylinders by certifying them by an alternative retest.
2014120260	16348	PREMIER FILLING COMPANY INC	6/10/2015	To authorize the transportation in commerce of Division 2.2 hazardous materials in certain DOT Specification 2Q non-refillable steel inner containers, which have been tested by an alternative method in lieu of the hot water bath test.
2014120405	16351	VSL B.V.	5/21/2015	To authorize the transportation in commerce of certain Division 2.1 and 2.2 hazardous materials in non-DOT specification cylinders manufactured to a foreign specification.
2015010250	16359	THE AIR FORCE UNITED STATES DEPARTMENT OF	5/15/2015	To authorize the transportation in commerce of Division 1.1, 1.2, 1.3, and 1.4 hazardous materials in cargo transport units that are not closed and are not stowed in accordance with the Hazardous Materials Table or the Dangerous Goods List.
2015010973	16371	VOLKSWAGEN GROUP OF AMERICA, INC.	1/25/2016	To authorize the transportation in commerce of lithium ion batteries each exceeding 35 kg net weight when transported aboard cargo aircraft.
2015010332	16361	UNIVERSITY OF CINCINNATI	5/28/2015	To authorize the transportation in commerce of certain Division 6.2 Category A infectious substances in alternative packaging (a freezer). No more than one freezer may be transported.
2015010633	16365	RDS MANUFACTURING, INC.	7/2/2015	To authorize the manufacture, mark, sale and use of non-DOT specification aluminum tanks with capacities not exceeding 95 gallons. Additionally, discharge of Class 3 hazardous materials from the tanks without removing them from the vehicle on which they are transported is authorized.
2015010672	16366	DEPARTMENT OF DEFENSE (MILITARY SURFACE DEPLOYMENT &	12/15/2015	To authorize the transportation in commerce of compressed nitrogen gas (Division 2.2) in non-DOT specification welded steel cylinders.



Tracking Number	SP Number	Company Name	Disposition Date	Summary
		DISTRIBUTION COMMAND)		
2015011123	16374	BRISTOW U.S. LLC	3/27/2015	To authorize the transportation in commerce of certain hazardous materials which exceed the authorized quantity limitations for passenger-carrying aircraft.
2015010975	16372	NORTHROP GRUMMAN SYSTEMS CORPORATION	7/17/2015	To authorize the transportation in commerce of non-DOT specification containers known as heat pipes containing anhydrous ammonia and/or pulse tube coolers containing helium.
2015020006	16394	CELLCO PARTNERSHIP	6/17/2015	To authorize the transportation in commerce of damaged or defective lithium ion cells and batteries and equipment containing these cells or batteries that originally met the requirements under 49 CFR 173.185(c).
2015011020	16373	STAINLESS TANK & EQUIPMENT CO., LLC	8/28/2015	The authorize the manufacture, mark, sale and use of non-DOT specification cargo tank motor vehicles conforming in part to Specification DOT 406, DOT 407, and DOT 412 cargo tank motor vehicles.
2015011131	16375	KALITTA CHARTERS, L.L.C.	4/23/2015	To authorize the carriage of radioactive materials aboard cargo aircraft when the combined transport index exceeds the authorized limit of 200 per aircraft or the separation distance criteria of § 175.702(b) cannot be met.
2015011383	16377	BASF CORPORATION	4/8/2015	To authorize the transportation in commerce of certain non-DOT specification spherical pressure vessels containing boron trifluoride.
2015011501	16390	J. R. HELICOPTERS, L.L.C.	4/24/2015	To authorize the transportation in commerce of certain hazardous materials by 14 CFR Part 133 Rotorcraft External Load Operations transporting hazardous materials attached to or suspended from an aircraft, in remote areas of the US only, without being subject to hazard communication requirements, quantity limitations and certain loading and stowage requirements.
2015011542	16391	HALLIBURTON ENERGY SERVICES, INC	8/7/2015	To authorize the manufacture, mark, sale and use of non-DOT specification cylinders used in oil well sampling.
2015011617	16392	GEM AIR, LLC	3/27/2015	To authorize the transportation in commerce of propane aboard passenger-carrying aircraft within or into remote wilderness areas in the United States.



Tracking Number	SP Number	Company Name	Disposition Date	Summary
2015020048	16395	CHANDLER INSTRUMENTS COMPANY L.L.C.	10/7/2015	To authorize the manufacture, mark, sale and use of non-DOT specification cylinders used in oil well sampling.
2015020689	16410	SNAP-ON INCORPORATED	5/13/2015	To authorize the transportation in commerce of packages containing lithium cells and batteries without the markings required in §§ 173.185(c)(1)(iii) and 173.185(c)(3)(i) when contained in overpacks and transported via motor vehicle between Snap-on, Inc. distribution centers.
2015020851	16413	AMAZON.COM, INC.	5/13/2015	To authorize the transportation in commerce of packages containing lithium cells and batteries without the markings required in §§ 173.185(c)(1)(iii) and 173.185(c)(3)(i) when contained in overpacks and transported via motor vehicle between the grantee and Amazon.com, Inc.'s distribution centers that hold party status to this special permit.
2015050805	16489	COASTAL HELICOPTERS, LLC	6/10/2015	To authorize the transportation in commerce of certain hazardous materials by 14 CFR Part 133 Rotorcraft External Load Operations, transporting hazardous materials attached to or suspended from an aircraft, in remote areas of the US only, without being subject to hazard communication requirements, quantity limitations and certain loading and stowage requirements.
2015030087	16415	VOLKSWAGEN GROUP OF AMERICA, INC.	6/12/2015	To authorize the transportation in commerce of certain Division 2.1 and 2.2 compressed gases in non-DOT specification cylinders manufactured to a foreign specification.
2015021005	16414	Gardner Cryogenics Department of Air Products and Chemicals Inc.	10/21/2015	To authorize the manufacture mark and sell of MC338 cargo tanks built to ASME Section XII standards (version in effect at time of manufacture) and stamping them with a "T" stamp associated with that section rather than the "U" stamp of current Federal Regulations.
2015030145	16416	INOX India Limited	2/8/2016	To authorize the manufacture, mark, sale and use of a DOT specification 4L cylinder to be used for the transportation in commerce of methane, refrigerated liquid, Division 2.1.
2015030178	16417	CB&I AREVA MOX SERVICES, LLC	6/17/2015	To authorize the one-way transportation in commerce of six 48G cylinders containing depleted uranium hexafluoride that do not meet the specifications in ANSI N14.1.



Tracking Number	SP Number	Company Name	Disposition Date	Summary
2015030370	16420	CONSTRUCTION HELICOPTERS, INC.	3/13/2015	To authorize the transportation in commerce of propane by 14 CFR Part 133 Rotorcraft External Load Operations transporting hazardous materials attached to or suspended from an aircraft without being subject to certain hazard communication requirements, quantity limitations and certain loading and stowage requirements.
2015031023	16427	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION	5/15/2015	To authorize the transportation in commerce of certain Class 1 hazardous materials contained within vehicles owned and operated by the United States Military, vehicles owned and operated by the Washington State Patrol, and vehicles owned and operated by other local law enforcement agencies within Puget Sound on passenger-ferry vessels.
2015031052	16429	CONSTRUCTION HELICOPTERS, INC.	5/28/2015	To authorize the transportation in commerce of certain hazardous materials by 14 CFR Part 133 Rotorcraft External Load Operations transporting hazardous materials attached to or suspended from an aircraft. Such transportation is in support of construction operations when the use of cranes or other lifting devices is impracticable or unavailable, without being subject to certain hazard communication requirements and quantity limitations.
2015031097	16432	PANASONIC CORPORATION OF NORTH AMERICA	8/4/2015	To authorize the manufacture, mark, sale and use of specially-designed combination packaging's for damaged or defective lithium ion batteries that originally met the requirements under 49 CFR 173.185(c).
2015040010	16437	AEROJET ROCKETDYNE, INC.	4/30/2015	An emergency special permit to authorize the one-way transportation in commerce of unapproved fireworks for use in a research testing project.
2015040447	16447	KALITTA AIR, L.L.C.	4/23/2015	To authorize the one-time transportation in commerce of certain explosives that are forbidden for transportation by cargo only aircraft.
2015040483	16449	CONOCOPHILLIPS ALASKA, INC.	4/14/2015	To authorize the transportation in commerce of nitrogen, refrigerated liquid, in non-DOT specification vacuum insulated portable tanks manufactured under a current DOT special permit and certain hazardous materials in packaging's that exceed the quantity limit for cargo carrying aircraft.



Tracking Number	SP Number	Company Name	Disposition Date	Summary
2015040636	16452	THE PROCTER & GAMBLE COMPANY	3/10/2016	To authorize the transportation in commerce of small quantities of certain Division 2.2 gases in small, non-refillable, plastic receptacles as not subject to the Hazardous Materials Regulations.
2015040607	16450	UNITED STATES DEPT OF ENERGY	8/7/2015	To authorize the one-way transportation in commerce of stainless steel encased lithium hydride shields in an alternative packaging for disposal.
2015040907	16461	COASTAL HYDROTESTING LLC	1/8/2016	To authorize the use of certain Specification DOT cylinders 3A, 3AA, 3AL and DOT special permit cylinders DOT-SP 9001, DOT-SP 9370, DOT-SP 9421, DOT-SP 9706, DOT-SP 9791, DOT-SP 9909, DOT-SP 10047, DOT-SP 10869, DOT-SP 11692, and DOT-SP 12440 used for the transportation in commerce of certain compressed gases, when retested by a 100% ultrasonic examination in lieu of the internal visual and the hydrostatic retest required in 49 CFR 180.205.
2015041277	16465	ATLAS AIR, INC	5/21/2015	To authorize the one-time transportation in commerce of certain explosives that are forbidden for transportation by cargo only aircraft.
2015050022	16469	ACS UE TESTING LLC	1/8/2016	To authorize the use of certain Specification DOT cylinders DOT 3A, 3AA, 3AL and DOT special permit cylinders DOT-SP 9001, DOT-SP 9370, DOT-SP 9421, DOT-SP 9706, DOT-SP 9791, DOT-SP 9909, DOT-SP 10047, DOT-SP 10869, DOT-SP 11692, and DOT-SP 12440 used for the transportation in commerce of certain compressed gases, when retested by a 100% ultrasonic examination in lieu of the internal visual and the hydrostatic retest required in 49 CFR 180.205.
2015060458	16507	ATLAS AIR, INC	6/17/2015	To authorize the transportation in commerce of certain explosives, by cargo aircraft only, which is otherwise forbidden by the regulations.
2015050809	16490	POE, WILLIAM T & ASSOCIATES INC	5/28/2015	To authorize the transportation in commerce of certain explosives by vessel in an alternative stowage configuration.
2015050361	16474	RETRIEV TECHNOLOGIES INC	12/18/2015	To authorize the manufacture, mark, sale and use of specifically designed packaging's for the transportation in commerce of certain batteries without shipping papers, and certain marking and labeling when transported for recycling or disposal.

Tracking Number	SP Number	Company Name	Disposition Date	Summary
2015050351	16473	AVIAKOMPANIYA VOLGA-DNEPR OOO	5/19/2015	To authorize the transportation in commerce of anhydrous ammonia and lithium ion batteries by cargo only aircraft.
2015050404	16475	AVIAKOMPANIYA VOLGA-DNEPR OOO	8/5/2015	To authorize the transportation in commerce of certain hazardous materials forbidden aboard cargo aircraft only.
2015050417	16477	HYDROID, INC.	3/16/2016	To authorize the transportation in commerce of certain prototype and low production lithium ion batteries contained in equipment.
2015050467	16478	SENTRY EQUIPMENT CORP.	11/13/2015	To authorize the manufacture, mark, sale and use of stainless steel non-DOT specification cylinders designed and manufactured in accordance with ASME Section VIII, Division 1, and which conform in part to specification DOT 3A.
2015050660	16485	ENTEGRIS, INC.	11/18/2015	To authorize the transportation in commerce of adsorbed gases in cylinders conforming to Specifications DOT 3AA and DOT 3E.
2015050641	16482	ANTONOV TA INSHIFIRMA KASHTAN, KOMANDITNE TOVARISTVO	6/10/2015	To authorized the one-time transportation in commerce of certain explosives that are forbidden for transportation by cargo only aircraft.
2015050811	16492	CONSTRUCTION HELICOPTERS, INC.	8/7/2015	To authorize the transportation in commerce of certain hazardous materials by 14 CFR Part 133 Rotorcraft External Load Operations transporting hazardous materials attached to or suspended from an aircraft and 14 CFR Part 135 operations transporting hazardous materials on board an aircraft. Such transportation is in support of construction operations when the use of cranes or other lifting devices is impracticable or unavailable or when aircraft is the only means of transportation, without being subject to certain hazard communication requirements, quantity limitations, packaging and loading and storage requirements.
2015050882	16494	BP Exploration (Alaska) Inc. (BPXA)	5/29/2015	To authorize the transportation in commerce of a corrosive material that exceeds the quantity limitation for cargo aircraft.
2015060053	16498	FIBA TECHNOLOGIES, INC.	10/2/2015	authorizes the manufacture, mark, sale and use of specification DOT 3T cylinders using an alternative heat treatment batch size.
2015060183	16502	KALITTA AIR, L.L.C.	6/10/2015	To authorize the one-time transportation in commerce of certain explosives that are

Tracking Number	SP Number	Company Name	Disposition Date	Summary
				forbidden for transportation by cargo only aircraft.
2015060490	16508	KALITTA AIR, L.L.C.	6/23/2015	To authorize the one-time transportation in commerce of certain explosives that are forbidden for transportation by cargo only aircraft.
2015060254	16503	CONSTRUCTION HELICOPTERS, INC.	6/12/2015	To authorize the transportation in commerce of propane by 14 CFR Part 133 Rotorcraft External Load Operations transporting hazardous materials attached to or suspended from an aircraft without being subject to certain hazard communication requirements, quantity limitations and certain loading and stowage requirements.
2015060283	16504	IDRINK PRODUCTS INC	9/9/2015	To authorize the transportation in commerce of certain used DOT Specification 3AL cylinders and containers that contain carbon dioxide, but not necessarily in an amount qualifying as hazardous material.
2015060491	16509	KALITTA AIR, L.L.C.	6/23/2015	To authorize the one-time transportation in commerce of certain explosives that are forbidden for transportation by cargo only aircraft.
2015060554	16510	APPLE INC	6/18/2015	To authorize the transportation in commerce of lithium batteries in non-DOT specification packaging.
2015060818	16513	BUREAU OF ALCOHOL TOBACCO, FIREARMS & EXPLOSIVES	7/15/2015	An emergency special permit to authorize the one-way transportation in commerce of unapproved fireworks for use in a research testing project.
2015060823	16514	BEST BUY CO INC	9/18/2015	To authorize the transportation in commerce of packages containing lithium cells and batteries without the markings required in §§ 173.185(c)(1)(iii) and 173.185(c)(3)(i) when contained in overpacks and transported via motor vehicle between distribution centers and retail stores that hold party status to this special permit; persons who receive these overpacks and do not offer overpacks under the terms of this special permit do not need party status.
2015061192	16524	QUANTUM FUEL SYSTEMS TECHNOLOGIES WORLDWIDE, INC.	9/7/2016	To authorize the manufacture, mark, sale and use of non-DOT specification fully wrapped fiber reinforced composite gas cylinders that meet ISO 11119-3:2013, except as specified.
2015060944	16516	EXOSENT ENGINEERING, LLC	1/11/2016	To authorize the manufacture, mark, sale and use of non-DOT specification cargo



