

*Biennial Report on
Hazardous Materials Transportation*

Calendar Years 1994-1995

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Preface

Hazardous materials (HM) are substances or materials determined by the U.S. Department of Transportation (DOT), or otherwise specified by statute, to have inherent characteristics, which may pose an unreasonable risk to the public's health and safety, property, or to the environment when transported in commerce. The transportation of HM is an issue of concern in American communities because of the real and perceived risks that these materials can pose to public safety. Highly publicized transportation incidents involving explosions and injury or loss of life have heightened the public awareness of the potential dangers in HM transportation. Consequently, the public tends to view the transportation of HM in terms of worst-case scenarios. In actuality, the vast majority of shipments arrive safely, and incidents that do occur usually involve small releases and require little or no emergency response action.

This biennial report, prepared in accordance with the Federal hazardous materials transportation law¹ (Federal hazmat law), provides a comprehensive picture of the Department's activities in administering a national HM transportation safety program.

On January 3, 1975, the Hazardous Materials Transportation Act (HMTA), Title I of Public Law 93-633, was signed into law. The Act provided authority for the Secretary of Transportation to draw together previously fragmented regulatory and enforcement

authority over the movement of HM in commerce into one consolidated and coordinated effort. The HMTA was significantly amended by the Hazardous Materials Transportation Uniform Safety Act of 1990 (HMTUSA), Public Law 101-615, signed on November 16, 1990, and was codified in 1994 in 49 U.S.C. §§ 5101-5127.

While 49 U.S.C. §§ 5101-5127 provides the primary legislative authority for the Department's HM programs, other relevant statutes are, for the most part, mode-specific. Among these are 49 U.S.C. § 20101 *et seq.*, formerly the Federal Railroad Safety Act of 1970, 45 U.S.C. § 421 *et seq.*; 49 U.S.C. § 40101 *et seq.*, formerly the Federal Aviation Act of 1958, 49 U.S.C. § 1301 *et seq.*; and marine transportation laws at 33 U.S.C. § 1221 *et seq.* and 46 U.S.C. § 3701 *et seq.* DOT's modal administrations--U.S. Coast Guard (USCG), Federal Aviation Administration (FAA), Federal Highway Administration (FHWA), and Federal Railroad Administration (FRA)--retain responsibility for enforcement actions relating to transportation by water, air, highway, and rail, respectively.

A number of other authorities underlie the Department's regulation of HM transportation. The Federal Water Pollution Control Act Amendments of 1972; the Resource Conservation and Recovery Act of 1976; the Comprehensive Environmental Response, Compensation, and Liability Act of 1980; and the Sanitary Food Transportation Act of 1990. Both HMTUSA and the Hazardous Materials Transportation Authorization Act of 1994, imposed on the Department additional responsibilities not codified in the Federal

hazmat law. These laws have influenced and will continue to greatly influence the HM programs of all the modal administrations.

Executive Summary

The Department of Transportation administers a comprehensive national HM transportation safety program. This report provides an overview of safety and enforcement initiatives, and incident/accident data; it also describes the regulations and exemptions to regulations issued during 1994 and 1995.

The Federal hazmat law empowers the Secretary to issue and enforce regulations deemed necessary to ensure the safe domestic and international movement of HM. This authority has been delegated to the Administrators of the operating administrations. The Administrator of the Research and Special Programs Administration (RSPA), through the Associate Administrator for Hazardous Materials Safety (HMS), coordinates the Department's HM transportation safety program.

RSPA develops and issues regulations governing single and multimodal transportation and includes the following areas: definition and classification of HM, shipper and carrier operations, and packaging and container specifications. Two principles guide the formulation of the regulations: (1) use of proper packaging and handling to ensure the safe transportation of HM, and (2) effective communication to carriers and emergency responders of the hazards of materials and appropriate procedures to manage emergency situations.

In 1994 and 1995, RSPA published 54 documents related to its HM rulemaking program. Appendix A of this report contains a summary of these notices and final rules. In addition to the many rulemaking actions, RSPA

completed 16,768 discretionary actions involving HM in 1994 and 1995. A breakdown of these actions is shown in Chapter Four. In addition, the Hazardous Materials Regulations Information Center received more than 60,000 telephone inquiries during the biennium.

Beyond its regulatory actions, the Department's goal is to promote safety in transportation by reducing accidents, deaths and injuries, and property damage attributed to the unsafe manufacture or maintenance of HM packagings or shipments of them. It is unrealistic to assume that accidents will be eliminated so long as HM are shipped, but extensive compliance and enforcement programs can assure the public that shipments of HM are moving safely in the various modes of transportation.

As a result of inspections conducted by the Department's staff of 206 full-time and 1,568 part-time inspectors, in 1994, the Department issued 176 Letters of Warning, initiated 2,821 civil penalty actions, completed 1,813 civil penalty actions, and collected over \$7 million in civil penalties. In 1995, a staff of 275 full-time and 1,465 part-time inspectors issued 213 Letters of Warning, initiated 2,839 civil penalty actions, completed 1,814 civil penalty actions, and collected over \$5.9 million in civil penalties.

Federal efforts are complemented by state enforcement programs. To support state efforts, RSPA sponsors the Cooperative Hazardous Materials Enforcement Development (COHMED) program. This outreach effort encourages partnerships among Federal/state and local agencies, industry

associations, public interest groups and Native American tribes, and promotes national uniformity of regulations and enforcement activities. Through semi-annual meetings, RSPA provides a forum for these groups to meet and obtain current and relevant training in HM transportation, and discuss issues of mutual concern.

Since 1989, 22 law enforcement and emergency response representatives from state and local governments have participated in RSPA's Hazardous Materials Specialist Intern program. Under the Intergovernmental Personnel Act, this program allows HM specialists and program managers from state and local agencies to become familiar with Federal regulatory processes and safety programs in order to develop or enhance HM programs within their home jurisdictions.

RSPA has operational responsibility for both the Hazardous Materials Registration and Hazardous Materials Emergency Preparedness (HMEP) grants programs. Certain shippers and carriers are required to pay an annual fee which funds emergency preparedness grants to states, territories and Native American tribes to train and prepare to respond to HM emergencies. During 1994, persons involved in the transportation of the specified HM submitted 27,775 registration statements and paid fees amounting to \$8,390,000. Of this amount, \$6,963,000 was set aside to support a grant program that provides funding to states, territories, and Native American tribes for emergency response planning and training and to support other activities related to emergency response. The remaining amount is collected to defray the DOT's costs of administering the registration program. During 1995, 27,500 registration statements

were submitted and the fees collected amounted to \$8,327,000. Of this amount, \$6,889,000 was set aside for the grant program.

The Department continues to represent the United States at meetings of international standards-setting organizations concerned with the safe transportation of HM. Our participation focuses on ensuring that international standards developed by these organizations enhance safety without impeding international trade.

RSPA's Hazardous Materials Information System (HMIS) is the Department's principal source of safety data related to HM transportation. This database contains comprehensive data on incidents, exemptions and approvals, enforcement actions (not fully accessible to the public), and other elements that support the regulatory program. HMIS' new menu-driven programs used extensively within the Department and by other Federal agencies, state and local governments, the media, and the public, were improved to permit generation of summary statistical reports. RSPA responded to 676 data requests in 1994 and 742 data requests in 1995. HMIS data is also used to identify emerging safety problems, monitor compliance efforts, support training programs, and supply analytical justification for regulatory proposals.

The research and technology program of the Department provides the technical analysis to support regulations development and addresses the multimodal improvement of safety and efficiency. The Department initiated a variety of research projects which are detailed in Chapter Two of this report.

To inform the public and private sectors of the principles and application of the HM regulatory program and emergency response procedures, the Department administers a comprehensive education and information program. Technical assistance is provided by the modal administrations, the Transportation Safety Institute (TSI), other Federal agencies, state and local officials, and industry representatives. Classroom instruction is provided at TSI in Oklahoma City, Oklahoma, and at field locations around the country. Through resident and "Train-the-Trainer" (TTT) courses, 5,442 students were trained in 1994 and 1995.

In addition to classroom training, the Department offers a variety of printed and multimedia training aids to the HM community. In 1994 and 1995, the Hazardous Materials Transportation Training Modules (Modules One through Six) were revised and were placed on CD-ROM for interactive individual

presentation, as well as, for customized group instruction. This CD-ROM mode of delivery at \$25 for the set of six modules is exceedingly cost effective to hazmat employers; the regulations requires all hazmat employers to train all their hazmat employees. Additionally, in 1995 the Department created greater awareness and delivery of publications in both Spanish and English, through a series of outreach programs, brochures, and meetings.

RSPA disseminates HM information through its Hazardous Materials Information eXchange electronic bulletin board system known as HMIX. In 1995, RSPA made HMIX available on the Internet, and was awarded the Vice President's Hammer Award for this effort.

In summary, at the Federal, state, and local levels, the Department strengthens existing programs and cultivates new programs that improve safety in HM transportation, and nationwide uniformity in application and enforcement of the regulations.

Chapter 1

Government Reinvention Accomplishments

As a result of the National Performance Review (NPR), the Department is aiming to put "customers" first, and to focus more clearly on its safety mandate: protecting the Nation from the risks inherent in the transportation of HM by all modes. In 1994 and 1995, the Department created greater customer awareness through a series of outreach programs and meetings, and delivery of brochures and publications in both Spanish and English.

Customer Outreach

RSPA is committed to achieving its safety goals, in part, by making technical information readily available to emergency responders and workers in the business of transporting HM by utilizing new technologies that are cost effective and up-to-date.

In 1994, the basic Hazardous Materials Transportation Training Modules (Modules One through Six) were revised to reflect all HM transportation regulatory changes of HM-181. In 1995, these six modules were further revised to include Docket HM-215A, Implementation of the United Recommendations on the Transport of Dangerous Goods (UN Recommendations), International Maritime Dangerous Goods (IMDG) Code, and the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Technical Instructions) and were placed on CD-ROM

for interactive individual presentation, and for customized group instruction. This CD-ROM mode of delivery at \$25 for the set of six modules is exceedingly cost effective to hazmat employers; the regulations require all hazmat employers to train all their hazmat employees. This training program was a cooperative effort by the Department, industry representatives of the Hazardous Materials Advisory Council (HMAC), and state enforcement/emergency management personnel from the COHMED program.

Hammer Awards

On July 24, 1995, RSPA's Office of Hazardous Materials Initiatives and Training (OHMIT) and FRA's Field Liaison Team received Vice President Gore's Hammer Award. The Hammer Award recognizes significant contributions in reinventing government by putting customers first, cutting red tape, empowering employees and getting back to basics.

OHMIT received its award for expanding access to the HMIX, a computer bulletin board and national clearinghouse for HM information, by providing a direct connection through the Internet and initiating gateway through FedWorld.

FRA received its award for reinventing the technical interpretation process to eliminate inconsistent applications of FRA regulations. The team established a Technical Resolution Committee to

formulate consistent technical interpretations and enforcement policies across safety disciplines. Committee decisions were used to develop FRA's technical manuals and technical training programs.

Regulatory Reinvention and Public Meetings

On March 4, 1995, President Clinton issued a memorandum to heads of departments and agencies calling for a review of all agency regulations and elimination or revision of those regulations that are outdated or in need of reform. The President also directed that front line regulators ". . . get out of Washington and create grassroots partnerships" with people affected by agency regulations. On April 4, 1995, RSPA published in the *Federal Register* a Notice of Public Meetings and request for comments on its HM safety program.

Comments were requested on ways to improve the Hazardous Materials Regulations (HMR) and the kind and quality of services its customers want. RSPA held seven public meetings and received over 50 comments in response to the notice. On July 28, 1995, RSPA published a second Notice of Public Meetings in the *Federal Register* announcing five more public meetings.

In response to the President's directive, RSPA performed an extensive review of the HM regulations, and associated procedural rules. RSPA identified at least five rulemaking actions for priority handling under this initiative that address various revisions to the regulations to eliminate duplicative requirements, remove obsolete regulations, and simplify other requirements. RSPA anticipates issuing final rules on these rulemakings in 1996.

Chapter 2

Research and Technology

Research and development is necessary to provide the technical and analytical foundation necessary to support the Department's regulatory, international standards development, compliance, and emergency response activities in the area of HM transportation safety.

carrying HM. A

Federal Aviation Administration

After 17 years of research and development, the FAA certified the first Explosives Detection System. The new system, the CTS-5000, is manufactured by InVision and was tested in 1995 at the FAA's Technical Center located in Atlantic City, New Jersey. The system uses computed tomography to detect explosives and is the first explosives detection system for checked baggage to be FAA-certified. Trials run at two airports, lasting a year, will be used to determine how the equipment performs. FAA plans deployment late in 1997.

Federal Railroad Administration

Research projects completed in 1994 and 1995:

Tank Car Design Study

This project, in accordance with the requirements of Section 21 of HMTUSA, studied the tank car design process, including specification development, design approval, repair approval, repair accountability and tank car design criteria including whether head shields should be installed on all tank cars

contract was awarded in 1992 to the Transportation Research Board. The final report "Ensuring Tank Car Safety" was published in October 1994.

Vent & Burn Method of Field Product Removal

This project studied and investigated factors to be considered in the selection of type, size and shape of explosive charges to be used in the "vent and burn method" to enhance safety related to field removal of tank car contents in accidents. The final report was submitted to FRA in September 1994.

New initiatives and ongoing projects:

Non-destructive Evaluation for Insulated Tank Cars

FRA initiated this project under the Small Business Innovation Research Program, in 1994. This project studies the use of acoustic emission testing. A final report is to be submitted to FRA the first quarter of 1996.

Dedicated Train Study

This project, initiated in 1992 in accordance with the requirements of Section 116 of HMTUSA, compares the safety of using trains operated exclusively for the transportation of high level radioactive waste and spent nuclear fuel (dedicated trains) with the safety of using other methods of rail transportation. The report to Congress is being reviewed.

Over-the-Road Test (FEEST II Test)

This project will gather service run forces data to validate/replace Freight Equipment Environmental Sampling Test (FEEST) data. This is being refined to fit the Damage

Tolerance Analysis (DTA) project. The data final report is being reviewed by FRA.

DTA for Tank Car Stub Sill Designs

This is a joint project with the Association of American Railroads (AAR), Railway Progress Institute (RPI) and the FRA. It will provide a procedure for analyzing the integrity of various stub sill designs as ordered by Emergency Order (EO) 17. The methodology would be similar to that used by the FAA and the airline industry in airplane design. Service forces gathered in an over-the-road test will be used by Southwest Research Institute and the tank car builders in this procedure. The final report and DTA for one stub sill design per manufacturer or user is due AAR/RPI/FRA by December 1996.

NDT for Tank Car Inspection and Requalification

This project will: (1) review, analyze and propose at least five non-destructive test (NDT) methods for use in the prescribed periodic inspection replacing the hydrostatic test; and (2) establish AAR/Transportation Technology Center as a test repository inspection center. The project was initiated in October 1995. The final report for the evaluation of test methods portion is due by the end of calendar year 1996.

Surge Pressure Suppression Devices

This project will determine the adequacy of existing surge pressure suppression devices by actual testing of several types of surge pressure suppression devices. This project is to co-fund the AAR project. A final report is due AAR/FRA by November 1996.

Damage Assessment of Tank Cars in

Accidents

This project, initiated in April 1995, will evaluate the validity of the tank car damage assessment guidelines currently in use and develop improved guidelines where necessary. A companion handbook to the "Emergency (Response) Procedures for Field Removal/Transfer of product" describing critical flaw size and damage assessment of tank cars will be developed. The final report for Phase 1 - literature search is due March 1996. Phase 2 theoretical and actual test validation is due December 1997. This will be an on-going task with the test results to be included in the Tank Car Safety Program course handbook when available.

Safety/Risk Analysis of HAZMAT Transportation - Phase 2

Under phase I, the proper packaging criteria for transporting HM, based on risk analysis, was evaluated. The phase 2 effort examined more hazardous materials. The final report has been submitted and is being reviewed.

Tank Car Safety Valves and Vents

This project will study/verify/validate the use parameters for pressure relief valves, i.e., relief of tank internal pressure to prevent tank rupture, for HM lading that are liquid, and/or that thermally decompose or polymerize. Test results are intended to be used in developing guidance in the selection, sizing, and use of pressure relief devices in HM tank cars, and the results should be available in June 1996.

Stub Sill Tank Car Fatigue Crack Growth Testing Phase 2

This project investigates the cause of stub sill fatigue cracks and the effectiveness of certain

retrofit designs. In addition, it will characterize the stress distribution environment in the stub sill tank car. This project will use the new FEEST II data since the existing FEEST data seems to have an anomaly in it. Simuloader and squeeze tests will be conducted. The project is scheduled to be completed by December 1996 with the final report submitted by summer 1997.

Neutron Beam Weld Inspection Method

This project was initiated July 1994. The Neutron beam method for determining weld quality/shape was performed and analyzed for possible use in determining the quality and strength of welds on sub-surface of tank car plate steels. A data report was received by FRA in December 1995. The project did not show the need for neutron beam sub-surface inspection of welds in production of tank cars.