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				tanks manufactured to ASME Section XII stamped with a "T" Stamp instead of the "U" stamp.
2015061033	16518	MIDWEST HELICOPTER AIRWAYS	9/11/2015	To authorize the transportation in commerce in the U.S. of certain hazardous materials by 14 CFR Part 133 Rotorcraft External Load Operations transporting hazardous materials attached to or suspended from an aircraft. Such transportation is in support of operations when the use of cranes or other lifting devices is impracticable or unavailable or when aircraft is the only means of transportation, without being subject to certain hazard communication requirements, quantity limitations, packaging and loading and storage requirements.
2015061037	16519	SPACE EXPLORATION TECHNOLOGIES CORP.	6/25/2015	To authorize the transportation in commerce of certain hazardous materials that are components of the Falcon Launch Vehicle Flight Termination System (FTS).
2015061143	16521	SENTRY EQUIPMENT CORP.	11/18/2015	To authorize the manufacture, mark, sale and use of stainless steel non-DOT specification cylinders designed and manufactured in accordance with ASME Section VIII, Division 1, and which conform in part to the specification DOT 3A.
2015061193	16525	AIR PRODUCTS AND CHEMICALS, INC.	12/18/2015	To authorize the transportation in commerce of a gas purification apparatus containing certain Division 4.1 and 4.2 hazardous materials in non-DOT specification cylinders (pressure vessels).
2015061191	16523	FIBA TECHNOLOGIES, INC.	12/24/2015	To authorize the manufacture, mark, sale and use of certain DOT specification 3-Series cylinders/tubes, UN pressure receptacles, and Multi-Element Gas Containers (MEGCs) without pressure relief devices.
2015070264	16530	3M COMPANY	10/29/2015	To authorize the transportation in commerce of Specification DOT 4BW cylinders containing certain toxic gases without pressure relief devices.
2015070247	16529	KALITTA AIR, L.L.C.	7/16/2015	To authorize the transportation in commerce of Ammonia, anhydrous in alternative packaging (heat pipes).
2015070229	16528	WORTHINGTON CYLINDER CORPORATION	7/10/2015	To authorize the transportation in commerce of certain DOT Specification 39 cylinders in strong outer packaging's without marking each package with an indication



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				that the inner packaging's conform to the prescribed specifications.
2015070313	16531	NVIDIA CORPORATION	7/22/2015	To authorize the transportation in commerce of lithium batteries in non-DOT specification packaging
2015070362	16532	KINSBURSKY BROS. SUPPLY, INC.	1/8/2016	To authorize the transportation in commerce of certain damaged or defective lithium ion cells and batteries and lithium metal cells and batteries in alternative packaging.
2015070542	16533	NATIONAL AIR CARGO GROUP, INC.	7/22/2015	To authorize the transportation in commerce of certain explosives that are forbidden for transportation by cargo only aircraft.
2015070713	16534	NATIONAL AIR CARGO GROUP, INC.	7/24/2015	To authorize the transportation in commerce of certain explosives that are forbidden for transportation by cargo only aircraft.
2015070861	16535	NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	12/24/2015	To authorize the transportation in commerce of non-DOT specification carbon composite overwrapped cylinders containing compressed nitrogen.
2015070939	16536	FIBA TECHNOLOGIES, INC.	9/30/2015	To authorize the DOT 3AA, 3AAX and DOT 3T specification cylinders using an alternative tensile test specimen for batch acceptance.
2015071405	16538	VEOLIA ES TECHNICAL SOLUTIONS, L.L.C.	9/3/2015	To authorize the one-way transportation in commerce of 100 grams of dimethyl 1,1'-azobis(1-cyclohexanecarboxylate) by highway for disposal.
2015080005	16540	GAZ LIQUEFIES INDUSTRIE DBA G.L.I. ETS CITERGAZ	12/16/2015	the manufacture, mark, sale and use a specification UN portable tank conforming to the requirements specified in § 172.102(c)(7) portable tank code T50 that has been designed, constructed, certified, and stamped in accordance with the latest edition of Section VIII, Division 1 of the ASME Code with a design margin of 3.5:1. The portable tank is used for the transportation in commerce of certain Division 2.3, Class 3, Division 6.1, and Class 8 materials.
2015080364	16545	VEOLIA ES TECHNICAL SOLUTIONS LLC	2/4/2016	To authorize the transportation in commerce of certain riot control agents and fireworks to a disposal facility.
2015080509	16547	GATEWAY FIREWORKS DISPLAYS	8/28/2015	To authorize the one-time, one-way transportation of unapproved fireworks from Garden City, GA to storage in Illiopolis, IL.
2015081115	16559	HTEC HYDROGEN TECHNOLOGY &	8/12/2016	To authorize the transportation in commerce of certain non-DOT specification

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		ENERGY CORPORATION		fully wrapped carbon-fiber reinforced aluminum lined cylinders containing compressed hydrogen.
2015081028	16555	ADVANCE RESEARCH CHEMICALS, INC.	9/3/2015	To authorize the transportation in commerce of a Division 6.1, Packing Group I, Hazard Zone B material poisonous by inhalation in specially designed UN 1A1 stainless steel drums without the cap seal specified in § 173.227(b)(2)(iii).
2015081118	16560	LIGHTSAIL ENERGY INC	6/3/2016	To authorize the manufacture, mark, sale and use of a non-DOT specification fully wrapped carbon fiber reinforced composite cylinder with a non-load sharing plastic liner for the purpose of transporting certain non-liquefied compressed gases in commerce. This cylinder meets all of the requirements of the ISO 11515 Standard with the exception of the design water capacity and the design safety factor.
2015081230	16563	CALL2RECYCLE, INC.	1/22/2016	To authorize the manufacture, mark, sale and use of UN specification packaging's for the transportation in commerce of damaged, defective, or recalled lithium ion cells and batteries and lithium metal cells and batteries and these cells or batteries contained in equipment.
2015090097	16566	SUNSET HELICOPTER INC	9/25/2015	To authorize the transportation in commerce of certain hazardous materials by 14 CFR Part 133 Rotorcraft External Load Operations transporting hazardous materials attached to or suspended from an aircraft in remote areas of the U.S. only. Such transportation occurs when aircraft is the only means of transportation, without being subject to certain hazard communication requirements, quantity limitations, packaging and loading and storage requirements.
2015090611	16571	CHEVRON USA INC	5/6/2016	To authorize the transportation in commerce of certain hazardous materials which exceed the authorized quantity limitations or are forbidden aboard passenger-carrying aircraft.
2015090406	16569	THE BOEING COMPANY	9/24/2015	To authorize the transportation in commerce of certain explosives that are forbidden for transportation by cargo only aircraft.
2015090774	16572	SAMSUNG AUSTIN SEMICONDUCTOR, L.L.C.	11/13/2015	To authorize the transportation in commerce of nitric acid not exceeding 70% concentration in UN 1H1 drums.



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2015090978	16574	VEOLIA ES TECHNICAL SOLUTIONS LLC	12/18/2015	To authorize the one-time transportation in commerce of certain unapproved fireworks from the Aberdeen Proving Ground military facility located in Aberdeen, MD to Veolia ES Technical Solutions, L.L.C.'s disposal facility located in Sauget, IL for final disposal.
2015091385	16578	SCHLUMBERGER TECHNOLOGY CORP	12/2/2015	To authorize the manufacture, mark, sale and use of non-DOT specification cylinders without pressure relief devices for the transportation in commerce of certain hazardous materials.
2015091524	16580	INTL REPO-DEPO INC	11/12/2015	To authorize the transportation in commerce of an explosive, which is otherwise forbidden by the regulations.
2015091557	16581	INTL REPO-DEPO INC	11/12/2015	To authorize the transportation in commerce of an explosive, which is otherwise forbidden by the regulations.
2015100200	16587	MOBIS PARTS AMERICA, LLC	4/6/2016	To authorize the transportation in commerce of lithium-ion polymer battery assemblies exceeding a net weight of 35 kg when transported aboard cargo aircraft.
2015100087	16584	VISURAY LLC	4/15/2016	To authorize the transportation in commerce of sulfur hexafluoride in a non-DOT specification cylinder, which is part of an oil well downhole logging tool.
2015100570	16596	Great Slave Helicopters Ltd	1/6/2016	To authorize transportation in commerce in the U.S. only of certain hazardous materials by Rotorcraft External Load Operations transporting hazardous materials attached to or suspended from an aircraft without being subject to certain hazard communication requirements, quantity limitations, packaging and loading and storage requirements.
2015100367	16591	THE AIR FORCE UNITED STATES DEPARTMENT OF	4/6/2016	To authorize the transportation in commerce of compressed argon in non-DOT specification cylinders.
2015100285	16590	U.S. Environmental Protection Agency	10/8/2015	To authorize the transportation in commerce of hazardous materials used to support the recovery and relief efforts from and within Lake and Calaveras Counties in California, under conditions that may not meet the Hazardous Materials Regulations (HMR).
2015100470	16592	MJ ASSOCIATES, INC.	1/14/2016	To authorize the transportation in commerce of certain Drug Enforcement Administration (DEA) controlled substances transported for the purpose of disposal.
2015100849	16598	SPACEFLIGHT INC	3/16/2016	To authorize the one-time transportation in commerce of three low production lithium

Tracking Number	SP Number	Company Name	Disposition Date	Summary
				ion batteries contained in equipment (SHERPA spacecraft) that are not of a type proven to meet the criteria in Part III, subsection 38.3 of the UN Manual of Tests and Criteria.
2015101268	16601	SAFC HITECH, INC.	4/22/2016	To authorize the manufacture, mark, sale and use of specially-designed combination packaging's for the transportation in commerce of certain pyrophoric hazardous materials.
2015101270	16602	HYDRITE CHEMICAL CO.	4/15/2016	To authorize the transportation in commerce of nitric acid with concentrations up to 50% in UN 3H1 jerricans and UN 1H1 plastic drums.
2015110270	16606	5-STATE HELICOPTERS, INC	3/25/2016	To authorize the transportation in commerce in the U.S. only of certain hazardous materials by 14 CFR Part 133 Rotorcraft External Load Operations transporting hazardous materials attached to or suspended from an aircraft. Such transportation is in support of construction operations when the use of cranes or other lifting devices is impracticable or unavailable or when aircraft is the only means of transportation, without being subject to certain hazard communication requirements, quantity limitations, packaging and loading and storage requirements.
2015110736	16609	HOLLYWOOD PYROTECHNICS INC	11/16/2015	To authorize the transportation in commerce of fireworks without approved EX numbers
2015110819	16612	UNIPART NORTH AMERICA LIMITED	3/25/2016	To authorize the transportation in commerce of lithium ion batteries exceeding the 35-kg maximum weight per package aboard cargo aircraft only.
2015110770	16610	KALITTA AIR, L.L.C.	11/24/2015	To authorize the one-time transportation in commerce of certain explosives that are forbidden for transportation by cargo only aircraft.
2015111959	16620	WESTEEL CANADA INC.	9/8/2016	To authorize the manufacture, mark, sale and use of non-DOT specification metal Intermediate Bulk Containers for the transportation in commerce of certain Class 3 hazardous materials. Additionally, the Class 3 hazardous materials will be discharged from the IBCs without removing the IBCs from the motor vehicle on which they are transported.



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2015122011	16623	KALITTA AIR, L.L.C.	1/19/2016	To authorize the transportation in commerce of certain explosives that are forbidden for transportation by cargo only aircraft.
2015111515	16618	FARMERS GRAIN COMPANY (INC)	6/15/2016	To authorize the transportation in commerce of anhydrous ammonia in four (4) existing non-DOT specification cargo tanks commonly known as "nurse tanks" and considered an implement in husbandry. The tanks exceed the authorized capacity and are loaded by volume rather than by weight as required by the Hazardous Materials Regulations (HMR).
2015122306	16624	AREVA NP INC	1/8/2016	To authorize the transportation in commerce of helium, compressed, in non-DOT specification pressure containers.
2015122386	16625	PELICAN PRODUCTS, INC.	1/29/2016	To authorize the transportation in commerce of lithium batteries in non-DOT specification packaging.
2015122529	16626	KALITTA AIR, L.L.C.	12/28/2015	To authorize the one-time transportation in commerce of certain explosives that are forbidden for transportation by cargo only aircraft.
2015122601	16627	KOREAN AIRLINES CO LTD	1/25/2016	To authorize the one-time transportation in commerce of certain explosives that are forbidden for transportation by cargo only aircraft.
2015122785	16628	Silk Way West Airlines, LLC	2/4/2016	To authorize the one-time transportation in commerce of certain explosives that are forbidden for transportation by cargo only aircraft.
2016015095	20085	EQ INDUSTRIAL SERVICES, INC	6/24/2016	To authorize the transportation in commerce of untested and unapproved lighters for the purpose of disposal.
2016015175	20159	ELKHORN AVIATION INC	4/25/2016	To authorize the transportation in commerce of certain hazardous materials by 14 CFR Part 133 Rotorcraft External Load Operations transporting hazardous materials attached to or suspended from an aircraft, in remote areas of the US only, without being subject to certain hazard communication requirements, quantity limitations and certain loading and stowage requirements.
2016015176	20182	A123 SYSTEMS LLC	8/3/2016	To authorize the transportation in commerce of lithium cells and batteries tested in accordance with the terms of this special permit
2016015174	20158	PALL CORPORATION	8/31/2016	To authorize the transportation in commerce of an isopropanol solution in non-specification packaging