Use of Thin Plate Steel Manufacturing Process for Tank Car Steel Production

This project looks at the feasibility of producing tank car steels produced by thin steel (Automobile) method. This is an ongoing project and an expected report is due to FRA by mid-1997.

Research and Special Programs Administration

RSPA's research and development efforts are organized into three program areas:

Information Systems - The HMIS is a computerized information management system containing data related to the Federal HM safety program to ensure the safe transportation of HM by air, highway, rail, and water, is the primary source of national data for the Federal,

state and local governmental agencies responsible for the safety of HM transportation. Data from the system are also used by the HMS program, industry, news media, and general public. An expanded description of the HMIS is located in Chapter 10.

Research and Analysis - This area provides the technical and analytical foundation necessary to support risk management, program assessment, assessment and implementation of new technologies, and the development of domestic and international HM transportation safety regulations and programs.

Regulation Compliance - Packagings are critical to the safe transportation of HM. This program performs the testing necessary to determine the extent of manufacturer compliance with the HM regulations to protect the public and the environment from unintentional release of HM.

Research completed in 1994 and 1995:

Definition and Evaluation Criteria for Dry Batteries

This project had three objectives: (1) to categorize "dry cell" batteries in commerce; (2) to develop criteria for evaluating hazards associated with "dry cell" batteries; and (3) to develop a definition of "dry batteries" for regulatory purposes. RSPA evaluated the hazard properties of "dry cell" batteries whose classification is disputed by shippers and manufacturers. Results obtained from this project will enable RSPA to respond quickly to the need for revision of the classification of "dry cell" batteries.

Guidance for HM Flow Surveys

This project, the purpose of which was to

provide written guidance to aid State, regional and local governments, and others with emergency response responsibilities on how to conduct a commodity flow study for HM moving by highway, was prepared by RSPA and the Volpe National Transportation Systems Center (Volpe) during 1994-1995 and completed in January 1995 with the publication of a final report. The report provides step-by-step guidance, to conduct a commodity flow study for specified geographic areas such as a single community, large urban areas, and other locations. The report was developed in support of HMTUSA which requires DOT/RSPA to make grants to states to determine HM flow patterns within and between states. During 1995, nearly 5,000 copies of the final report were distributed by RSPA to state-designated grantees under the HMEP grant program.

Assessing HM Transportation in the Kanawha Valley

A comprehensive study of HM in transportation in the Kanawha Valley of West Virginia, funded by EPA and RSPA, was prepared by the National Institute for Chemical Studies and completed in 1994. The primary purposes of the study were:

(1) to characterize transportation of HM and wastes in Kanawha and Putnam Counties; (2) to assess the public safety risk that may be present from this activity; and (3) to document the process by which the study was conducted for the benefit of other communities with concerns about the transport of industrial raw materials, products and wastes. This information provides a basis for emergency planners and

responders, and the public, to help prevent and respond to transportation accidents involving HM.

Mode and Route Study

FRA co-funded this research project, initiated in the latter part of 1992, in accordance with the requirements of Section 116 of HMTUSA, to determine which factors should be taken into consideration by shippers and carriers in order to select modes and routes which, in combination would enhance public safety related to the transportation of high-level radioactive waste and spent nuclear fuel.

Evaluating SADT Test Methods

The purpose of this project was to evaluate the equivalency of the four Self-accelerating Decomposition Temperature (SADT) test methods which are prescribed in Title 49 Code of Federal Regulations (49 CFR) and based on the UN Recommendations. RSPA evaluated the equivalency of these four methods to ensure safe bulk transportation of thermally unstable substances such as organic peroxides. Results obtained from this project will be used to assess the runaway reaction hazards of thermally unstable substances.

ERG Analyses

The Department's Emergency Response Guidebook (ERG) is revised and republished every three years to provide first responders with critical information necessary to protect the public and themselves from HM spills. In 1996, the DOT ERG will be replaced by a North American Emergency Response Guidebook (NAERG). In 1995, research work was performed to expand and improve

the accuracy of the guidance provided in the NAERG. In particular, work was performed to improve the guidance provided by the Table of Initial Isolation and Protective Action Distances. A second effort to improve the NAERG was a study to identify and assess the hazard of materials which, upon being spilled into water, would produce a large quantity of toxic vapor or gas.

New initiatives and ongoing projects:

Operation Respond

RSPA, together with the FRA and FHWA, is currently funding a cooperative research and demonstration project known as Operation Respond. The project is designed to demonstrate the value of providing area first responders (police, fire-fighters, and emergency medical services personnel) with technology and training to improve communications at the scene of a HM incident at various locations in the nation. User-friendly software is being developed to provide a 911-emergency dispatcher with a direct computer linkage to rail car and motor vehicle specific HM content and emergency response guidance information maintained by a participating carrier.

Analyzing National Transportation Patterns of Large-Volume HM by Highway

The purpose of this work is to test the practicability of a "gravity" model developed to predict highway flows for a portion of 147 large-volume hazardous chemicals that have been identified as being transported by truck in the United States. During 1994-1995, RSPA began work through Volpe, to compare the gravity model with alternative "linear" models for six selected chemicals: Dodecene-1, 1-

Butanol, Phosphorus Pentasulfide, Acetone, Isopropanol, and Isopropylamine. RSPA expects the first of this series of reports to be available by June 1996.

Identification of Factors for Selecting Modes and Routes for Shipping High-Level Radioactive Waste and Spent Nuclear Fuel

This ongoing study, initiated in late 1992, is in support of Section 15 of HMTUSA which requires DOT/RSPA to conduct a study to provide technical information on which factors, if any, should be considered by shippers and carriers in order to select modes and routes that would enhance public safety related to the transportation of high-level radioactive waste and spent nuclear fuel. On December 30, 1993, RSPA issued a notice of opportunity for public review of a draft report and requested comments. During 1994-1995, RSPA conducted an analysis of comments received during early 1994, and is preparing a final report expected to be available in calendar year 1996.

Exploration of GPS to Enhance the Safe Transportation of Hazardous Materials

This study is in support of DOT's Strategic Plan, Goal 3.2., to make the Global Positioning System (GPS) the world's standard. A draft report was prepared by RSPA and Volpe during 1994-1995 and is expected to be distributed as a final report during 1996. The report examines informational needs, technical feasibility, performance criteria, and organizational and other system requirements to assess GPS technology and applications that may promote the safe transport of hazardous materials by rail and highway. Emphasis is on the cost impact of implementation of GPS on current industry practices and infrastructure to

ensure that practical, least burdensome, applications may be developed.

New Technologies in Hazardous Materials Transportation Information Systems: System Definition

This study was conducted by RSPA and Volpe during 1994-1995 and is expected to be completed as a final report during 1996. The purpose of the report is to build on the knowledge provided by the National Academy of Sciences (NAS) in its report to Congress and DOT, "Hazardous Materials Shipment Information for Emergency Response," Special Report 239. Specifically, RSPA will focus on the cost-effectiveness of technology-based options for tracking, identifying and monitoring hazardous materials shipments to enhance transportation safety. The final report is expected to concentrate on developing the parameters of a pilot project, following NAS protocols, that would apply to the trucking industry.

Evaluating DDT Hazards of Energetic Materials

The objective of this project is development of a suitable test method for the evaluation of the deflagration-to-detonation (DDT) potential of energetic materials. DDT sensitivity measures the behavior of a blasting agent involved in a fire. Alternative small scale tests, baseline data and criteria were developed for evaluation of the DDT potential of energetic materials. Results obtained from this project will enable RSPA to review critically the adequacy of current safety standards used in the authorization of the transport of energetic materials. It also will enable RSPA to incorporate alternative small scale tests and new criteria into the HM regulations.

Evaluations of Small Explosive Devices

The objective of this project is to identify and establish criteria and procedures for identifying small explosive devices with a low explosive hazard so RSPA can minimize the regulation of such devices and focus its resources on explosives with higher risk. Evaluations--including testing--will be carried out on a variety of devices generally classed in Division 1.4 and which contain a small quantity of explosives.

Test Methods and Criteria for Ammonium Nitrate Fertilizers

The objective of this project is to develop simplified test methods for proper classification of industrial or agricultural grade ammonium nitrates. Results obtained from this project will enable RSPA to review critically the adequacy of current classification criteria and safety standards on ammonium nitrate fertilizers.

Test Methods and Classification Criteria for Oxidizers

In the area of classification, RSPA plans to revise the test methods and packing group criteria for oxidizers in support of the United States position at meetings of the UN Group of Experts on the Transport of Dangerous Goods.