Tracking Number	SP Number	Company Name	Disposition Date	Summary
2016025209	20205	TIER HOLDINGS, LLC	4/22/2016	To authorize the one-time movement of a tank built in accordance with ASME section VIII Div. 1. 2013 containing no more than 3,500 pounds of sodium metal.
2016025224	20219	COASTAL HELICOPTERS, INC.	4/29/2016	To authorize the transportation in commerce of certain hazardous materials by 14 CFR Part 133 Rotorcraft External Load Operations, transporting hazardous materials attached to or suspended from an aircraft, in remote areas of the US only, without being subject to hazard communication requirements, quantity limitations and certain loading and stowage requirements.
2016025227	20210	ROHM AND HAAS ELECTRONIC MATERIALS LLC	2/18/2016	To authorize the transportation of a pyrophoric, water-reactive organometallic liquid in non-bulk packaging not authorized for the hazardous material concerned.
2016025275	20213	WEST CRYOGENICS, INC.	4/25/2016	To authorize the repair of certain DOT 4L cylinders without requiring pressure testing to the internal jacket.
2016035415	20224	AXALTA COATING SYSTEMS, LLC	9/7/2016	To authorize the transportation in commerce of certain waste paints and paint related materials, Class 3, in metal or plastic pails, packed in roll-off containers.
2016025264	20214	UNIVERSITY OF SOUTHERN CALIFORNIA	5/6/2016	To authorize the transportation in commerce of certain waste hazardous materials over approximately 0.5 mile of public roads without being subject to certain hazard communication requirements.
2016025394	20221	COMET TECHNOLOGIES USA INC.	7/14/2016	To authorize the transportation in commerce of a Division 2.2 gas in a non-DOT specification pressure vessel.
2016035403	20222	TRINITY CONTAINERS, LLC	4/21/2017	To authorize the transportation in commerce of certain DOT Specification MC-331 cargo tanks and cargo tank motor vehicles with a water capacity greater than 3,000 gallons but not greater than 5,400 gallons, manufactured to the DOT MC-331 specification, constructed of non-quenched and tempered ("NQT") steel except that the cargo tanks have any baffle support assembly welded to the inside of the cargo tank without the use of pads.
2016035405	20223	A & P HELICOPTERS, INC.	7/14/2016	To authorize the transportation in commerce of certain hazardous materials by 14 CFR Part 133 Rotorcraft External Load Operations transporting hazardous materials attached to or suspended from an aircraft in remote areas of the U.S. only.

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2016035414	20225	ALASKA AIR TAXI LLC	4/29/2016	To authorize the transportation in commerce of certain Class 1 explosive materials which are Forbidden for transportation by cargo aircraft within the state of Alaska when other means of transportation are impractical or not available.
2016035481	20227	KALITTA AIR, L.L.C.	3/25/2016	To authorize the transportation in commerce of certain explosives that are forbidden for transportation by cargo only aircraft.
2016035525	20232	LEIDOS BIOMEDICAL RESEARCH, INC.	9/21/2016	To authorize the transportation in commerce of live animals infected with Category B infectious substances.
2016045561	20238	BALL AEROSPACE & TECHNOLOGIES CORPORATION	4/29/2016	To authorize the transportation of lithium ion batteries, including lithium polymer batteries, contained in equipment, in non-DOT specification packaging (a manufactured spacecraft)
2016035550	20234	KALITTA AIR, L.L.C.	4/8/2016	To authorize the transportation in commerce of certain explosives that are forbidden for transportation by cargo only aircraft.
2016035551	20235	UNION PACIFIC RAILROAD COMPANY INC	8/3/2017	To authorize the transportation in commerce of flatcars carrying bulk packaging's containing certain Division 4.3 materials without restricting its ability to couple with another railcar while moving under its own momentum.
2016035553	20237	DSM NUTRITIONAL PRODUCTS, INC.	11/23/2016	To authorize the transportation in commerce of bulk packaging's containing Division 4.2 materials without displaying placards.
2016045566	20239	PAKLOOK AIR, INC	1/13/2017	To authorize the transportation in commerce of certain Class 1 explosive materials which 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.
2016035529	20233	NATIONAL AIR CARGO GROUP, INC.	4/6/2016	To authorize the transportation in commerce of certain explosives that are forbidden for transportation by cargo only aircraft.
2016045580	20240	LG CHEM MICHIGAN INC.	9/21/2016	To authorize the transportation in commerce of lithium ion batteries exceeding 35 kg net weight in non-DOT specification packaging via cargo aircraft.
2016045581	20241	SEACOAST HELICOPTERS, LLC	7/14/2016	To authorize the transportation in commerce of certain hazardous materials by



Tracking Number	SP Number	Company Name	Disposition Date	Summary
				14 CFR Part 133 Rotorcraft External Load Operations transporting hazardous materials attached to or suspended from an aircraft, in remote areas of the US only, without being subject to certain hazard communication requirements, quantity limitations and certain loading and stowage requirements.
2016045606	20243	ATLAS AIR, INC	6/8/2016	To authorize the transportation in commerce of Division 1.1 explosives, which are forbidden, by cargo-only aircraft.
2016045608	20244	KALITTA AIR, L.L.C.	4/29/2016	To authorize the one-time transportation in commerce of certain explosives that are forbidden for transportation by cargo only aircraft.
2016045633	20247	TOXIC SUBSTANCES CONTROL, CALIFORNIA DEPARTMENT OF	5/6/2016	To authorize authorizes the transportation in commerce of hazardous materials used to support the recovery and relief operations from and within the California fire disaster areas in Lake, Calaveras and Trinity Counties, under conditions that may not meet the Hazardous Materials Regulations (HMR).
2016045640	20248	Total Feuerschutz GmbH	6/14/2016	To authorize the transportation in commerce of fire extinguishers that have not been tested at the proper pressure.
2016055668	20250	ELI LILLY AND COMPANY	8/10/2016	To authorize the transportation in commerce of certain infectious substances in specially designed packaging (freezers). Due to the opening of a new vaccine research facility, the existing stock of thousands of samples, including infectious substances UN2900, UN2814, and biological substances UN3373 must be moved to the new location. Nearly all of the infectious substances are animal pathogens. We propose to move the samples in their existing packages that are housed in liquid nitrogen or electric freezers at -80C instead of pulling out all the samples and repacking in UN packaging on dry ice. This is a one-time move of approximately 25 miles from Indianapolis, IN to Greenfield, IN. The freezers would be loaded into one or more trucks with electrical outlets such that the freezers could retain temperature to retain the quality of the samples and stability of the material.
2016055669	20251	SALCO PRODUCTS INC.	2/17/2017	To authorize the manufacture, mark, sale and use of manway assemblies constructed from stabilized polyethylene for installation on certain DOT specification cargo tank



Tracking Number	SP Number	Company Name	Disposition Date	Summary
				motor vehicles in transporting certain hazardous materials.
2016045618	20254	P.J. HELICOPTERS, INC.	8/12/2016	To authorize the transportation in commerce in the U.S. only of certain hazardous materials by 14 CFR Part 133 Rotorcraft External Load Operations transporting hazardous materials attached to or suspended from an aircraft and 14 CFR Part 135 operations transporting hazardous materials on board an aircraft.
2016055714	20255	STERICYCLE SPECIALTY WASTE SOLUTIONS, INC.	6/10/2016	To authorize the transportation in commerce of pharmaceutical waste products in special disposal receptacles that are part of the DEA's Secure and Responsible Drug Disposal Act.
2016055747	20257	VEOLIA ES TECHNICAL SOLUTIONS LLC	9/21/2016	To authorize the one-time, one-way transportation of unapproved explosives by motor vehicle.
2016065806	20261	SAFT S.A.	1/6/2017	To authorize the transportation in commerce of prototype and low production lithium ion cells and batteries and lithium metal cells and batteries by cargo-only aircraft.
2016055705	20260	ROGERS HELICOPTERS, INC.	12/23/2016	To authorize the transportation in commerce of certain hazardous materials by 14 CFR Part 133 Rotocraft External Load Operations transporting hazardous materials attached to or suspended from an aircraft, in remote areas of the US only, without being subject to hazard communication requirements, quantity limitations, and certain loading and stowage requirements.
2016065892	20266	ZHEJIANG TIANTAI ZHANTU AUTOMOBILE SUPPLIES CO.,LTD	12/23/2016	To authorize the manufacture, mark, sale and use of a non-refillable, non-DOT specification inside metal container conforming to all regulations applicable to a DOT specification 2Q, except as specified herein, for the transportation in commerce of the materials authorized by this special permit.
2016065904	20268	AUDI Aktiengesellschaft	7/15/2016	To authorize the transportation in commerce of prototype and low production lithium ion batteries that have not passed the UN-required tests and exceed 35 kg net weight via cargo aircraft.
2016065905	20269	TOYOTA MOTORSPORT GMBH	7/15/2016	To authorize the transportation in commerce of lithium ion batteries exceeding 35 kg net weight via cargo aircraft.
2016065939	20272	BALL AEROSPACE & TECHNOLOGIES CORP.	9/21/2016	To authorize the transportation in commerce of low production lithium ion

Tracking Number	SP Number	Company Name	Disposition Date	Summary
				batteries contained in spacecraft via highway transportation.
2016065941	20274	SDV (USA) INC.	11/30/2016	To authorize the transportation in commerce of certain non-DOT specification containers containing certain Division 2.1, 2.2, 2.3 liquefied and compressed gases and other hazardous materials for use in specialty cooling applications such as satellites and military aircraft.
2016065929	20276	SWAGWAY LLC	7/8/2016	To authorize the manufacture, mark, sale, and use of non-DOT specification packaging for battery-powered vehicles containing damaged, defective, or recalled lithium ion batteries by highway.
2016065942	20275	ST LOUIS HELICOPTER LLC	10/19/2016	To authorize the transportation in commerce in the U.S. only of certain hazardous materials by 14 CFR Part 133 Rotorcraft External Load Operations transporting hazardous materials attached to or suspended from an aircraft and 14 CFR Part 135 operations transporting hazardous materials on board an aircraft.
2016065940	20273	ATK LAUNCH SYSTEMS INC.	11/18/2016	To authorize the one-time, one-way transportation of blasting caps that have not been issued an EX approval.
2016075962	20278	TOXIC SUBSTANCES CTRL CAL DEPT	7/8/2016	To authorize authorizes the transportation in commerce of hazardous materials used to support the recovery and relief operations from and within the California fire disaster areas in Kern County, under conditions that may not meet the Hazardous Materials Regulations (HMR).
2016075987	20280	KALITTA AIR, L.L.C.	7/26/2016	To authorize the transportation in commerce of certain explosives that are forbidden for transportation by cargo-only aircraft
2016075999	20283	LG CHEM	11/16/2016	To authorize the transportation in commerce of lithium ion batteries exceeding the 35 Kg maximum weight authorized for transportation by cargo aircraft.
2016076024	20284	SHARPS COMPLIANCE, INC.	8/26/2016	To authorize the manufacture, mark, sale and use of non-DOT specification packaging for the transportation in commerce of certain materials authorized to be disposed of under 21 CFR Part 1317, Subpart B.
2016106371	20351	ROEDER CARTAGE COMPANY, INCORPORATED	12/23/2016	To authorize the transportation in commerce of Acetonitrile and Acetonitrile, crude in dedicated DOT Specification 407 and 412 cargo tanks which are not required to have periodic internal visual inspections.



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2016086107	20303	FARADAY&FUTURE INC	1/18/2017	To authorize the transportation of prototype and low production lithium ion batteries, and vehicles containing these batteries, via cargo-only aircraft.
2016076051	20290	LG CHEM	11/30/2016	To authorize the transportation of lithium ion batteries, exceed the 35 kg weight limitation on cargo aircraft.
2016076028	20288	DEPARTMENT OF DEFENSE (MILITARY SURFACE DEPLOYMENT & DISTRIBUTION COMMAND)	12/23/2016	To authorize the transportation of lithium ion batteries in carry-on luggage that exceed the allowable weight and have a Watt-hour rating greater than 100 Wh.
2016076046	20289	FDC Composites Inc	2/22/2017	To authorize the manufacture, mark, sale, and use of non-DOT specification glass fiber reinforced plastic (GFRP) cargo tank conforming with all applicable requirements for DOT specification 412/407 cargo tanks, except as specified herein.
2016086073	20295	ASSURED WASTE SOLUTIONS, LLC	9/14/2016	To authorize the transportation in commerce of certain Drug Enforcement Agency materials for the purpose of disposal.
2016075994	20292	NUANCE SYSTEMS LLC	11/18/2016	To authorize the manufacture, marking sale and use of a non-specification cylinder used to transport pyrophoric materials in a steel cylinder constructed like a 4B cylinder except as follows: Cylinder head with openings may be attached by bolts and gasket. The cylinder may be constructed without a longitudinal seam. Chemical analysis and mechanical tests of a foreign made material of construction may be performed outside of the United States without further retest when tests results are reviewed by a competent inspector of the US manufacturer and found to meet mechanical and chemical requirements for a specified material of construction.
2016076065	20293	LG CHEM	2/22/2017	To authorize the transportation in commerce of prototype lithium ion batteries by cargo-only aircraft.
2016086079	20296	DENON ELECTRONICS (USA), LLC	8/22/2016	To authorize the transportation in commerce of lithium batteries in non-DOT specification packaging.
2016076066	20294	THE DOW CHEMICAL COMPANY	2/22/2017	To authorize a 5-year periodic hydrostatic pressure test on UN portable tanks used in the transportation of certain hazardous materials to be performed with mineral oil rather than water.



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2016086105	20305	ATLAS AIR, INC	8/22/2016	To authorize the transportation in commerce of certain explosives, by cargo aircraft only, which is otherwise forbidden by the regulations.
2016086090	20297	CODYSALES INC	1/13/2017	To authorize the use of certain DOT specification 3A, 3AA, 3AL, SP9001, SP9370, SP9421, SP9706, SP9791, SP9909, SP10047, SP10869, SP11692, SP12440 cylinders used for the transportation in commerce of certain compressed gases, when retested by a 100% ultrasonic examination in lieu of the internal visual and the hydrostatic retest required in 49 CFR 180.205.
2016086089	20298	ATLAS AIR, INC	8/22/2016	To authorize the transportation in commerce of certain explosives, by cargo aircraft only, which is otherwise forbidden by the regulations.
2016086103	20301	TESLA MOTORS, INC.	12/2/2016	To authorize the transportation in commerce of prototype and low production lithium ion batteries via cargo aircraft.
2016086104	20302	TESLA MOTORS, INC.	3/2/2017	To authorize the transportation in commerce of vehicles containing prototype lithium ion batteries via cargo-only aircraft and cargo vessel.
2016086100	20300	TOXIC SUBSTANCES CTRL CAL DEPT	8/12/2016	To authorize the transportation in commerce of hazardous materials used to support the recovery and relief operations from and within the California fire disaster areas in Monterey County, under conditions that may not meet the Hazardous Materials Regulations (HMR).
2016086108	20306	AVANTOR PERFORMANCE MATERIALS INTERNATIONAL, INC.	2/17/2017	To authorize the transportation in commerce of nitric acid in glass bottles fully coated in PVC in fiberboard outer packaging's without the use of intermediate packaging or absorbent material.
2016086126	20307	TESLA, INC.	12/2/2016	To authorize the transportation in commerce of low production and prototype lithium ion batteries in excess of 35 kg by cargo-only aircraft.
2016086127	20308	THE DOW CHEMICAL COMPANY	3/8/2017	To authorize transportation in commerce of UN portable tanks which have been periodically pressure tested using materials other than water.
2016086163	20312	S. C. JOHNSON & SON, INC.	11/16/2016	To authorize the transportation in commerce of DOT Specification 2S and non-DOT specification plastic non-refillable inside containers, which are leak tested by an automated in-line pressure check in lieu of



Tracking Number	SP Number	Company Name	Disposition Date	Summary
				the tests specified in the Hazardous Materials Regulations.
2016086153	20310	TOXIC SUBSTANCES CTRL CAL DEPT	8/22/2016	To authorize authorizes the transportation in commerce of hazardous materials used to support the recovery and relief operations from and within the California fire disaster areas in Lake, Calaveras and Trinity Counties, under conditions that may not meet the Hazardous Materials Regulations (HMR).
2016086173	20313	TIER HOLDINGS, LLC	12/1/2016	To authorize the one-way transportation in commerce of sodium in two non-DOT specification portable tanks.
2016086171	20311	ESSEX INDUSTRIES, INC.	12/16/2016	To authorize the manufacture, mark, sale, and use of non-DOT specification cylinders meeting the requirements of 4L cylinders except that the heat transfer from the atmosphere to the contents of the cylinder may exceed 0.0005 as specified herein.
2016086172	20317	ROYLCO, INC.	9/28/2016	To authorize the transportation in commerce of defective lithium batteries.
2016086184	20315	TRANSPORT LOGISTICS INTERNATIONAL, INC.	2/22/2017	To authorize the one-time movement of uranium hexafluoride in non-authorized packaging.
2016096241	20324	BLUEFIN ROBOTICS CORPORATION	1/19/2017	To authorize the transportation of prototype lithium ion and lithium metal batteries exceeding 35 kg in non-specification packaging via cargo-only aircraft.
2016086165	20321	COLMAC COIL MANUFACTURING, INC.	12/23/2016	To authorize the transportation in commerce of methanol in alternative packaging by motor vehicle and cargo vessel.
2016096332	20342	O M P RACING SPA	1/19/2017	To authorize the transportation in commerce of fire extinguishers with a burst pressure lower than that required in the HMR.
2016096240	20323	CAMX POWER LLC	1/5/2017	To authorize the transportation in commerce of prototype and low production lithium ion and lithium metal cells and batteries.
2016096242	20325	SAMSUNG ELECTRONICS AMERICA, INC.	9/15/2016	To authorize the manufacture, mark, sale and use of alternative packaging's for the transportation of recalled lithium ion batteries contained in equipment.
2016096284	20331	C. L. SMITH COMPANY INC	3/20/2017	To authorize the manufacture, mark, sale and use of UN specification packaging for the transportation of damaged/defective lithium ion batteries.
2016086138	20327	NUVERA FUEL CELLS, INC.	2/1/2017	To authorize the transportation in commerce of a hydrogen generation apparatus containing less than 100 kg of

Tracking Number	SP Number	Company Name	Disposition Date	Summary
				Division 4.2, PG II solid material in non-DOT specification stainless steel pressure vessel.
2016096282	20329	ANTONOV,DP	10/21/2016	To authorize the transportation in commerce of anhydrous ammonia in non-DOT specification packaging (spacecraft) authorized in a special permit issued by the competent authority of the United States.
2016096310	20333	ANTONOV,DP	3/3/2017	To authorize the transportation in commerce of certain hazardous materials forbidden aboard cargo aircraft only.
2016096329	20341	AIR PRODUCTS AND CHEMICALS, INC.	9/28/2016	To authorize the transportation in commerce of certain Division 2.1 and 2.2 materials in DOT Specification 3A, 3AA, 3AX, 3AAX and 3T cylinders (tubes) having a water capacity over 125 lbs. that are requalified every ten years rather than every five years. The 3AX, 3AAX, and 3T cylinders (tubes) must be mounted in an ISO frame or on a trailer frame. 3A or 3AA tubes may also be mounted in an ISO frame or tube trailer frame.
2016096336	20343	DR. ING. H. C. F. PORSCHE AG	3/20/2017	To authorize the transportation in commerce of lithium ion batteries that exceed 35 kg by cargo-only aircraft.
2016096313	20334	RELIABLE PHARMACEUTICAL RETURNS, LLC	9/28/2016	To authorize the manufacture, mark, sale and use of non-DOT specification packaging for the transportation in commerce of certain materials authorized to be disposed of under 21 CFR Part 1317, Subpart B.
2016096327	20339	ATLAS AIR, INC	2/14/2017	To authorize the transportation in commerce of certain hazardous materials forbidden aboard cargo aircraft only.
2016096322	20336	GEOTEK CORING INC	10/21/2016	To authorize the transportation in commerce of methane hydrate (frozen methane gas) in non-DOT specification cylinders.
2016106389	20352	SCHLUMBERGER TECHNOLOGY CORP	2/23/2017	To authorize the manufacture, mark, sale, and use of non-DOT specification cylinders for the transportation of Division 2.1 materials.
2016096339	20346	TK HOLDINGS INC.	10/7/2016	To authorize the one-time transportation in commerce of Waste Substance Explosives contaminated with packaging and other debris.
2016106370	20350	STRATO, INC.	1/8/2018	To authorize the manufacture, mark, sell, and use of tank car service equipment manufactured under a previously valid Class F registration.



Tracking Number	SP Number	Company Name	Disposition Date	Summary
2016106356	20348	WRIGHTSPEED, INC.	5/17/2017	To authorize the transportation in commerce of prototype lithium ion batteries by cargo-only aircraft.
2016106360	20356	TESLA, INC.	2/23/2017	To authorize the transportation in commerce of lithium ion batteries exceeding 35 kg by cargo-only aircraft.
2016106394	20355	ENERSYS ADVANCED SYSTEMS INC.	2/23/2017	To authorize the transportation in commerce of lithium batteries that are of a type not proven to meet the requirements of the UN Manual of Tests and Criteria.
2016106388	20354	KALITTA AIR, L.L.C.	10/14/2016	To authorize the transportation in commerce of explosives by cargo only aircraft which is forbidden in the regulations.
2016106427	20358	BATTLE L P GAS CO	10/26/2016	To authorize the transportation of consumer propane tanks in support of post-hurricane clean-up efforts.
2016106442	20362	GRESKO, INC.	4/7/2017	To authorize the use of certain non-DOT specification cylinders in Guam for the transportation in commerce of the materials authorized by this special permit.
2016106441	20361	KEITH HUBER CORPORATION	5/11/2017	To authorize the manufacture, mark, sale, and use of non-DOT specification cargo tanks to transport gasoline.
2016106487	20364	PETER PAN SEAFOODS, INC.	12/5/2016	To authorize the transportation in commerce of fish meal in certain non-specification bags and IBCs.
2016126618	20383	SACRAMENTO EXECUTIVE HELICOPTERS, INC	4/24/2017	To authorize the transportation in commerce in the U.S. only of certain hazardous materials by 14 CFR Part 133 Rotorcraft External Load Operations transporting hazardous materials attached to or suspended from an aircraft and 14 CFR Part 135 operations transporting hazardous materials on board an aircraft.
2016116582	20372	General Defense Corp.	12/28/2016	To authorize the one-time, one way transportation of an explosive by cargo aircraft, which is otherwise forbidden by the regulations
2016116532	20368	KALITTA AIR, L.L.C.	11/16/2016	To authorize the transportation in commerce of certain explosives that are forbidden for transportation by cargo-only aircraft
2016116552	20369	ALEVO INC	12/7/2016	To authorize the transportation in commerce of lithium batteries that have not been tested according to UN 38.3 lithium ion battery tests.
2016116581	20371	LINDE GAS NORTH AMERICA LLC	12/16/2016	to authorize the addition of Nitrous Oxide, Liquefied gas to the list of hazmat authorized for transportation in commerce by the permit.



Tracking Number	SP Number	Company Name	Disposition Date	Summary
2016116576	20370	AMERICAN HONDA MOTOR CO., INC.	12/20/2017	To authorize the transportation in commerce of hydrogen, compressed in non-DOT specification carbon fiber composite tanks.
2016116589	20374	SCANA CORPORATION	5/10/2017	To authorize the transportation in commerce of SCO-II material which has fixed and non-fixed contamination levels on the inaccessible surface area in excess of that authorized.
2016116584	20373	Silk Way West Airlines MMC	12/7/2016	To authorize the one-time transportation in commerce of certain explosives that are forbidden for transportation by cargo only aircraft.
2016126621	20378	LG CHEM	2/24/2017	To authorize the transportation in commerce of lithium ion batteries exceeding 35 kg by cargo-only aircraft.
2016126658	20381	WESTERN INTERNATIONAL GAS & CYLINDERS, INC.	12/1/2017	To authorize the transportation in commerce of limited quantities of acetylene not dissolved in a solvent.
2017037335	20443	ORBITAL SCIENCES CORPORATION	4/28/2017	To authorize the transportation in commerce of certain non-DOT specification containers containing certain Division 2.1, 2.2, and 2.3 liquefied and compressed gases and other certain hazardous materials.
2016126647	20382	NEXTEV USA, INC.	1/19/2017	To authorize the transportation of lithium-ion batteries which exceed the allowable weight (35 kg) by cargo aircraft
2016126665	20385	CMV SRL	12/6/2017	To authorize the manufacture, mark, sale and use of non-DOT specification cylinders that meet the ISO 9809-2:2010 standard except for the design water capacity.
2016126666	20386	SPACEFLIGHT, INC.	4/28/2017	To authorize the transportation in commerce of lithium ion batteries contained in equipment that are not of a type proven to meet the requirements of the UN Manual of Tests and Criteria.
2016126663	20384	BEANWORTHY, LLC	7/14/2017	To authorize the manufacture, mark, sale, and use of packaging's for the purpose of transporting recalled batteries for recycling/disposal.
2016126689	20387	TECHNIP STONE & WEBSTER PROCESS TECHNOLOGY, INC.	5/5/2017	To authorize the transportation in commerce of non-DOT specification bundled cylinders.
2016126723	20390	AMERICAN SECURITY CABINETS INC	12/28/2016	To authorize the manufacture, mark, sale and use of non-DOT specification packaging for the transportation in commerce of certain materials authorized to be disposed of under 21 CFR Part 1317, Subpart B.
2016126718	20389	LG CHEM	3/3/2017	To authorize the transportation in commerce of lithium ion batteries by cargo-

Tracking Number	SP Number	Company Name	Disposition Date	Summary
				only aircraft that are not of a type proved to meet the UN Manual of Tests and Criteria.
2016126724	20391	LINCOLN HEXAGON INC	10/10/2018	To authorize the transportation in commerce of bundled non-DOT specification cylinders without pressure relief devices.
2017016732	20395	CARLETON TECHNOLOGIES, INC.	10/11/2017	To authorize the manufacture, mark, sale and use of a non-DOT specification fully wrapped carbon- fiber reinforced, aluminum-lined composite cylinders conforming to ISO Standard 11119-2, except as specified herein, for the transportation in commerce of Division 2.1 and 2.2 hazardous materials.
2017016737	20396	DIGITAL WAVE CORPORATION	12/15/2017	To authorize the requalification of tanks manufactured under DOT-SP 14951 and 14402 using modal acoustic emission (MAE) test method.
2017016745	20398	FLY 4 YOU, INC.	2/24/2017	To authorize 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.
2017016792	20400	BIC USA INC.	4/7/2017	To authorize the transportation in commerce of lighters in alternative packaging by private or contract motor carrier, or by common carrier in a motor vehicle under exclusive use, between manufacturing sites, distribution centers and retail outlets.
2017016793	20403	DAWS MANUFACTURING COMPANY, INC.	7/12/2017	To authorize the manufacture, mark, sale and use of non-DOT specification aluminum tanks with capacities not exceeding 95 gallons. Additionally, discharge of Class 3 hazardous materials from the tanks without removing them from the vehicle on which they are transported is authorized.
2017016808	20402	ORONO SPECTRAL SOLUTIONS INC.	8/24/2017	To authorize an alternative test method for the determination of the presence of the minimum water content in anhydrous ammonia.
2017016799	20404	ROTECH HEALTHCARE INC.	4/24/2017	To authorize the transportation in commerce of certain hazardous materials in DOT Specification 3AL cylinders that are requalified every ten years rather than every five years using 100% ultrasonic examination.



Tracking Number	SP Number	Company Name	Disposition Date	Summary
2017016849	20405	AIROSOL CO., INC.	2/17/2017	To authorize the transportation of damaged and undamaged aerosol cans in roll off containers for disposal.
2017016876	20406	ATLAS AIR, INC	2/6/2017	To authorize the transportation in commerce of certain hazardous materials forbidden aboard cargo aircraft only.
2017016882	20408	UNITED PARCEL SERVICE CO.	10/18/2017	To authorize the offering for transportation and transportation in commerce (as cargo) of Pilot Rest Modules (PRMs) containing certain hazardous materials required on aircraft under applicable airworthiness regulations for the safety of crew members, and which would be excepted from all provisions of the HMR except as prescribed in the special permit.
2017016900	20409	I-K-I MANUFACTURING CO., INC.	4/10/2017	To authorize the transportation in commerce of plastic aerosols classed as Division 2.1 for the purposes of testing and disposal.
2017026994	20414	LOCKHEED MARTIN CORPORATION	7/26/2017	To authorize the transportation of low production batteries aboard cargo-only aircraft.
2017016817	20412	AMERICAN RAILCAR INDUSTRIES, INC.	9/13/2017	To authorize the transportation in commerce of tanks cars with cast manway covers that have been produced by casting facilities that do not meet the quality assurance program requirements required by AAR MSRP 1002/1003.
2017026939	20413	KALITTA AIR, L.L.C.	2/16/2017	To authorize the transportation in commerce of certain explosives that are forbidden for transportation by cargo only aircraft.
2017027030	20416	ALUMINUM TANK & TANK ACCESSORIES, INC.	9/13/2017	To authorize the manufacture, marking, sale and use of non-DOT specification metal refueling tanks containing certain Class 3 liquids.
2017027029	20417	REDEMPTION, INC	7/26/2017	To authorize 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.
2017026956	20418	CIMARRON COMPOSITES, LLC	3/27/2017	To authorize the manufacture, mark, sale and use of a non-DOT specification fully wrapped carbon fiber reinforced composite cylinder with a non-load sharing plastic liner for the purpose of transporting certain non-liquefied compressed gases in commerce.