HM Packaging Performance Evaluation

The work called for in this multi-year effort is a systematic approach to the development of specific accident survival performance criteria for materials extremely toxic by inhalation when shipped in bulk quantities. The criteria developed will be supported by: assessment and analyses of existing

regulatory structure, acceptable measures of harm, accident environments, release scenarios and release consequences. The final products will be: accident survivability, performance criteria, performance tests, pass/fail criteria, and specific acceptable designs for packaging of bulk quantities of materials toxic by inhalation. RSPA has received a final report which covers all tasks except specific performance criteria and design approaches.

Criteria for High Strength Steel Cylinders

This project was initiated to insure that the present level of structural integrity for compressed gas containers will be maintained for containers being developed using new materials and new testing methods. This project will accomplish the following: (1) evaluate test methods and results used to demonstrate fracture resistance of high strength steel cylinders; (2) develop fracture resistance acceptance criteria for design and manufacture of high strength steel cylinders; and (3) develop the analytical methodology needed to conduct an assessment of the maximum safe life of steel cylinders.

Leak Testing of Special Form Sealed Sources

This project is addressing possible defects in the current methodology for testing radioactive sealed sources during design, approval, and production. There is strong evidence that the current practice of using surrogate material in lieu of actual radioactive material (RAM) gives erroneous results due to thermal output differences. This project will attempt to resolve the issue or recommend alternates.

RAM Packages

Specification packages are a broad family of package designs authorized by both DOT and the U.S. Nuclear Regulatory Commission (NRC) for the transport of fissile and Type B quantities of RAM. This study will compile all available test and performance data and documentation for the specification packages and identify the strengths and weakness of the specification packages. A follow-on study will address the weaknesses of these packages. The follow-on study will identify design changes required to bring DOT Specification packages into compliance with the current International Atomic Energy Agency's (IAEA) Basic Safety Series; develop the most effective and cost efficient course of action for the redesign of each specification package considered; and provide the regulatory analysis required to justify the chosen course of action.

Index System Used to Transport RAM

The transport index (TI) is a numerical value marked on the labels and shipping papers of RAM packages which indicates the magnitude of the potential radiation hazard from a package in transport. Because the TI can be determined by either a measurement of the maximum radiation dose rate at a distance of one meter from the package or, for packages containing fissile RAM, be derived from the theoretical determination of the safety features that prevent accidental criticality of the materials in the package, the TIs shown on labels and shipping papers do not definitively identify whether the potential hazard is from the external radiation of the package or there is potential for the contents of the package to go critical.

This study investigates whether a modification/addition to the current indexing system or a completely new indexing system would improve operating safety and hazard communication.

Reducing Radiation Doses

Over the past twenty years, ⁹⁹Mo-⁹⁹mTc have been the most commonly used radio nuclides in medicine. Data collected in the early 1990s from the Department's exemption holders indicate that possibly 90 percent of the total radiation dose received by transport workers is related to the transport of generators containing ⁹⁹Mo-⁹⁹mTc. Based on this data, it is fair to conclude that a reduction in the radiation dose rates from these packages would result in a significant dose reduction to workers in the overall transport program. This study will investigate the costs and benefits associated with changing the shielding material used in the generators from lead to depleted uranium. The investigation will cover new packaging requirements, number of new packages required, and the effect any change would have on the doses to transport and medical employees as well as the operational impact of switching from lead to depleted uranium.

Composite Cylinders Assessment

This project is addressing the design, testing, and retesting requirements for full composite cylinders. It is anticipated that full composite cylinders will become

increasingly popular due to their light weight. However, at this time, little is known about the structural integrity and degradation modes of these cylinders or appropriate nondestructive testing methods for these cylinders. Before specifications and regulations can be developed, research must be conducted to determine suitable design, testing, and retesting procedures.

Retest Methods for Composite Cylinders

Another project will address the development of a requalification procedure for high strength metal cylinders. For example, certain aluminum cylinders have been found to be subject to sustained load cracking which results in cracks in the neck and shoulder areas. If not detected, these cracks may result in cylinder failure. This project will attempt to develop a reliable nondestructive test procedure to detect and determine the size of cracks and acceptance criteria for cracks detected during requalification testing.

National Risk Assessment

This is an assessment of the transportation risk posed by materials poisonous by inhalation, explosives, flammable liquids and gases based upon a statistical analysis of HM incidents in the HMIS. By determining the relative nature of risk from high-probability low-consequence and low-probability high-consequence events, RSPA will be able to better prioritize its regulations and program activities.

Hazardous Materials Regulations

The Secretary of Transportation is responsible, under the Federal hazmat law, for protecting the public against dangers inherent in the transportation of HM. Under authority delegated by the Secretary, RSPA is responsible for formulating, issuing and revising HM regulations and exemptions, to carry out this responsibility.

The HM regulations, codified in 49 CFR Parts 171-180, set forth standards applicable to HM, which include: classification, packaging, hazard communication, emergency response information, training of hazmat employees, transportation and handling, and incident reporting.

In assessing the need for changes to the regulations, RSPA continually monitors domestic transportation practices and experience and international regulatory developments. It evaluates requests for new or amended regulations received from the general public, the regulated industry, other Government agencies, and the Department's modal administrations. Amendments are also issued to address specific safety problems, to incorporate new technology, and in response to congressional mandates or executive orders.

In 1994, RSPA published 26 documents related to its HM rulemaking program: 1 Advance Notice of Proposed Rulemaking (ANPRM); 3 Notices of Proposed Rulemaking (NPRMs); 3 NPRMs and 4 NPRM Clarification Notices; 10 Final Rules (FRs); 2 FR Notices of Confirmation of Effective Dates; 1 Denial of a

Petition for Reconsideration of a FR; 1 FR Clarification Notice; 2 Safety Advisory Notices; 1 Notice of Public Symposium; and 1 Notice of Filing Requirement. In 1995, 28 additional documents were published: 1 Supplemental Advance Notice of Proposed Rulemaking (SANPRM); 1 withdrawal of an ANPRM; 1 termination of an ANPRM; 7 NPRMs; 7 FRs; 3 Revised FRs in response to Petition for Reconsideration; 1 Denial of a Petition for Reconsideration FR; 3 FR Clarification Notices; 1 Notice of a Supplemental Emergency Preparedness Grant Program; 2 Notices of Request for Comment; and 1 Notice of Document Availability. Appendix A of this report contains a summary of these Notices and FRs.

The following FRs are of particular interest:

UN Recommendations, IMDG Code, and ICAO's Technical Instructions

In a FR published on December 29, 1994, RSPA amended the regulations to maintain alignment with corresponding provisions of international standards. This action was taken because of recent changes to the IMDG Code, ICAO Technical Instructions, and the UN Recommendations. These revisions were made to facilitate the transportation of HM in international commerce.

HM Transportation Registration and Fee Assessment Program

After further consideration of a proposal to increase fees to provide a sound basis for funding a nationwide emergency response training and planning grant program, established in 1992, RSPA issued a FR on May 23, 1995, which maintained the current fee structure. Therefore, registration fees were not increased, as proposed in an NPRM issued on January 30, 1995, for persons engaged in transporting or offering for transportation certain categories and quantities of HM in intrastate, interstate, and foreign commerce. RSPA expanded applicability of the registration program to include certain additional materials and provided an exception from a requirement for registration of foreign offerors.

IBCs for Hazardous Materials

The regulations were amended to include requirements for the construction, maintenance and use of intermediate bulk containers (IBCs) for transportation of HM. The IBC specifications and standards are based on the UN Recommendations and commodity assignments set forth in the IMDG Code. Safety standards are established for IBCs to allow for flexibility and technological innovation in the development of IBC design types, and eliminate the need for most of the exemptions applying to polyethylene, rigid, and flexible IBCs. Revisions and response to petitions for reconsideration were published in the *Federal Register* on August 4, 1995.

Cargo Tanks; Miscellaneous Requirements

Certain requirements under the regulations for manufacture, qualification and maintenance of cargo tank motor vehicles were amended in a FR issued November 3, 1994. These actions were based on petitions for rulemaking, exemptions, National Transportation Safety Board

recommendations, and RSPA initiatives. RSPA revised design loading requirements for MC 331 cargo tank motor vehicles and made certain other editorial and technical changes for clarity. Changes were made to relax certain requirements and to reduce unnecessary burdens on industry where there will be no adverse effect on safety.

Hazardous Substances

On June 20, 1994, RSPA revised the List of Hazardous Substances and Reportable Quantities, which appears in Appendix A to the Hazardous Materials Table (49 CFR Section 172.101). This action was taken to comply with the Super Fund Amendments and Reauthorization Act of 1986, which amended the Comprehensive Environmental Response, Compensation and Liability Act of 1980 to mandate that RSPA regulate under the regulations all hazardous substances designated by the Environmental Protection Agency (EPA). On August 2, 1995, RSPA published a final rule which further revised the List of Hazardous Substances and Reportable Quantities. These actions enable shippers and carriers of hazardous substances to comply with applicable requirements of the regulations, including notification if a discharge occurs.