Tracking Number	SP Number	Company Name	Disposition Date	Summary
				This cylinder meets all of the requirements of the ISO 11515 Standard.
2017027111	20422	SPORTSMAN'S AIR SERVICE, INC.	7/26/2017	To authorize the transportation in commerce of certain Class 3 liquid fuels contained in non-DOT specification packaging of up to 250-gallon capacity by cargo aircraft within and to remote areas in Alaska where there is no other practical alternative to air shipments.
2017027127	20423	BALL AEROSPACE & TECHNOLOGIES CORPORATION	3/10/2017	To authorize the transportation in commerce of lithium ion and lithium ion polymer batteries that have not been tested according to UN 38.3 and at a state of charge exceeding 30%.
2017027105	20419	INSITU, INC.	3/23/2017	To authorize the transportation in commerce of lithium batteries with a state of charge > 30% but < 50%.
2017027106	20421	THE PROCTER & GAMBLE COMPANY	10/12/2017	To authorize the transportation in commerce of plastic receptacles charged with liquefied gases, or a mixture of a liquefied and compressed gas, and which are exempted from marking, labeling, and shipping papers when shipped by motor vehicle or rail freight.
2017037171	20426	ENERSYS ADVANCED SYSTEMS INC.	7/6/2017	To authorize the transportation in commerce of lithium metal cells that are not of a type proven to meet the requirements of the UN Manual of Tests and Criteria.
2017027148	20425	COMPOSITE ADVANCED TECHNOLOGIES CNG	2/15/2018	To authorize the transportation in commerce of non-DOT specification over wrapped carbon fiber and epoxy composite reinforced cylinder.
2017037172	20427	SPACE SYSTEMS/LORAL, LLC	4/7/2017	To authorize the transportation in commerce of machinery containing more than 500 ml of fuel.
2017037231	20435	ATIEVA USA INC	7/12/2017	To authorize the transportation in commerce of low production lithium ion batteries in excess of 35 kg by cargo-only aircraft.
2017037180	20428	ATLAS AIR, INC	3/29/2017	To authorize the transportation in commerce of certain explosives that are forbidden aboard cargo aircraft only.
2017037217	20432	PROCYON-ALPHA SQUARED, INC.	8/3/2017	To authorize the manufacture, mark, sale and use of specially designed packaging's for the transportation in commerce of damaged, defective or recalled lithium ion cells, batteries and equipment containing these cells and batteries.
2017037226	20433	BRAMMO, INC.	7/26/2017	To authorize the transportation in commerce of prototype and low production

Tracking Number	SP Number	Company Name	Disposition Date	Summary
				lithium ion batteries in excess of 35 kg by cargo-only aircraft.
2016096340	20434	CARDINAL PROFESSIONAL PRODUCTS	11/9/2018	To authorize the transportation in commerce of up to 11.35 kg (25 lbs.) of an organic phosphate compound (2,2 dichlorovinyl dimethylphosphate) in a DOT Specification 4BA240, 4BW240, 3A and 3AA cylinder equipped with an education (dip) tube without using an overpack.
2017037268	20437	Silk Way West Airlines MMC	3/29/2017	To authorize the transportation of explosives by cargo aircraft, which is forbidden by the regulations.
2017037270	20438	TOYOTA MOTORSPORT GMBH	5/22/2017	To authorize the transportation in commerce of prototype lithium ion batteries in excess of 35 kg by cargo-only aircraft.
2017037291	20441	SPACEFLIGHT, INC.	6/9/2017	To authorize the transportation in commerce of low production lithium ion batteries contained in equipment via cargo-only aircraft.
2017037276	20439	Total Feuerschutz GmbH	4/7/2017	To authorize the transportation in commerce of fire extinguishers which do not have the "MEETS DOT REQUIREMENTS" label on them.
2017037289	20440	NELLIS ENGINEERING, INC.	8/3/2017	To authorize the transportation in commerce of lithium ion batteries and lithium ion batteries contained in equipment by cargo-only aircraft.
2017037363	20448	KOREAN AIRLINES CO., LTD	4/12/2017	To authorize the transportation in commerce of certain explosives which are forbidden for transport by cargo only aircraft.
2017037364	20449	ATLAS AIR, INC	4/7/2017	To authorize the transportation in commerce of explosives by cargo only aircraft in amounts forbidden by the regulations.
2017037365	20450	PORSCHE CARS NORTH AMERICA, INC.	8/24/2017	To authorize the transportation in commerce of lithium ion batteries which exceed the allowable 35 kg weight limit by cargo aircraft
2017047406	20452	XALT ENERGY MI, LLC	7/26/2017	To authorize the transportation in commerce of lithium ion batteries exceeding 35 kg net weight by cargo-only aircraft.
2017047460	20456	CALLERY, LLC	8/3/2017	To authorize the transportation in commerce of Division 4.3 materials in packages not required to be labeled.
2017047473	20457	KOREAN AIRLINES CO., LTD	4/21/2017	To authorize the transportation in commerce of certain explosives which are forbidden for transport by cargo only aircraft.

Tracking Number	SP Number	Company Name	Disposition Date	Summary
2017047478	20458	KAVOK EIR, TOV	5/3/2017	To authorize the transportation in commerce of certain explosives which are forbidden for transport by cargo only aircraft.
2017047529	20460	KALITTA AIR, L.L.C.	5/3/2017	To authorize the transportation of explosives forbidden aboard aircraft to be transported aboard cargo-only aircraft.
2017057584	20463	AEROJET ROCKETDYNE, INC.	7/26/2017	To authorize the transportation in commerce of subassembly components of previously approved rocket motors without individual EX classification approvals.
2017047436	20455	LUXFER INC.	11/1/2017	To authorize the manufacture, mark, sale and use of a non-DOT specification fully wrapped carbon fiber composite cylinder with a load sharing aluminum liner for the transport of the hazardous materials authorized in this special permit.
2017026943	20464	CCL CONTAINER CORPORATION	8/3/2017	CCL Container is currently the grantee of DOT-SP 11620. This request is to create a new special permit to accommodate a 27-bar container (DOT-SP 11620 is 32 bar). Proposed differences from DOT-SP 11620: 7a. Packaging – new drawing – CCL Container drawing No. T95609 dated April 28, 2017. 178.33a-8 Tests – must not burst below 27 bar (392 psig) 178.33a-9 Marking – new DOT-SP number. 7b. Operational Controls – The pressure inside the container may not exceed 205 psig at 130°F.
2017057657	20468	KALITTA AIR, L.L.C.	5/25/2017	To authorize the transportation in commerce of anhydrous ammonia by cargo aircraft, which is forbidden in the regulations.
2017057680	20469	SCOTT'S HELICOPTER SERVICE INC	10/12/2017	To authorize the transportation in commerce of certain hazardous materials by 14 CFR Part 133 Rotorcraft External Load Operations, transporting hazardous materials attached to or suspended from an aircraft, in remote areas of the US only, without being subject to hazard communication requirements, quantity limitations and certain loading and stowage requirements.
2017057712	20470	Audi Aktiengesellschaft	9/8/2017	To authorize the transportation in commerce of lithium ion batteries in excess of 35 kg by cargo-only aircraft.
2017057725	20472	AVIAKOMPANIYa UKRAINA-AEROALYANS, PrAT	5/25/2017	To authorize the transportation in commerce of explosives by cargo aircraft which is forbidden by the regulations.



Tracking Number	SP Number	Company Name	Disposition Date	Summary
2017067776	20476	A123 SYSTEMS LLC	10/18/2017	To authorize the transportation in commerce of lithium ion batteries exceeding 35 kg by cargo-only aircraft.
2017057743	20473	ADVANCED CHEMICAL TRANSPORT, INC.	8/23/2017	ACT is seeking relief from 49 CFR 173.242 with regards to shipping a Bulk, UN3191 material in a Trap/canister for Disposal. The relief would allow ACT to package this Non-DOT approved steel, Trap in a Vessel approved, Shipping Container that carries a DNV 2.7-1 certification, but not a DOT UN certification (which is required). Transportation would be by ground to a permitted disposal facility for Treatment.
2017047377	20474	SPACE EXPLORATION TECHNOLOGIES CORP.	9/20/2017	<p>NTO/MMH: The Dragon uses hypergol-fueled Draco engines for attitude maneuvers, roll control and de-orbit burn. Dragon 2's launch escape system provides escape capability using hypergol-fueled SuperDraco engines. The hypergol fuels used are monomethyl hydrazine (MMH) and nitrogen tetroxide (NTO). Please refer to the Transportation Risk Analysis Table 5 for further details on NTO and MMH quantities. NTO is a powerful corrosive, especially when mixed with water and a powerful oxidizer that increases the intensity of fire, although it is non-flammable itself. NTO reacts violently with organic chemicals. MMH is flammable, very toxic by either inhalation or skin absorption and is a potential human carcinogen. MMH produces toxic oxides of nitrogen during combustion and spontaneous ignition occurs in contact with oxidizing materials Both MMH and NTO have been used as rocket propellants for over 50 years and SpaceX follows well established safety and handling procedures. Helium: During flight, helium is used to maintain pressure in various tanks. The prime hazards associated with helium are the potential for asphyxiation in an enclosed environment and high-pressure burst. Helium is not flammable and will not support combustion. All high-pressure helium lines are securely fastened to prevent motion in the event of a leak.</p> <p>Section 3.2 and 3.4 of the Transportation Risk Analysis submitted with this permit application contains Dragon's hypergol (MMH and NTO) and helium tank details. All</p>

Tracking Number	SP Number	Company Name	Disposition Date	Summary
				<p>Dragon components were designed in accordance with Government Standards:</p> <ul style="list-style-type: none"> • CCT-REQ-1130 ISS Crew Transpiration and Services Requirements Document • SSP 50808 ISS Integrated Requirements <p>Tubing, valves, and other components in the Dragon Reaction Control System are described in more detail in the Transportation Risk Analysis Sections 3.4.4 through 3.4.7.</p> <p>The hazardous materials to be transported within Dragon 2 are listed in the Transportation Risk Analysis in Table 5. Quantity derivation details are contained in the Transportation Risk Analysis Section 3.1. Section 3.3 in the Transportation Risk Analysis contains details on ordnance hazards, Section 3.4.6 contains details on battery hazards and Section 3.4.7 contains details on oxygen and nitrox tanks. Eight potential routes are identified for transporting Dragon. Details for each trucking route are provided in Section 2.1 and Appendix A of the Transportation Risk Analysis. The Dragon transport fixture is designed to withstand high g loads defined by NASA SP-8077, Transportation and Handling Loads.</p>
2017067785	20478	THERMO MF PHYSICS LLC	8/28/2017	To authorize the transportation in commerce of sulfur hexafluoride in non-specification packaging.
2017067798	20480	CAROLINA LOGISTICS SERVICES, L.L.C.	9/20/2017	To authorize the transportation in commerce of packages containing lithium cells and batteries without certain package markings when contained in overpacks and transported via motor vehicle and rail.
2017067784	20479	MCABEE, THOMAS O.	7/12/2017	To authorize the manufacture, mark, sale and use of non-DOT specification packaging for the transportation in commerce of certain materials authorized to be disposed of under 21 CFR Part 1317, Subpart B.
2017067814	20481	ADVANCED GREEN INNOVATIONS, LLC	11/28/2017	To authorize the manufacture, mark, sale, and use of non-DOT specification pressure vessels for the transportation of certain Division 4.2 materials.
2017037208	20482	PHOSPHORUS DERIVATIVES INC.	9/13/2017	To authorize the transportation in commerce of residue contained in IBCs where the closure nearest to the hazardous materials cannot be secured.