Hazardous Materials in COFC and TOFC Service

On December 15, 1994, RSPA published a FR which established standards for transporting portable tanks containing certain HM in container-on-flatcar (COFC) or trailer-on-flatcar (TOFC) service, eliminating the need for prior approval from the FRA. This action facilitates domestic and international commerce.

Hazardous Materials Penalty Guidelines

In a FR issued March 6, 1995, RSPA published civil penalty guidelines used in its HM enforcement program, in response to a request contained in Senate Report 103-150 that accompanied the DOT and Related Agencies Appropriations Act of 1994. This action provides the regulated community and the general public with information concerning how RSPA generally begins its hazmat penalty assessment process, and types of information that respondents in enforcement cases should provide to justify reduction of proposed penalties. The criteria that RSPA applies are the nature, extent, circumstances, and gravity of each violation; the degree of the violator's culpability; the violator's history of prior violations; the violator's ability to pay; any effect of the penalty on the violator's ability to continue to do business, and other matters as justice may require.

Infectious Substances

In a FR, issued on September 20, 1995, RSPA revised requirements under the regulations for Division 6.2 materials (infectious substances). This rule clarified the scope of regulation for infectious substances, provided relief for certain shipments of regulated medical waste (RMW) that conform to other Federal agency regulations, allowed certain quantities of RMW to be transported by aircraft and made other changes that clarified regulatory provisions applicable to infectious substances and RMW. This action was taken to ensure that regulations for infectious substances and RMW are cost effective and provide an adequate level of safety in transportation.

Compatibility with IAEA Regulations

RSPA amended the regulations pertaining to the transportation of RAM to harmonize them with those of the IAEA and, thus, most major nuclear

nations of the world. A FR was issued on September 28, 1995, making several substantive changes to provide a more uniform degree of safety for various types of shipments, such as requiring offerors and carriers to maintain written radiation protection programs; revising the definition and packaging for low specific activity RAM; and requiring use of the International System of Units for the measurement of activity in a package of RAM. The basic standards for packaging RAM remain unchanged. This action is intended to increase the level of safety and facilitate international commerce concerning the transportation of RAM.

The following ongoing regulatory activities are of particular interest:

Regulatory Review

As a result of RSPA's review of agency regulations and meetings with affected persons, a NPRM was issued October 13, 1995, which proposed to remove unnecessary, obsolete, and duplicative regulations. RSPA has identified at least four other rulemakings slated for priority handling in 1996 to advance this regulatory relief initiative and anticipates holding additional public meetings.

Improving HM Identification Systems

RSPA proposed changes to the hazard communication requirements of the regulations. Based on comments received in response to an ANPRM issued on June 9, 1992, and recommendations of the NAS, RSPA issued a NPRM on August 15, 1994, containing proposals to improve the existing hazard communication system. The intended effect is to better identify HM in transportation in order to assist emergency response personnel in responding to and mitigating the effects of

incidents and accidents involving HM. The proposals addressed improvements to placarding, marking, and emergency response information requirements, and included editorial corrections and clarifications of requirements for marking identification numbers on bulk packagings, such as IBCs.

Registration and Reporting Procedures; Miscellaneous Provisions

To expedite processing of applications and to promote clarity and program consistency, RSPA proposed, on September 14, 1995, to revise procedures for applying for exemptions and to establish procedures for applying for approvals and certain registrations.

Clarification of these provisions will assist RSPA in reducing the need to seek additional information from applicants in processing exemption applications and will provide guidance for persons filing reports, registering or applying for approvals from RSPA.

Hazardous Materials Pilot Ticketing Program

RSPA proposed to implement a two-year pilot program for ticketing of certain HM transportation violations in order to streamline administrative procedures, cut costs, and reduce regulatory burdens on persons subject to the Federal hazmat law. This NPRM, issued on August 21, 1995, stated that RSPA would issue tickets for violations that do not have substantial impacts on safety. These violations may include, among others, operating under an expired exemption, failing to register, failing to maintain training records, and failing to file incident reports. Under this pilot program, procedures would be less complicated than current procedures for civil penalty actions, and penalties would be substantially reduced for persons who elect to pay the amounts assessed in the tickets.

Transportation of HM by Rail; Miscellaneous Amendments

On December 19, 1995, RSPA proposed to incorporate into the regulations a number of changes to requirements for transportation by

rail car based on rulemaking petitions from industry and RSPA initiative. The proposals address changes to shipping paper requirements, removal of the RESIDUE placard, and changes to mode specific requirements for rail in Part 174 of the regulations. This action is necessary to update the regulations and to respond to petitions for rulemaking. These regulatory changes would improve safety and reduce costs to shippers and carriers of HM. The rule, as proposed, is consistent with the goals of the President's Regulatory Reinvention Initiative.

Inspection and Testing of Cylinders

On October 18, 1995, RSPA proposed to amend the requirements found in the regulations pertaining to the maintenance and requalification of DOT specification and exemption cylinders used for transporting compressed gases in commerce. The proposed changes are necessary to clarify current inspection and retest requirements, incorporate certain regulatory interpretations and add new provisions. The changes would enhance public safety by providing greater guidance to persons who perform periodic inspection and testing of cylinders.

Direct Final Rule Procedure; Petitions for Rulemaking

To further the goals of the Executive Order 12866 on Regulatory Planning and Review, and in response to the recommendations of the NPR and the Administrative Conference of the United States, RSPA proposed on December 18, 1995, to implement new and more efficient procedures for adopting noncontroversial rules. This "Direct Final Rule" procedure involves issuing a FR that provides notice and an opportunity to comment, with a statement that if RSPA does not receive a significant adverse

comment, the rule will become effective on a specified date without further publication of the text of the rule. A subsequent document would be published in the *Federal Register* to confirm that no significant adverse comment was received, and to

reiterate the effective date. If a significant adverse comment were received, RSPA would publish a document before the effective date of the direct final rule withdrawing the rule or a part of the rule.

Chapter 4

Discretionary Actions

Since many unusual shipping situations and technological advances are not addressed in existing regulations, RSPA, on a case-by-case basis, grants exemptions and approvals.

Exemptions

The Federal hazmat law grants the Secretary the authority to relieve a person from a requirement of the regulations through the issuance of an exemption on the basis of equivalent levels of safety or levels of safety consistent with the public interest. The need for exemptions from the regulations arises from the changing nature of HM and the methods by which they are transported. Exemptions are vital to industry, allowing it to quickly implement new technology and to evaluate new operational techniques which often increase productivity and enhance safety.

Within RSPA, the Associate Administrator for HMS directs the Department's exemption program. The program permits HM shippers, carriers, and packaging manufacturers to apply for exemptions which allow them to utilize packaging methods or shipping practices other than those prescribed in the regulations. The exemption process includes the evaluation of new applications, modifications and renewals of exemptions, and requests to become "parties to" existing exemptions. In addition, emergency exemptions are granted to accommodate special circumstances.

Applications are evaluated and exemptions are authorized if RSPA concludes, following public comment, that the proposed practices achieve a level of safety which is equal to or greater than that level of safety which would be required in the absence of an exemption. In the event there is no existing level of safety established, the exemption must be consistent with the public interest and the Federal hazmat law.

Exemptions cover a broad set of circumstances. For example, in 1994 and 1995, the following significant exemptions were issued or renewed:

Exemption DOT-E 11215 authorized Orbital Sciences Corporation to transport certain HM contained in a Pegasus solid fuel rocket in a captive carry launch configuration secured beneath an L-1011 aircraft;

Exemptions DOT-E 11086 and DOT-E 11171 authorized the reuse of flexible intermediate bulk containers (FIBC) for solid HM under prescribed test and inspection criteria. Previously FIBCs were not authorized for reuse.

Exemptions DOT-E 10979, DOT-E 11255, DOT-E 11430 and DOT-E 11481 authorized the transportation of shock absorbers and struts containing a Division 2.2 material as not being subject to the regulations when in conformance with the conditions specified in the exemption.

Exemptions DOT-E 11378 and DOT-E 11383 authorized NASA to ship hypergolic fuels in specially designed non-DOT specification stainless steel cylinders. These fuels are used by both the government and commercial organization to fuel rockets and payloads.

Exemptions DOT-E 11281 and DOT-E 11321 authorized the transportation in commerce of materials poisonous by inhalation in bulk packagings which were not insulated.

Exemption DOT-E 11070 authorized NASA to ship anhydrous ammonia in a closed loop thermal control system as part of a Capillary Pump Loop Flight experiment.

Exemption DOT-E 10887 authorized NASA to ship nitrogen tetroxide and other materials authorized for transportation in a DOT Specification 51 portable tank in a double walled generic propellant transfer unit.

Exemption DOT-E 10950 authorized the mounting of “nurse tanks” on a field truck for agricultural distribution of anhydrous ammonia.

Exemption DOT-E 11209 authorized the transportation of liquefied petroleum gas in non-DOT specification cargo tank motor vehicles for agricultural distributions.

RSPA periodically converts provisions contained in certain exemptions to regulations of general applicability after their safety has been verified through experience under exemptions. This is accomplished through the rulemaking process. These conversions authorize the entire regulated industry to use containers or practices previously authorized as exemptions.

Modal Review

FAA evaluated 42 proposed routine 1994 DOT exemptions which affected the transportation of HM by air. In addition, eight requests for emergency exemptions were reviewed during 1994. The FAA evaluated 31 proposed routine exemptions and 5 requests for emergency exemptions during 1995. These exemptions were requested by both air shippers and carriers and concerned several classes of HM.

Appendix B contains a brief summary of each exemption issued, renewed, or amended in 1994 or 1995, and the reason for granting or maintaining the exemption.

Routine Exemptions Processed

1994 Applications

<i>Mode</i>	<i>New</i>	<i>Renewal</i>	<i>PTE*</i>	<i>Total</i>	<i>Granted</i>
Motor Vehicle	42	312	136	490	365
Rail Freight	22	77	23	122	84
Cargo Vessel	6	30	6	42	35
Cargo Aircraft	5	23	12	40	30
Passenger-Carrying Aircraft	2	4	2	8	6
Intermodal	44	799	183	1,026	842
Totals	121	1,245	362	1,728	**1,362

1995 Applications

<i>Mode</i>	<i>New</i>	<i>Renewal</i>	<i>PTE*</i>	<i>Mods</i>	<i>Total</i>	<i>Granted</i>
Motor Vehicle	53	135	195	25	408	327
Rail Freight	29	51	29	6	115	85
Cargo Vessel	5	5	7	0	17	12
Cargo Aircraft	7	23	6	1	37	27
Passenger-Carrying Aircraft	0	1	0	0	1	1
Intermodal	55	323	181	41	600	497
Totals	149	538	418	73	1,178	***949

* Party to Exemption

** In addition to **1,362** applications granted, there were **88** withdrawals, **22** denials, and **25** returned as incomplete.

*** In addition to **949** applications granted, there were **32** withdrawals, **5** denials, and **17** returned as incomplete.

Emergency Exemptions-1994

<i>Mode</i>	<i>Applications</i>	<i>Granted</i>
Motor Vehicle	25	24
Rail Freight	48	48
Cargo Vessel	1	1
Cargo Aircraft	5	5
Passenger-Carrying Aircraft	1	1
Intermodal	42	42
Totals	122	*121

Emergency Exemptions-1995

<i>Mode</i>	<i>Applications</i>	<i>Granted</i>
Motor Vehicle	30	30
Rail Freight	30	30
Cargo Vessel	0	0
Cargo Aircraft	2	2
Passenger-Carrying Aircraft	0	0
Intermodal	36	36
Totals	98	**97

* Of the **122** emergency exemption applications, **18** were issued as new exemptions, **1** was denied, **9** were granted party status, and **60** were renewed.

** Of the **98** emergency exemption applications, **56** were issued as new exemptions, **1** was denied, **14** were granted party status, and **27** were renewed.

Approvals

RSPA performs discretionary review of classification, packaging, and handling of certain HM and of the manufacturing, inspection, retesting, and requalification of specification containers. An approval is an authorization which permits a person to ship certain materials or to perform inspections and/or testing activities after the applicant has met the standards contained within the regulations. By issuing an approval, RSPA ensures that a proper level of safety will be maintained. Requests are denied when an approval is not justified or if adequate information is not provided.

Approvals are granted for items such as new explosives, and cigarette lighters, and their packaging. Approvals are also issued to foreign cylinder manufacturers, third party certification packaging agencies, and independent domestic and foreign inspection agencies. The terms and conditions of these authorizations are too detailed to be included in the regulations due to the variety of packaging and handling practices used by the industry. For example, the regulations require that new explosives be examined and approved before being transported. The class of the explosive, which is based upon the criteria stated in the definition of explosives in the HM regulations, dictates how the item should be shipped.

Approvals are also issued for UN Third-Party Certification Agencies for the purpose of certifying conformance of packaging designs with current regulations. There are currently 46 approved agencies. Each agency must complete a written application

and during an on-site inspection demonstrate the capabilities of its personnel and equipment.

To ensure that safety standards are maintained regardless of product origin, RSPA conducts inspections at cylinder manufacturers, independent inspection agencies (IIAs), and cylinder requalification (retester) facilities in foreign countries. This program permits foreign manufacturers access to the U.S. market while maintaining the same safety standards required of U.S. manufacturers. In 1994, inspections were completed at foreign cylinder manufacturers and independent inspection agencies in England, Germany, Italy, Portugal, and Wales; and cylinder retest facilities were inspected and registered in Germany, Ireland, Israel, Tunisia, and the United Arab Emirates. In 1995, inspections were completed at foreign cylinder manufacturers and independent inspection agencies in Canada, China, Korea and the Philippines; and a cylinder retest facility was inspected and registered in Singapore.

Registrations

Registrations are issued to packaging manufacturers and requalifiers as a means of identification. The registration program provides an inventory of persons performing critical safety functions under the regulations. This program presently covers 18 operations delineated in the regulations. Among those entities registered are packaging manufacturers, cargo tank manufacturers and inspectors, drum reconditioners, and cylinder retest facilities.

APPROVAL ACTIVITIES

<i>Number of Applications*</i>				
Type	Received		Granted**	
	1994	1995	1994	1995
Explosives Classification	4,809	3,792	4,802	3,806
Cylinder Retesters	547	764	383	528
Cigarette Lighter/Packaging	475	238	466	234
Repair/Rebuilders	5	2	3	0
Foreign Manufacturers	8	3	8	2
Foreign IIA	7	4	7	3
Foreign Cylinder Retesters	31	39	15	28
Special Approvals	143	203	133	163
UN Third-Party Certification Agencies	2	3	2	3
Totals	6,027	5,048	5,819	4,767

REGISTRATION ACTIVITIES

<i>Number of Applications*</i>				
Type	Received		**Granted	
	1994	1995	1994	1995
Drum Reconditioners	4	0	4	0
Symbol Registration	135	104	121	81
Cargo Tanks	1,697	1,498	1,444	1,704
Totals	1,836	1,602	1,569	1,785

* Applications that are terminated by the applicant or returned for further clarification are not included. The figures reflect those applications completed, pending minor technical corrections, or awaiting processing due to a workload backlog.

** Figures may include applications which were received in previous years, but processed in the year indicated.

TOTAL CYLINDER REQUALIFICATION FACILITIES REGISTERED AS OF 1995

DOMESTIC

Alabama	47	New Hampshire	15
Alaska	15	New Jersey	92
Arizona	27	New Mexico	22
Arkansas	25	New York	139
California	201	North Carolina	71
Colorado	46	North Dakota	14
Connecticut	42	Ohio	140
Delaware.	8	Oklahoma	35
Florida	186	Oregon	34
Georgia	57	Pennsylvania	148
Hawaii	17	Rhode Island	20
Idaho	13	South Carolina	25
Illinois	89	South Dakota	7
Indiana	59	Tennessee	44
Iowa	34	Texas	212
Kansas	26	Utah	16
Kentucky	42	Vermont	8
Louisiana	77	Virginia	72
Maine	15	Washington	54
Maryland	39	West Virginia	18
Massachusetts	73	Wisconsin	45
Michigan	77	Wyoming	10
Minnesota	34		
Mississippi	18	Guam	3
Missouri	40	Puerto Rico	18
Montana	17	Virgin Islands	3
Nebraska	14		
Nevada	14	Total	<u>2,617</u>

FOREIGN

Argentina	2	Japan	8
Australia	1	North Africa	1
Canada	5	New Zealand	2
China	2	Panama	1
Cuba	1	Phillippines	2
England	6	Portugal	1
France	2	Scotland	2
Germany	1	Singapore	6
Greenland	1	South Korea	2
Hong Kong	1	Taiwan	3
Iceland	1	United Arab Emirates	3
Indonesia	1	United Kingdom	1
Ireland	2	Total	<u>60</u>
Israel	1		

Total for Domestic and Foreign 2,677

Competent Authority Approvals

In some instances, the regulations of international organizations provide governments with some discretion in the manner in which HM are transported. A competent authority approval is a document issued by the appropriate government authority which specifies how HM must be shipped internationally. For example, when the international regulations state "as provided by the competent authority", the Associate Administrator for HMS, as the appropriate competent authority for the United States, specifies the conditions under which HM may be shipped.