Tracking Number	SP Number	Company Name	Disposition Date	Summary
2017088146	20519	RICHEMONT NORTH AMERICA, INC.	10/18/2017	To authorize the transportation in commerce of articles containing a Division 2.1 material as de minimis.
2017067925	20488	SAINT LOUIS UNIVERSITY	6/30/2017	To authorize the transportation in commerce of Category B Infectious Substances in non-specification packaging.
2017067950	20490	ROTAK LLC	11/17/2017	To authorize the transportation in commerce of certain hazardous materials which are forbidden for transportation by air or exceed quantity limitations, to be transported by cargo aircraft either inside the aircraft or in external load configuration within the state of Alaska and the 48 contiguous states when other means of transportation are impracticable or not available.
2017067951	20491	ROTAK LLC	11/17/2017	To authorize the transportation in commerce of certain class 1 hazardous materials which are forbidden for transportation by air, to be transported in Part 133 rotorcraft external load operations attached to or suspended from an aircraft, in remote areas of the State of Alaska and the contiguous 48 states, without being subject to hazard communication requirements, quantity limitations and certain loading and stowage requirements.
2017077988	20493	TESLA, INC.	10/12/2017	To authorize the transportation in commerce of lithium ion batteries exceeding 35 kg net weight by cargo-only aircraft.
2017078005	20496	KALITTA AIR, L.L.C.	7/19/2017	To authorize the transportation in commerce of explosives by cargo aircraft which is forbidden in the regulations.
2017078006	20497	KALITTA AIR, L.L.C.	7/18/2017	To authorize the transportation of explosives by cargo aircraft which is forbidden in the regulations.
2017067959	20498	LIGHTING RESOURCES, LLC	9/8/2017	To authorize the manufacture, marking, sale and use of specifically designed packaging's for the transportation in commerce of certain batteries and cells without shipping papers, and certain marking and labeling when transported for recycling or disposal.
2017078012	20499	MED-TURN, INC.	7/18/2017	To authorize the manufacture, mark, sale and use of non-DOT specification packaging for the transportation in commerce of certain materials authorized to be disposed of under 21 CFR Part 1317, Subpart B.
2017078025	20500	CALIFORNIA DEPARTMENT OF	7/18/2017	To authorize the transportation in commerce of hazardous materials used to support the recovery and relief operations



Tracking Number	SP Number	Company Name	Disposition Date	Summary
		TOXIC SUBSTANCES CONTROL		from and within the California fire disaster areas.
2017078046	20502	SPENCER COMPOSITES CORPORATION	11/3/2017	To authorize the manufacture, mark, sale and use of non-DOT specification subsea sampling cylinders (similar to oil well sampling cylinders) without pressure relief device(s).
2017078063	20504	A123 SYSTEMS LLC	12/6/2017	To authorize the transportation in commerce of lithium ion batteries in excess of 35 kg net weight by cargo-only aircraft.
2017078004	20503	DYNO NOBEL INC.	11/3/2017	The proposed special permit would allow UN3099 to be transported with certain Division 1.1B, 1.1D, 1.4B, 1.4D, 1.4S, and 1.5D explosives, Division 5.1 oxidizers, Class 8 materials, and combustible liquids in separate containers secured on the same vehicle as currently allowed by HM 233D (incorporating IME SLP 23).
2017078087	20507	ENERGY, UNITED STATES DEPT OF	11/14/2018	To authorize the transportation in commerce of non-DOT specification cylinders containing compressed hydrogen.
2017088137	20516	GENERAL DEFENSE CORP	8/7/2017	<i>Summary Unavailable</i>
2017078112	20511	ARMOTECH s.r.o.	11/15/2017	To authorize the transportation in commerce of non-DOT specification cylinders containing oxygen.
2017078008	20512	WORLDWIND HELICOPTERS, INC.	10/18/2017	To transportation in commerce of certain hazardous materials by external load with a helicopter in remote areas of the US without being subject to hazard communication requirements and quantity limitations where no other means of transportation is available.
2017088139	20517	ADVANCE RESEARCH CHEMICALS, INC.	11/3/2017	Advance Research Chemicals is requesting a special permit to allow cylinders containing Iodine Pentafluoride UN 2495 to be imported from India. These cylinders are manufactured in accordance with EN 14208 and are Pi stamped. This request would be similar to SP 13359 held by BASF Corporation for transportation of Boron Trifluoride.
2017088148	20520	AVIAKOMPANIYa UKRAINA-AEROALYANS, PrAT	8/17/2017	To authorize the transportation in commerce of certain hazardous materials forbidden aboard cargo-only aircraft.
2017088212	20522	MAINE DEPARTMENT OF TRANSPORTATION	10/11/2017	To authorize the transportation in commerce of private motor vehicles containing certain hazardous materials via passenger ferry vessels.



Tracking Number	SP Number	Company Name	Disposition Date	Summary
2017088223	20524	Wilhelm Schmidt GmbH	3/2/2018	To authorize the manufacture, mark, sale, and use of IBCs intended to contain ammonia solutions and dichloromethane.
2017088204	20525	AVFUEL CORPORATION	1/10/2018	PLEASE SEE ATTACHMENT TO SPECIAL PERMIT APPLICATION (Tracking #2017088204)
2017088256	20527	PROCYON-ALPHA SQUARED, INC.	12/1/2017	To authorize the manufacture, mark, sale, and use of non-DOT specification fiberboard boxes for the transportation in commerce of certain batteries without shipping papers, marking of the proper shipping name and identification number or labeling, when transported for recycling or disposal.
2017088290	20531	GENERAL ATOMICS	12/1/2017	To authorize the transportation in commerce of low production lithium batteries in excess of 35 kg by cargo-only aircraft.
2017098370	20540	LINDE GAS NORTH AMERICA LLC	11/17/2017	To authorize the transportation in commerce of DOT specification 3A and 3AA cylinders containing certain hazardous materials after previously containing hydrogen fluoride.
2017098373	20541	ISGEC HEAVY ENGINEERING LTD.	1/19/2018	To authorize the manufacture, mark, sale, and use of DOT specification tank cars that have been inspected outside of the United States.
2017098389	20543	SODASTREAM USA, INC.	12/18/2017	To authorize the transportation in commerce of certain cylinders that are authorized to be requalified every 10 years.
2017098422	20546	DEPARTMENT OF DEFENSE (MILITARY SURFACE DEPLOYMENT & DISTRIBUTION COMMAND)	3/6/2018	To authorize the transportation in commerce of batteries in metal drums or boxes as strong outer packaging's.
2017098424	20547	FISHER SCIENTIFIC COMPANY LLC	12/6/2017	To authorize the one-time transportation of nitric acid without tightly closed intermediate inner packaging's cushioned with an absorbent material.
2017098434	20548	CONSUMER PRODUCT SAFETY COMMISSION, UNITED STATES	9/28/2017	To authorize the transportation in commerce of certain packages that are not closed in accordance with the packaging manufacturer's closure instructions.
2017098462	20549	CORNERSTONE ARCHITECTURAL PRODUCTS LLC	1/10/2018	To authorize the manufacture, marking, sale and use of non-DOT specification fiberboard boxes for the transportation in commerce of certain batteries without shipping papers, marking of the proper shipping name and identification number or labeling, when transported for recycling or disposal.

Tracking Number	SP Number	Company Name	Disposition Date	Summary
2017098423	20550	NORTHSTAR TREKKING	12/1/2017	As a part 135 and 133 helicopter operator NorthStar is seeking authorization to transport in commerce, certain hazardous materials by cargo aircraft, to include part 133 rotorcraft external loads in remote areas of the united states without being subject to hazard communication requirements, quantity limitations, and certain loading and stowage requirements. the regulations NorthStar is seeking to be exempted from are 49 CFR 172.101 column (9B), 172.204(c)(3), 173.27 (b)(2) and 175.30 (a) (1) in that explosives are forbidden by cargo aircraft, 172.200 and 172.300 in that shipping papers and certain marking requirements would be waived for other than Class 1 materials, Part 173 in that certain packaging requirements are waived, and 175.75 in that alternative stowage is authorized.
2017098481	20552	CROWLEY LINER SERVICES, INC.	9/26/2017	To authorize the transportation in commerce of vehicles with fuel tanks containing greater than 25% of their capacity by cargo vessel.
2017098516	20554	PRAXAIR, INC.	9/29/2017	To authorize the transportation in commerce of oxygen, refrigerated liquid in MC 338 cargo tanks that are not equipped with an on-vehicle remotely controlled self-closing shutoff valve as required at §178.338-11(c).
2017108522	20556	SAFT AMERICA INC	11/17/2017	To authorize the transportation in commerce of lithium ion batteries in excess of 35 kg by cargo-only aircraft.
2017108610	20567	OMNI TANKER PTY. LTD.	6/1/2018	To authorize the manufacture, mark, sale, and use of non-DOT specification cargo tanks and cargo tank motor vehicles.
2017098518	20555	AKZO NOBEL FUNCTIONAL CHEMICALS LLC	10/11/2017	To authorize the transportation in commerce of a cargo tank containing diethylaluminim dichloride residue which has a failed valve.
2017108541	20558	Puerto Rico Public Service Commission	10/4/2017	To authorize the transportation in commerce of fuel by persons conducting operations under the direction of the Puerto Rico Public Service Commission within the Hurricane Maria emergency and disaster areas of Puerto Rico.
2017108537	20561	HILLWOOD AIRWAYS, LLC	10/24/2017	To authorized the one-time transportation of explosives forbidden aboard cargo-only aircraft.



Tracking Number	SP Number	Company Name	Disposition Date	Summary
2017108572	20562	LINDE LLC	10/6/2017	To authorize the transportation in commerce of non-DOT specification cargo tanks containing oxygen, refrigerated liquid by vessel.
2017108578	20563	AIRGAS USA, LLC	10/12/2017	To authorize the transportation in commerce of a 4AA80 cylinder of ammonia anhydrous which has a leak in the valve base.
2017108608	20566	UNIVERSITY OF LOUISIANA AT LAFAYETTE	1/19/2018	To authorize the transportation in commerce of category B infectious substances.
2017108618	20568	Environmental Protection Agency, Region 2	10/16/2017	To authorize the transportation in commerce of non-radioactive hazardous materials to staging areas within 50 miles of the point of origin by persons conducting operations under the direction of and under alternative safety requirements imposed by the grantee to this special permit within the Hurricane Maria emergency and disaster areas of Puerto Rico and United States Virgin Islands.
2017108668	20571	CATALINA CYLINDERS, INC.	2/13/2018	To authorize the manufacture, mark, sale, and use of non-DOT specification cylinders meeting the requirements of ISO 11119-2, except as specified in the special permit.
2017108669	20572	Environmental Protection Agency Region 9	10/23/2017	To authorize the transportation in commerce of hazardous materials in support of the recovery and relief operations from and within the California fire disaster areas in Northern California under conditions that may not meet the Hazardous Materials Regulations (HMR).
2017108672	20573	SIEMENS GAMESA RENEWABLE ENERGY, INC.	4/25/2018	To authorize the transportation in commerce of hazardous materials in non-DOT specification accumulators that meet the requirements of 49 CFR §173.306(f)(3) except the accumulators exceed the maximum gas space, and non-DOT specification cylinders that are shipped as components of wind power generating equipment.
2017108707	20579	CARLETON TECHNOLOGIES, INC.	8/24/2018	To authorize the manufacture, mark, sale, and use of non-refillable, non-DOT specification cylinders intended to contain oxygen, compressed.
2017118744	20581	HARMS PACIFIC TRANSPORT INC	4/24/2018	To authorize the transportation in commerce of cargo tanks manufactured after August 31, 1995 for which the Manufacturer's Certificate of Compliance is missing.



Tracking Number	SP Number	Company Name	Disposition Date	Summary
2017118783	20584	BATTERY SOLUTIONS, LLC	2/14/2018	To authorize the manufacture, mark, sale and use of certain drums for the transportation in commerce of certain damaged or defective lithium ion cells and batteries and lithium metal cells and batteries.
2017118819	20586	HAZ-MAT RESPONSE, INC.	11/29/2017	To authorize the transportation in commerce of non-DOT specification cylinders for a limited distance to safely analyze the contents and prepare for shipment in accordance with the HMR.
2017118799	20585	ATLAS AIR, INC	11/29/2017	To authorize the transportation in commerce of explosives by cargo only aircraft in amounts forbidden by the regulations.
2017118837	20588	Nantong Tank Container Co., Ltd.	6/27/2018	To authorize the manufacture, marking, sale and use of UN portable tanks conforming to portable tank code T50 that have been designed, constructed and stamped in accordance with Section VIII, Division 2 of the ASME Code (plus applicable Code Cases) as the primary pressure vessel code based upon a design reference temperature of 46.10C (115 OF).
2017118833	20587	SILK WAY WEST AIRLINES MMC	12/7/2017	To authorize the transportation in commerce of explosives by cargo only aircraft in amounts forbidden by the regulations.
2017118849	20591	RAYTHEON MISSILE SYSTEMS CO	3/29/2018	To authorize the manufacture, mark, sale and use of non-DOT specification stainless steel cylinders conforming with all the regulations applicable to a DOT 3A specification cylinder except as specified herein, for the transportation of hazardous materials in commerce.
2017118840	20589	KALITTA AIR, L.L.C.	12/6/2017	To authorize the transportation in commerce of certain explosives which are forbidden by cargo only aircraft.
2017118843	20590	TROY MANUFACTURING CO., INC.	12/6/2017	To authorize the manufacture mark sale and use of DOT Specification 2P nonrefillable aluminum cans with inner aluminum/PET laminate bags containing a Class 3 material.
2017128906	20593	TRANSPORT LOGISTICS INTERNATIONAL, INC.	3/29/2018	To authorize the one-time, one-way transportation in commerce of cylinders filled in excess of the authorized filling limits.
2017128910	20594	The Sherwin-Williams Manufacturing Company	3/19/2018	To authorize the transportation in commerce of certain hazardous materials without being subject to certain shipping paper, marking, labeling and placarding requirements.



Tracking Number	SP Number	Company Name	Disposition Date	Summary
2017128962	20597	DEPARTMENT OF DEFENSE (MILITARY SURFACE DEPLOYMENT & DISTRIBUTION COMMAND)	2/2/2018	To authorize the transportation of remotely piloted vehicles which are fueled while in transportation
2017118798	20599	ALAMEDA COUNTY OFFICES	9/4/2018	To transport certain lifesaving pyrotechnic marine signal devices to disposal by motor vehicle without the use of a manufacturers EX number.
2017129037	20600	FIREAWAY INC.	2/13/2018	To authorize the manufacture, mark, sale, and use of fire extinguishing and suppression articles shipped as UN3268, Safety Devices.
2018019057	20601	Capella Space Corp.	2/2/2018	To authorize the transportation in commerce of low production lithium batteries contained in equipment via cargo-only aircraft.
2018019091	20602	THE BOEING COMPANY	6/8/2018	To authorize the transportation in commerce of spacecraft containing certain hazardous materials in non-DOT specification packaging's.
2018019092	20603	FIBA TECHNOLOGIES, INC.	3/29/2018	To authorize the manufacture, mark, sale and use of cylinders with pressure relief devices meeting the Fourteenth Edition of CGA S-1.1.
2018019117	20604	ELSTER AMERICAN METER COMPANY, LLC	6/12/2018	To authorize the transportation in commerce of lithium batteries contained in equipment without certain markings on each package.
2018019173	20607	The Greenbrier Companies	8/14/2018	To authorize the manufacture, mark, sale, and use of tank cars with the protective housing mounted in an alternate manner.
2018019150	20606	SPACEFLIGHT, INC.	3/6/2018	To authorize the transportation in commerce of lithium batteries contained in a spacecraft which have not been tested by UN 38.3 standards.
2018019234	20608	DEPARTMENT OF DEFENSE (MILITARY SURFACE DEPLOYMENT & DISTRIBUTION COMMAND)	6/6/2018	To authorize the transportation in commerce of compressed air in non-DOT specification cylinders.
2018029261	20609	AUTOLIV ASP, INC.	2/23/2018	To authorize the transportation in commerce of hazmat that has been packaged by individuals who are not fully hazmat trained.
2018029266	20610	DEPARTMENT OF DEFENSE (MILITARY SURFACE	3/12/2018	To authorize the transportation in commerce of certain fuzes assigned Compatibility Groups (CG) S and D, on the