The International Maritime Organization (IMO), ICAO, and IAEA all require such approvals or certifications by the country in which the shipment originates. A further explanation of these organizations and their working groups is found in Chapter seven of this report. The Associate Administrator for HMS is the U.S. Competent Authority for the issuance of approvals under rules published by these organizations. These approvals and certifications usually address materials and packaging requirements. A summary of the activities relating to the issuance of such approvals for RAM is presented below. A breakdown of the 299 international competent authority approvals and certificates issued in 1994 and 1995 is shown.

IAEA COMPETENT AUTHORITY ACTIVITIES 1994-1995

<i>Type</i>	1994		1995	
	<i>Issued</i>	<i>Registered Users</i>	<i>Issued</i>	<i>Registered Users</i>
Competent Authority Certificates	50	402	28	264
Endorsement of Foreign Certificates	41	91	38	128
Special Form Certificates	23	117	31	73
Special Arrangement Certificates	4	55	6	52
Requests for Registration	55	55	23	23
Totals	173	720	126	540

Chapter 5

Compliance and Enforcement

The Department conducts an extensive compliance and enforcement program to ensure that shipments of HM move safely among the various modes of transportation. Within the Department, RSPA is the coordinator of policy on HM transportation and, in addition to conducting its own enforcement program, it cooperates with the enforcement programs directed by the four modal administrations: FAA, FHWA, FRA, and USCG. To increase effectiveness, the Department utilizes both headquarters and regional staffs in each administration for compliance and enforcement activities.

Federal Aviation Administration

Office of Civil Aviation Security

The Dangerous Goods and Hazardous Materials Branch of the Office of Civil Aviation Security Operations, under the Associate Administrator for Civil Aviation Security, is responsible for the overall management of the FAA HM Compliance and Enforcement Program.

During the 1994-1995 biennium, one new full-time HM position was assigned to Washington, DC, Headquarters, resulting in a total of 13 full-time HM compliance and enforcement positions. Three are located in the Washington, DC, headquarters, nine are in the domestic regional offices, and one is located in the European regional office in Brussels, Belgium. The 10 regional

coordinators are an integral part of the FAA HM organization. As regional specialists, they provide information and advice to field inspectors. Most importantly, they are responsible for coordinating investigations of all actual or suspected dangerous goods incidents, discrepancies, or violations in their assigned geographic areas.

FAA Civil Aviation Security Special Agents assigned to field offices at major airports are the most important resource in the FAA's program. In addition to other security functions, the agents conduct inspections and respond to dangerous goods incidents reported by air carriers. If violations are found, they investigate and may initiate enforcement investigative reports recommending civil penalties for processing by FAA's legal staff.

During 1994, HM compliance and enforcement activities included and resulted in the following actions:

- M 377 regional agents conducted 6,377 HM inspections in conjunction with their other civil aviation security duties;
- M 28,390 individual HM shipments and associated shipping papers were examined to ensure compliance with the HM regulations and ICAO;
- M 112 violations were discovered during air carrier inspections;

- m 1031 total enforcement investigation reports were prepared;
- m approximately 25,775 additional hours were expended in the conduct of investigations and administrative actions resulting from violations, which constituted approximately 3.2 percent of the available work hours; and
- m a total of 30 work years were expended by the FAA in support of the overall HM Compliance and Enforcement Program.

- m a total of 24 work years were expended by the FAA in support of the overall HM Compliance and Enforcement Program.

During 1995, HM compliance and enforcement activities included and resulted in the following actions:

- m 265 regional agents conducted 3,073 operator/air carrier HM inspections in conjunction with their other civil aviation security duties;
- m 8,444 individual HM shipments and associated shipping papers were examined to ensure compliance with the HM regulations and with ICAO Technical Instructions;
- m 64 violations were discovered during air carrier inspections;
- m 699 total enforcement investigation reports were prepared;
- m approximately 17,475 additional hours were expended in the conduct of investigations and administrative actions resulting from violations which constituted approximately 3.2 percent of the special agents' available work hours; and

FAA continues to use the improved inspection/surveillance activity data computer system, which was implemented on October 1, 1988. This database system provides all regions with the ability to enter information as the inspection activity is accomplished, with data collected at the field, regional, and national levels. The system contains information on airports, stations, and operators that may or may not handle HM, and also provides information on inspections and on inspector training.

The system also provides an improved method of tracking HM by shipment origin (location), and by specific air carriers/freight forwarders. This information furnishes the FAA with a management tool to effectively direct inspections and surveillance to those air carriers/freight forwarders who accept, offer, and transport HM and the airport facilities where shipments originate. It also provides managers with a method of tracking all scheduled inspections within their respective areas.

Enforcement Partnerships

In order to place greater emphasis on compliance and enforcement in the cargo facilities around major airports, the FAA participated in jointly coordinated inspection programs with inspectors in FHWA's Office of Motor Carriers (OMC). The purpose of these programs was to determine that the transportation of HM to air carrier facilities was accomplished in accordance with applicable regulations.

In 1994, six coordinators were provided as representatives on three of the FAA's Flight Standards National Aviation Safety Inspection

Program (NASIP) inspections and four coordinators were provided as representatives on two NASIP inspections in 1995. FAA's involvement in the NASIP program calls for special in-depth inspections of air carriers and other aviation-related organizations regulated under Parts 121 and 135 of the Federal Aviation Regulations. Participation in the program is expected to continue.

Federal Highway Administration

Office of Motor Carriers

The OMC field operations are responsible, among many other initiatives, for enforcement of the HM regulations and the Federal Motor Carrier Safety Regulations. There are 9 regional offices and 69 field offices throughout the country. There also is a HM division located in Washington, DC.

In addition to the 8 HM program managers (Region 5 position is vacant) located at the regional offices, OMC filled 21 positions with HM specialists at the division level and two specialists at the regional level. The HM program managers and specialists devote 100 percent of their time to HM enforcement and other HM activities as well as to the safety education of the motor carrier industry. In addition to the full-time HM specialists, OMC has a field staff of 286 safety investigators. This staff conducts compliance reviews and provides educational and technical assistance to carriers, shippers, cargo tank manufacturing operations, and other program areas.

Motor Carrier Safety Ratings

The Motor Carrier Safety Act of 1984 directed

the Secretary of Transportation to establish a procedure for determining the safety fitness of motor carriers operating in interstate or foreign commerce. The purpose of the safety fitness procedure is to determine a motor carrier's adherence to the 49 CFR Safety Fitness Standard and vehicle roadside hours-of-service rating. Based on the review, FHWA assigns the carrier a safety fitness rating of satisfactory, conditional, or unsatisfactory.

Beginning in October 1994, FHWA and State enforcement officials devoted increased attention in the review to acute and critical regulations shown to have the greatest impact on safety improvement.

Acute regulations are those for which noncompliance is so severe as to require immediate corrective actions. Critical regulations are identified as those where noncompliance indicates a lack of management or operational controls.

This change simplifies the process, since only noncompliance with acute regulations or patterns of noncompliance with critical regulations are used for evaluating the regulatory factors. And, since driver error is a significant factor in the majority of accidents and since fatigue is a major component of driver error, greater emphasis is placed on compliance with the hours-of-service rules.

It should be noted that a satisfactory rating is only a "passing" grade and that only full compliance with all the safety regulations will assure that carriers meet the safety fitness standards.

During 1994, there were 2,884 ratings assigned to interstate HM carriers. These reviews were conducted by FHWA and the

states. Of these 57 percent were rated satisfactory, 30 percent conditional and 13 percent unsatisfactory. During 1995, there were 2,338 ratings assigned to interstate HM carriers. Of these, 54 percent were rated satisfactory, 34 percent conditional and 12 percent unsatisfactory.

Out-of-Service Orders

The Motor Carrier Acts of 1984 and 1990 provided FHWA with the authority to terminate all or part of a motor carrier's operation if the carrier were found to present an "imminent hazard" to the public or considered "unfit" for certain operations. This authority is implemented through Operations Out-of-Service (OOS) Procedures.

Once a carrier has been issued an unsatisfactory safety rating, the carrier must receive a rating upgrade within 45 days in order to continue to transport passengers and placardable quantities of HM. If a new rating cannot be issued during the 45-day period, temporary relief *may* be provided to the carrier based on evidence of improved compliance. A compliance review is conducted to confirm improvement. In cases where improvement is insufficient, immediate enforcement action is initiated for documentable violations *and* for OOS Order violations, and the carrier must immediately cease the portion of its operation specified in the OOS Order.