Tracking Number	SP Number	Company Name	Disposition Date	Summary
		DEPLOYMENT & DISTRIBUTION COMMAND)		same motor vehicle with certain Division 1.1, 1.2, 1.3, 1.4, or 1.5 materials.
2018029293	20612	WILCO MACHINE & FAB, INC.	7/9/2018	To authorize the transportation in commerce of hydrochloric acid in transport trailers whose support ribs exceed the 60-inch maximum separation distance.
2018029441	20617	HILLWOOD AIRWAYS, LLC	3/19/2018	To authorize the transportation in commerce of certain explosives that are forbidden aboard cargo aircraft only.
2018039464	20618	NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	7/11/2018	To authorize the transportation in commerce of explosives contained in spacecraft by motor vehicle.
2018039466	20619	GLOBALTECH ENVIRONMENTAL CORP	6/6/2018	To authorize the manufacture, mark, sale, and use of packaging's, intended to contain batteries of mixed chemistries, as not subject to certain hazard communication requirements
2018039469	20620	SOUTHERN STATES, LLC	7/10/2018	To authorize the manufacture, mark, sale, and use of non-DOT specification pressure receptacles containing sulfur hexafluoride.
2018039473	20622	APPLE INC.	6/27/2018	To authorize the transportation in commerce of low production lithium ion batteries exceeding 35 kg net weight by cargo-only aircraft.
2018039517	20624	JAGUAR LAND ROVER NORTH AMERICA, LLC	6/6/2018	To authorize the transportation in commerce of lithium ion batteries in excess of 35 kg by cargo-only aircraft.
2018039536	20625	LG CHEM	8/14/2018	To authorize the transportation in commerce of lithium batteries exceeding 35 kg by cargo-only aircraft.
2018100790	20796	SODASTREAM USA, INC.	11/6/2018	To authorize the transportation in commerce of certain DOT 3AL, TC/3ALM and UN ISO 7866 cylinders that contain carbon dioxide, with alternative hazard communication
2018039553	20627	GATEWAY PYROTECHNIC PRODUCTIONS, LLC	3/29/2018	To authorize the one-time, one-way transportation of unapproved fireworks from Louisville, KY to storage in Illiopolis, IL.
2018039597	20629	SPACEFLIGHT, INC.	6/27/2018	To authorize the transportation in commerce of lithium batteries in alternative packaging.
2018039600	20630	MACHINE & WELDING SUPPLY COMPANY	8/29/2018	To authorize the transportation in commerce of certain hazardous materials in DOT Specification 3AL cylinders manufactured from aluminum allow 6061-T6 that are requalified every ten years rather than every five years using 100% ultrasound examination.



Tracking Number	SP Number	Company Name	Disposition Date	Summary
2018039601	20631	AMERICASE, LLC	7/25/2018	To authorize the transportation in commerce of more than one damaged/defective lithium battery in a single fiberboard outer packaging.
2018049727	20640	Insitu Inc	9/19/2018	To authorize the transportation in commerce of vehicles containing prototype lithium batteries via cargo-only aircraft.
2018049660	20633	SPACEFLIGHT, INC.	7/20/2018	To authorize the transportation in commerce of low production lithium ion batteries contained in equipment via cargo-only aircraft.
2018049662	20634	Business Integra Technology Solutions, Inc	4/24/2018	To authorize the transportation in commerce of heat pipes containing anhydrous ammonia by cargo-only aircraft.
2018049687	20636	DPC ENTERPRISES	4/11/2018	To authorize the one-time transportation in commerce of a MC331 cargo tank containing chlorine with a suspected leak between the pressure relief valve and the manway, which has been repaired temporarily using a Chlorine Institute Kit "C".
2018049692	20637	LG CHEM	8/13/2018	To authorize the transportation in commerce of lithium ion batteries in excess of 35 kg by cargo-only aircraft.
2018049757	20644	CRI CATALYST COMPANY LP	6/27/2018	To authorize the transportation in commerce of 50G large packaging's containing solid environmentally hazardous substances via air.
2018049698	20638	BALL METALPACK LLC	11/6/2018	To authorize the manufacture, mark, sale, and use of non-DOT specification receptacles with reduced wall thickness.
2018049726	20639	ICC THE COMPLIANCE CENTER INC.	7/26/2018	To authorize the manufacture, mark, sale, and use of alternative packaging for the transport of damaged, defective, and recalled batteries.
2018049750	20642	SUN CHEMICAL CORPORATION	5/2/2018	To authorize the one-time movement of a DOT 407 cargo tank that was leaking hazmat for investigation/repair.
2018049728	20641	THERMO MF PHYSICS LLC	9/11/2018	To authorize the transportation in commerce of non-DOT specification cylinders containing sulfur hexafluoride gas.
2018049756	20643	KALITTA AIR, L.L.C.	5/9/2018	To authorize the transportation in commerce of certain explosives which are forbidden by cargo only aircraft.
2018049759	20645	WALMART INC.	11/8/2018	To authorize the transportation in commerce of lithium batteries with alternative hazard communication.
2018049760	20646	OMNI TANKER PTY. LTD.	9/20/2018	To authorize the manufacture, mark, sale, and use of non-DOT specification portable tanks.

Tracking Number	SP Number	Company Name	Disposition Date	Summary
2018049763	20648	ARMOTECH s.r.o.	6/21/2018	To authorize the transportation in commerce of foreign manufactured special permit cylinders manufactured under IIA oversight.
2018049765	20649	STERICYCLE, INC.	5/3/2018	To authorize the transportation in commerce of electronic cigarette products that include a power unit containing a small lithium ion battery in support of a voluntary recall on behalf of R.J. Reynolds Vapor Company.
2018059849	20653	JOHNSON CONTROLS, INC.	7/25/2018	To authorize the transportation in commerce of lithium ion batteries in alternative packaging.
2018059812	20650	VEOLIA ENVIRONMENTAL SERVICES NORTH AMERICA CORP.	8/15/2018	To authorize the one-time, one-way transportation in commerce of an unapproved cartridge, power device.
2018059813	20651	ATIEVA USA, INC	9/12/2018	To authorize the transportation in commerce of lithium ion batteries in excess of 35 kg by cargo-only aircraft.
2018059860	20658	NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	12/13/2018	To authorize the transportation in commerce of non-DOT specification packaging's containing explosive articles that are not required to be marked or labeled.
2018059856	20655	UTAH STATE UNIVERSITY RESEARCH FOUNDATION	9/12/2018	To authorize the transportation in commerce of low production lithium ion batteries contained in equipment by cargo-only aircraft.
2018059857	20656	THE SHERWIN-WILLIAMS MANUFACTURING COMPANY	12/6/2018	To authorize the transportation in commerce of 2Q receptacles that have been tested in an alternative manner.
2018059865	20661	SAFT AMERICA INC	9/13/2018	To authorize the transportation in commerce of large lithium battery assembly mounted within an ISO shipping container that also contains a securely mounted charged DOT specification cylinder as part of the fire suppression system.
2018059861	20659	NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	9/25/2018	To authorize the transportation in commerce of non-DOT specification pressure vessels that are incorporated into spacecraft.
2018059994	20673	Airopack B.V.	12/12/2018	To authorize the manufacture, mark, sale, and use of non-DOT specification receptacles containing aerosols that are not subject to the requirements of the HMR.
2018059921	20662	DEPARTMENT OF DEFENSE (MILITARY SURFACE DEPLOYMENT &	6/6/2018	To authorize the transportation in commerce of non-self-inflating life-saving appliances (parachutes), which contain Division 1.4C and 1.4S explosives.

Tracking Number	SP Number	Company Name	Disposition Date	Summary
		DISTRIBUTION COMMAND)		
2018059926	20664	Shm International Corporation	8/10/2018	To authorize the transportation in commerce of firefighters as limited quantities.
2018059962	20667	HAZ MAT SERVICES, INCORPORATED	8/1/2018	To authorize the transportation in commerce of cyanide compounds in lab packs.
2018059956	20666	KOREAN AIR LINES CO., LTD.	6/6/2018	To authorize the transportation in commerce of certain explosives which are forbidden for transport by cargo only aircraft.
2018059963	20668	Nuvation Research Corporation	7/11/2018	To authorize the transportation of lithium ion batteries in alternative packaging.
2018059968	20669	LOUISIANA ENERGY SERVICES, LLC	7/25/2018	To authorize the transportation in commerce of 48Y Uranium Hexafluoride cylinders which do not conform to ANSI N14.1-2012 specification for the cylinder valve cap gasket.
2018059971	20670	Envases de Acero, S.A. de C.V.	11/1/2018	To authorize the transportation in commerce of certain DOT-3AX, 3AAX, 3T, 3AA and 3A cylinders. The cylinders (tubes) are retested by acoustic emission and follow-up ultrasonic examination (AE/UE) described in paragraph 7 below in place of the internal visual inspection and hydrostatic test required by § 180.205.
2018059988	20672	ATLAS AIR, INC	6/15/2018	To authorize the transportation in commerce of explosives by cargo aircraft which is forbidden in the regulations.
2018059992	20671	STERICYCLE SPECIALTY WASTE SOLUTIONS, INC.	8/1/2018	To authorize the transportation in commerce of certain materials as not subject to the requirements of the Hazardous Materials Regulations (HMR). DO NOT OPEN FOR PARTY STATUS.
2018060027	20677	DEPARTMENT OF DEFENSE (MILITARY SURFACE DEPLOYMENT & DISTRIBUTION COMMAND)	7/25/2018	To authorize the transportation in commerce of certain Division 2.2 hazardous materials in non-DOT specification cylinders.
2018060074	20678	Parsons Corporation	6/8/2018	To authorize the transportation in commerce of lithium ion batteries that exceed the 35-kg weight restriction by cargo aircraft.
2018060128	20681	PROSERV UK LTD	11/26/2018	To authorize the manufacture, mark, sale and use of a non-DOT specification packaging conforming in part to DOT Specification 3A, except as specified herein,



Tracking Number	SP Number	Company Name	Disposition Date	Summary
				for the transportation in commerce of the materials authorized by this special permit.
2018060129	20682	HILLWOOD AIRWAYS, LLC	7/10/2018	To authorize the transportation in commerce of certain explosives which are forbidden by cargo only aircraft.
2018060150	20684	LINDE GAS NORTH AMERICA LLC	11/9/2018	To authorize the manufacture, mark, sale, and use of tank cars that use solid plugs in lieu of pressure relief devices and which are periodically retested in an alternative manner.
2018060151	20685	TOYOTA MOTORSPORT GMBH	9/11/2018	To authorize the transportation in commerce of lithium batteries exceeding 35 kg by cargo-only aircraft.
2018060179	20687	DEPARTMENT OF DEFENSE (MILITARY SURFACE DEPLOYMENT & DISTRIBUTION COMMAND)	8/3/2018	<i>Summary Unavailable</i>
2018070228	20690	KIK CUSTOM PRODUCTS, INC.	12/17/2018	To authorize the manufacture, mark, sale and use of pressurized, non-refillable aerosol product in metal non-DOT specification, DOT 2P, DOT 2Q and DOT 2Q1 containers that have been tested by an alternative method. (not sure this should be MMS)
2018070230	20692	Tyvak Nano-Satellite Systems Inc.	9/7/2018	To authorize the transportation in commerce of low production lithium ion batteries contained in equipment (spacecraft).
2018070200	20689	DEPARTMENT OF DEFENSE (MILITARY SURFACE DEPLOYMENT & DISTRIBUTION COMMAND)	8/7/2018	To authorize the transportation of non-hazardous materials as hazardous materials.
2018070330	20699	General Defense Corp	8/1/2018	To authorize the one-time, one way transportation of an explosive by cargo aircraft, which is otherwise forbidden by the regulations.
2018070259	20697	Zoox, Inc.	10/1/2018	To authorize the transportation in commerce of prototype lithium batteries exceeding 35 kg by cargo-only aircraft.
2018070248	20694	NK TECH CO., LTD	12/19/2018	To authorizes the use of certain DOT Specification 3AA and 3AAX cylinders for the transportation in commerce of the certain compressed gases, when retested by a one hundred percent (100%) ultrasonic examination (UE) in lieu of the internal visual and the hydrostatic retest.



Tracking Number	SP Number	Company Name	Disposition Date	Summary
2018070253	20696	THE PROCTER & GAMBLE COMPANY	11/9/2018	To authorize the transportation in commerce of DOT Specification 2S and non-DOT specification plastic non-refillable inside containers that have been tested by an automated in-line pressure check in lieu of the test methods required in the Hazardous Materials Regulations (HMR), the ICAO TI and the IMDG Code.
2018070289	20698	Defense Advanced Research Projects Agency	8/1/2018	To authorize the transportation in commerce of lithium batteries which have not passed all the UN 38.3 tests.
2018070331	20700	KAVOK EIR, TOV	8/28/2018	To authorize the transportation of forbidden explosives by cargo only aircraft
2018080408	20704	BALL AEROSOL AND SPECIALTY CONTAINER INC.	10/25/2018	To authorize the manufacture, mark, sale and use of a non-DOT specification inner container, which conforms to all regulations applicable to a DOT specification 2P inner container, except as specified herein, for the transportation in commerce of the materials authorized by this special permit.
2018080424	20707	SHARPSVILLE CONTAINER CORPORATION	10/25/2018	To authorize the manufacture, mark, sale and use of non-DOT specification stainless steel cylinders conforming to all regulations applicable to DOT specification 4BW, except as specified herein, for use in transporting materials authorized under this special permit.
2018080427	20709	DAIMLER AG	11/1/2018	To authorize the transportation in commerce of prototype and low production lithium ion batteries exceeding 35 kg by cargo-only aircraft.
2018080425	20708	JAGUAR LAND ROVER NORTH AMERICA, LLC	12/4/2018	To authorize the transportation in commerce of lithium batteries by air that exceed the 35-kg weight limit.
2018090544	20783	PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION	9/13/2018	To authorize the transportation in commerce of cylinders containing flammable gas without being required to use placards, shipping papers or requiring hazmat employees to be trained.
2018090616	20785	BAYER HEALTHCARE LLC	12/19/2018	To authorize the transportation in commerce of prototype non-DOT specification plastic aerosol containers for the transportation in commerce of the materials authorized by this special permit.
2018100728	20792	ATLAS AIR, INC	10/22/2018	To authorize the transportation in commerce of explosives by cargo aircraft which is forbidden in the regulations.
2018100736	20793	STERILMED, INC.	12/4/2018	To authorize the transportation in commerce of medical equipment as excepted from the requirements of the

Tracking Number	SP Number	Company Name	Disposition Date	Summary
				Hazardous Materials Regulations without including an itemized count of equipment contained within the package.
2018114003	20800	ATK SPACE SYSTEMS INC	12/20/2018	To authorize the transportation in commerce of certain hazardous materials over approximately 0.5 miles of public roadway without being subject to certain hazard communication requirements.
2018114057	20801	WALMART INC.	11/29/2018	To authorize the transportation in commerce of limited quantities of hazardous materials with a reduced size limited quantity marking by motor vehicle and rail freight.
2018114500	20807	ENVIRONMENTAL PROTECTION AGENCY	11/19/2018	To authorize the transportation in commerce of hazardous materials used to support the recovery and relief operations from and within the Super Typhoon Yutu Response Area (Saipan, Tinian and Rota, CNMI), under conditions that may not meet the Hazardous Materials Regulations (HMR).
2018115093	20812	AVIAKOMPANIYA AEROVIZ, TOV	12/3/2018	To authorize the transportation in commerce of explosives by cargo only aircraft.
2018115029	20811	ENVIRONMENTAL PROTECTION AGENCY	11/30/2018	To authorize the transportation in commerce of hazardous materials in support of the recovery and relief operations from and within the California fire disaster areas in various parts of the state under conditions that may not meet the Hazardous Materials Regulations (HMR).





Appendix B: Comprehensive list of rulemaking actions submitted to the Federal Register

PHMSA Office of Hazardous Material Safety, Proposed Rules, 2015-2020 ⁸⁶			
Date	RIN	PHMSA Docket ID	Title
01/23/2015	2137-AF04	PHMSA-2013-0225	Miscellaneous Amendments (RRR)
01/30/2015	2137-AF00	PHMSA-2013-0042	Adoption of Special Permits (MAP-21) (RRR)
06/30/2016	2137-AF09	PHMSA-2015-0102	Miscellaneous Petitions for Rulemaking (RRR)
07/26/2016	2137-AE80	PHMSA-2011-0140	Miscellaneous Amendments Pertaining to DOT-Specification Cylinders (RRR)
07/29/2016	2137-AF08	PHMSA-2014-0105	Oil Spill Response Plans and Information Sharing for High-Hazard Flammable Trains
09/07/2016	2137-AF18	PHMSA-2015-0273	Harmonization with International Standards (RRR)
10/11/2016	2137-AF19	PHMSA-2015-0272	Revisions to Hazardous Materials Grants Requirements (RRR)
11/21/2016	2137-AF25	PHMSA-2016-0079	PIPES Act Requirements for Identification Numbers on Cargo Tanks Containing Petroleum Based Fuel
12/05/2016	2137-AF10	PHMSA-2015-0100	Notification of the Pilot-in-Command and Response to Air Related Petitions for Rulemaking (RRR)
01/18/2017	2137-AF24	PHMSA-2016-0077	Volatility of Unrefined Petroleum Products and Class 3 Materials
01/19/2017	2137-AF21	PHMSA-2016-0015	FAST Act Requirements for Real-Time Train Consist Information by Rail
11/27/2018	2137-AF32	PHMSA-2017-0108	Harmonization with International Standards
08/06/2019	2137-AF30	PHMSA-2017-0083	Response to an Industry Petition To Reduce Regulatory Burden for Cylinder Requalification Requirements
08/14/2019	2137-AF33	PHMSA-2017-0120	Adoption of Miscellaneous Petitions To Reduce Regulatory Burdens
10/24/2019	2137-AF40	PHMSA-2018-0025	Liquefied Natural Gas by Rail

PHMSA Office of Hazardous Material Safety, Final Rules, 2015-2020			
Date	RIN	PHMSA Docket ID	Title
01/08/2015	2137-AF05	PHMSA-2013-0260	Harmonization with International Standards (RRR)
02/20/2015	2137-AE44	PHMSA-2009-0095	Transportation of Lithium Batteries

⁸⁶ PHMSA's Rulemaking Documents available at <https://cms7.phmsa.dot.gov/regulations-fr/rulemaking>

PHMSA Office of Hazardous Material Safety, Final Rules, 2015-2020			
05/08/2015	2137-AE91	PHMSA-2012-0082	Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains
09/10/2015	2137-AE99	PHMSA-2012-0260	Special Permit and Approvals Standard Operating Procedures and Evaluation Process
10/30/2015	2137-AF12	PHMSA-2015-0165	Carriage of Battery-Powered Electronic Smoking Devices in Passenger Baggage
11/23/2015	2137-AF11	PHMSA-2015-0067	Editorial Corrections and Clarifications (RRR)
12/21/2015	2137-AE86	PHMSA-2011-0345	Requirements for the Safe Transportation of Bulk Explosives (RRR)
01/21/2016	2137-AF00	PHMSA-2013-0042	Adoption of Special Permits (MAP-21) (RRR)
03/31/2016	2137-AE81	PHMSA-2011-0143	Reverse Logistics (RRR)
04/29/2016	2137-AF15	PHMSA-2015-0271	Incorporation by Reference Edition Update for the American Society of Mechanical Engineers Boiler and Pressure Vessel Code and Transportation Systems for Liquids and Slurries: Pressure Piping Code
06/02/2016	2137-AF04	PHMSA-2013-0225	Miscellaneous Amendments (RRR)
06/29/2016	2137-AF23	PHMSA-2016-0041	Revision of Maximum and Minimum Civil Penalties
08/15/2016	2137-AF17	PHMSA-2016-0011	FAST Act Requirements for Flammable Liquids and Rail Tank Cars
03/30/2017	2137-AF18	PHMSA-2015-0273	Harmonization with International Standards (RRR)
09/25/2018	2137-AF35	PHMSA-2017-0102	Removal of Electronically Controlled Pneumatic Brake System Requirements for High Hazard Flammable Unit Trains
10/18/2018	2137-AF10	PHMSA-2015-0100	Notification of the Pilot-in-Command and Response to Air Related Petitions for Rulemaking
11/07/2018	2137-AF09	PHMSA-2015-0102	Response to Petitions from Industry to Modify, Clarify, or Eliminate Regulations
11/27/2018	2105-AE70	PHMSA-2013-0008-0276	Revisions to Civil Penalty Amounts
02/14/2019	2137-AF19	PHMSA-2015-0272	Revisions to Hazardous Materials Grants Requirements (FAST Act)
02/28/2019	2137-AF08	PHMSA-2014-0105	Oil Spill Response Plans and Information Sharing for High-Hazard Flammable Trains
03/06/2019	2137-AF20	PHMSA-2016-0014	Enhanced Safety Provisions for Lithium Batteries Transported by Aircraft (FAA Reauthorization Act of 2018)
07/31/2019	2105-AE80	PHMSA-2013-0008-0304	Revisions to Civil Penalty Amounts
05/11/2020	2137-AF32	PHMSA-2017-0108	Harmonization With International Standards

PHMSA Office of Hazardous Material Safety, Final Rules, 2015-2020			
05/20/2020	2137- AF24	PHMSA- 2016-0077	Withdrawal; Vapor Pressure of Unrefined Petroleum Products and Class 3 Materials
07/24/2020	2137- AF40	PHMSA- 2018-0025	Liquefied Natural Gas by Rail
10/30/2020	2137- AF30	PHMSA- 2017-0083	Response to an Industry Petition To Reduce Regulatory Burden for Cylinder Requalification Requirements
11/25/2020	2137- AF33	PHMSA- 2017-0120	Adoption of Miscellaneous Petitions To Reduce Regulatory Burdens



Appendix C: NTSB Recommendations

Number	Status	Issue	Closed	Topic
R-18-027	OAA	11/27/2018		Sponsor research to study and publish the difference in characteristics between denatured and undenatured ethanol
H-18-003	OUA	1/30/2018		With FMCSA, develop and implement process to ensure cargo tank inspectors able to verify safety
H-18-004	OAA	1/30/2018		With FMCSA incorporate by reference registered inspector training requirements for cargo tanks inspectors
H-18-005	OAA	1/30/2018		With FMCSA permit suspension or revocation of registration of highway cargo tank inspectors
R-17-005	CNLA	6/29/2017	11/29/2019	Study increased derailment risks
R-17-006	CNLA	6/29/2017	11/29/2019	With FRA develop specific guidance for railroads
R-17-001	OAA	3/9/2017		Evaluate risks posed to train review re: separation distance
R-17-002	OAA	3/9/2017		Withdraw regulatory interpretation for positioning placarded rail cars
A-16-001	OAA	2/9/2019		Maximum Loading Densities for Lithium Batteries or Class 3 Flammable Liquids
A-16-002	OAA	2/9/2016		Segregation of Lithium Batteries from Class 3 flammable liquids
R-15-016	CNLA	4/3/2015	2/11/2020	Milestone Schedule for Retrofit of DOT-111 and CPC-1232 Tank Cars
R-15-015	OAA	4/3/2015		Appropriately Sized PRDs for Tank Cars in Class 3 Flammable Liquid Service
R-15-014	OAA	4/3/2015		Thermal Protection in Tank Cars in Class 3 Flammable Liquid Service
R-14-021	OAA	8/22/2014		Audits of Short Line and Regional Railroads
R-14-020	OAA	8/22/2014		RCRMS Risk Assessment Tool
R-14-018	OUA	8/22/2014		Train Crew Emergency Response Information
R-14-004	CAA	1/23/2014	07/12/2016	Rail Routing of Trains Carrying Flammable Liquids
I-07-002	CAA	2/4/2013	02/04/2013	Pressurized Aluminum Cylinders
I-07-001	CUA	2/4/2013	02/04/2013	Pressurized Aluminum Cylinders
H-12-006	CAA	2/4/2013	6/19/2013	Guidance on testing and recordkeeping requirements of 49 CFR 180.407
H-12-005	CAA	2/4/2013	02/04/2013	Letter of Interpretation on 49 CFR 180.416d
H-12-004	CUA	2/4/2013	6/19/2014	Passive emergency shutdown for partial failure of hose assembly
H-12-003	CAAA	2/4/2013		Verification of chemical compatibility of hose assembly
H-12-002	CAA	2/4/2013	2/4/2013	Advisory bulletin on Swansea, SC hose rupture incident
R-12-006	CAA	3/2/2012	07/12/2016	Bottom Outlet Valve Closure
R-12-005	CAA	3/2/2012	07/12/2016	Enhanced protection of DOT-111 Tank Cars Used in ethanol and crude oil service

Number	Status	Issue	Closed	Topic
H-11-004	CAA	9/2/2011	01/06/2017	Rollover Prevention Program
H-11-001	CUA	9/2/2011	07/08/2013	Cargo Tank Data
H-09-002	CAAA	3/5/2009	03/06/2017	Mobile Acetylene Trailers
H-09-001	CAAA	3/5/2009	03/06/2017	Mobile Acetylene Trailers
R-08-013	OAA	5/22/2008		Optimum Separation Requirements
A-07-109	CAAA	12/17/2007	11/12/2014	Lithium Batteries
A-07-108	CAAA	12/17/2007	11/12/2014	Lithium Batteries
A-07-107	CAAA	12/17/2007	9/6/2013	Lithium Batteries
A-07-106	CAA	12/17/2007	7/21/2010	Lithium Batteries
A-07-105	CR	12/17/2007	12/26/2012	Lithium Batteries
A-07-104	CR	12/17/2007	12/26/2012	Lithium Batteries
R-07-005	CR	4/25/2007	6/7/2011	HMEP Grant Funds
R-04-010	CAAA	12/15/2004	10/29/2013	Loading Unloading
H-02-025	CAA	9/26/2002	4/1/2005	Cylinders carrying hydrogen
H-02-024	CUA	9/26/2002	4/21/2010	Cylinders carrying hydrogen
H-02-023	CAA	9/26/2002	4/21/2010	Cylinders carrying hydrogen
I-02-002	CAAA	7/16/2002	10/29/2013	Loading/Unloading
I-02-001	CAAA	7/16/2002	10/29/2013	Loading/Unloading
R-01-003	CAA	3/12/2001	1/11/2013	Written Reporting Standards
I-01-001	CAAA	3/12/2001	10/20/2004	Written reporting standards
I-00-006	CUA	6/20/2000	03/29/2004	Applicability of the HMR
A-99-084	CAA	11/16/1999	09/26/2002	Lithium Batteries
A-99-083	CAAA	11/16/1999	09/26/2002	Lithium Batteries
A-99-082	CAA	11/16/1999	06/19/2008	Lithium Batteries
A-99-080	CAA	11/16/1999	06/19/2008	Lithium Batteries
H-99-058	CUA	10/1/1999	10/20/2004	Immediate reporting of hazardous materials incident
H-99-057	CAAA	10/1/1999	0/25/2002	Loading/Unloading instructions for cargo tanks
A-98-080	CUA	8/12/1998	11/13/2000	Air carrier emergency telephone number
H-98-027	CNLA	5/18/1998	3/15/2016	
A-96-030	CNLA	5/31/1996	02/04/2002	Oxidizing materials on aircraft
H-95-037	CUA	11/27/1995	08/18/2003	Cargo tanks
H-95-014	CAAA	8/1/1995	08/06/2002	Cargo tanks
I-93-002	CUA	11/30/1993	01/23/2002	Cylinder inspection
I-93-001	CUA	11/30/1993	01/23/2002	Cylinder inspection
H-93-034	CAA	10/4/1993	08/07/2013	Cargo tanks
R-92-023	CAA	12/31/1992	1/11/2013	Periodic Inspection & Testing of Rail Tank Cars
I-92-002	CAA	10/28/1992	05/28/2002	Portable tanks
H-92-006	CAA	3/20/1992	10/20/2004	Cargo tank incident reporting
H-92-005	CUA	3/20/1992	06/25/2004	Cargo tank rollover requirements
H-92-004	CUA	3/20/1992	06/25/2004	Cargo tank rollover requirements

Number	Status	Issue	Closed	Topic
H-92-003	CAA	3/20/1992	09/08/1999	Cargo Tanks
H-92-002	CAA	3/20/1992	10/25/2002	Cargo tanks
H-92-001	CAA	3/20/1992	12/12/2014	Cargo tanks
H-90-091	CAA	9/12/1990	08/07/2003	Cargo tank remote shut-off requirements
I-90-009	CUA	3/23/1990	07/20/2001	Inspection requirements for low pressure cylinders
I-90-008	CUA	3/23/1990	07/20/2001	Cargo securement
R-89-053	CUA	7/14/1989	03/19/2010	Closure fittings on rail tank cars
R-89-052	CNLA	7/14/1989	10/20/2004	Shipper notification of HM incidents