Between October 1, 1994, and September 30, 1995, 140 HM carriers received unsatisfactory safety ratings and, at the same time, HM OOS Orders from FHWA. Of these carriers, 16 received improved safety ratings as a result of an on-site review before the OOS Order took effect, i.e., within 45 days of receipt of the unsatisfactory rating. Of the remaining 124

carriers that received OOS Orders, 58 received improved safety ratings resulting from a second review. The remaining 66 either had not received a second review before the close of Fiscal Year 1995 or were reviewed and received another unsatisfactory rating.

Hazardous Materials Highway Routing

The FHWA's Office of Highway Safety, has been delegated responsibility for enforcement regarding highway routing of HM. HMTUSA provided standards and procedures for states, local governments, and Native American tribes to follow if they establish, maintain and enforce highway routing of placarded, nonradioactive HM.

The HM Routing and Special Studies Branch revised the "Guidelines for Applying Criteria to Designated Routes for Transporting Hazardous Materials." In addition, a "Resource Field Manual" was developed which will assist regional and division office routing coordinators with their responsibilities. The first training conference to introduce these coordinators to this manual is scheduled for May 1996.

Special FHWA Enforcement Efforts

In 1994, OMC and the Commercial Vehicle Safety Alliance (CVSA) coordinated "Roadcheck '94," with participants from 49 States, the District of Columbia, the 112 Canadian provinces and territories, Puerto Rico, American Samoa, Guam, and the Republic of Mexico. During 1994, 48,715 commercial motor vehicle inspections were conducted. Of these, 9.3 percent (4,546) involved vehicles transporting HM. The out-of-service rate for trucks was 19.64 percent; driver out-of-service rate was 2.77 percent;

and the truck violation rate per inspection was 1.69 percent.

In 1995, OMC and the CVSA coordinated "Roadcheck '95"; approximately 200 jurisdictions from the United States, Canada, the Republic of Mexico, and the FHWA participated in the effort. During 1995, 55,232 commercial motor vehicle inspections were conducted. Of these, 10.9 percent (6,034) involved vehicles transporting HM. The out-of-service rate for trucks was 17.95 percent; driver out-of-service rate was 3.5 percent; and the truck violation rate per inspection was 1.8 percent.

Hazardous Waste/Substance Technical Assistance Group

The Hazardous Waste/Substance Technical Assistance Group (HW/S TAG) members in each region took the lead in conducting reviews on hazardous waste transporters. Some members conducted specialized reviews at Department of Energy (DOE) RAM waste facilities.

A National HW/S strikeforce activity was conducted in South Carolina and TAG members conducted on-the-job training for state enforcement personnel and worked with the Internal Revenue Service fuel enforcement group.

A group of TAG members produced a resource document on the requirements for regulating infectious substances and distributed it to all OMC specialists to use as a reference document while conducting reviews on special institutions such as hospitals, medical centers, clinics, and specialized transporters.

Members in each region worked with their state counterparts on projects such as routing of hazardous waste through the State, carrier registration, and generator (shipper) programs. Each member worked in their region with state enforcement persons on roadside inspection of hazardous waste transporters.

Cylinder Technical Assistance Group

In 1994, OMC's Cylinder TAG received specialized training from both industry and Government agencies on cylinders and compressed gases:

- ! Fabrication of cylinders at Taylor-Wharton Co., Harrisburg, Pennsylvania;
- ! Shipment and transportation of cylinders, Defense General Supply Center Richmond, Virginia;
- ! Regulatory Training, RSPA; and
- ! Speciality Gas Transportation, Solkatronic Corporation, Phoenix, Arizona.

RAM Technical Assistance Group

During the week of May 15, 1995, the Radioactive Materials Technical Assistance Group (RAMTAG), met with Nordio International Inc. (Kanata (Ottawa) Ontario, Canada), a major shipper of RAM in North America. Nordio International Inc., is a world leader in the development, production, and marketing of radioisotope products and technology. At this facility the RAMTAG was able to view more than two dozen Type B packages. Christie Transport (North Gower, Ontario), a primary contract carrier for Nordio, was also visited and officials showed their use of Qualconn, a satellite tracking device that can provide real time message to their drivers and to dispatchers a number of items such as vehicle speed, engine operational temperatures, and routing information.

The RAMTAG members were trained in the use and care of newly purchased Ludlum

Survey Meters (emphasizing correct operational procedures and the obligation of each RAMTAG member to show usage data of the instruments).

During the 1995 summer, the RAMTAG began developing a RAM Reference Manual for use by Safety Investigators or Motor Carrier Safety Assistance Program (MCSAP) personnel in conducting Compliance Review of RAM shippers/carriers.

Explosive Technical Assistance Group

During 1994 and 1995, the Explosives Technical Assistance Group (ETAG) participated in many activities that are essential to carrying out the objectives of the OMC Strategic Plan. A number of activities are on-going, and will continue well into the 1996-1997 schedule and beyond such as:

- ! Creation and distribution of an Explosives Technical Manual, for field staff use;
- ! Update of the Special HM (Explosives) training course, including the instruction manual, with the technical manual for the use of explosives;
- ! Instruction for field staff at two of the training courses;
- ! Continued provision of feedback and comments on revising 49 CFR Part 397 and various rulemakings related to all HM areas;
- ! Participation in strike force activities, which has brought successful enforcement actions against the motor carrier;

- ! Speakers, and expert panel discussion leaders for the Munitions Carriers Conference;

- ! ETAG assistance to Department of Defense (DOD) with creating policy guidelines for military installations;

- ! Completion of Compliance Reviews for 13 DOD explosives carriers, per an Memorandum of Understanding (MOU) between OMC and DOD; and

- ! ETAG regulatory change recommendations to RSPA.

Cargo Tank Technical Assistance Group

The cargo tank TAG is working on formalizing the tools and procedures which have been under development for several years. They have written a draft chapter for the Motor Carrier Training Manual on Cargo Tank Inspection, Test, Repair, and Manufacturer Facility Reviews. They are also working with the Field Systems Group (FSG) to develop specialized laptop computer software to be used while conducting these facility reviews. FHWA is completing the "Guidelines for Structural Evaluation of Cargo Tanks" to be used by FHWA during manufacturer reviews in evaluating the adequacy of cargo tank designs. The TAG is also developing, with the assistance of the FHWA Chief Counsel's Office, strategies for addressing cargo tanks found to not meet the specifications.

The TAG has developed a list of acute and critical cargo tank violations--the list has been forwarded to the FSG for incorporation with the latest release of the OMC laptop Compliance Review Software. These changes and modifications have also been included in

the OMC Training Manual.
Cargo Tank Program

The OMC hosted the first Cargo Tank Round Table meeting in Chicago, Illinois, July 17-18, 1995. The Round Table meeting was convened to bring together all parties involved in cargo tank transportation under the theme of “Forging Partnerships in Cargo Tank Safety.” The meeting included presentations by OMC and other participants regarding the safety record of the cargo tank industry as well as ideas to further improve cargo tank safety. During smaller breakout sessions the Round Table participants identified the safety issues with the greatest impact on the cargo tank industry and agreed to work together on action items to address those issues. The six top action items involve data collection, driver training, vehicle design changes, and safety incentives. Following this meeting, there have been a number of meetings to work on the action items and develop solutions to the problems identified during the meeting.

Plans for a second Round Table meeting during the summer of 1996 were discussed. The purpose of this meeting will be to enable the action item groups to report progress, discuss the future direction, and continue to forge a partnership through discussions on ways to improve safety in the cargo tank industry.

The OMC is completing engineering guidelines to be used to evaluate the designs and construction of DOT specification cargo tanks. The OMC is continuing its endeavors by identifying additional research and development projects to enhance their efforts and expertise in cargo tank design evaluation and compliance. In addition, OMC is developing procedures for compliance, enforcement, and correction of violations to address deficiencies in engineering

and construction. The OMC investigators are conducting these reviews with the assistance and support from FHWA engineers.

Shipper Program

As part of a national HM shipper program, OMC will pursue the development of a prioritization scheme (similar to the Selective Compliance and Enforcement Program for non-HM carriers) for HM shippers. This will provide OMC with a means to review the most “*at risk*” HM shippers with the limited resources available.

Federal Railroad Administration

Within FRA, the Office of Safety (OS) is responsible for establishing a safe rail environment. The HM Division of the OS Enforcement, in consultation with the Office of Safety Analysis and FRA Chief Counsel, establishes enforcement policy and strategy. The OS has eight regions located in major cities throughout the United States that carry out these policies.

The regions are staffed with 45 full-time HM safety inspectors who focus inspection activities on shipping facilities, rail carriers, and bulk package manufacturing, repair and alteration facilities. In addition to these inspectors, personnel from the Track, Signal, Operating Practices and Motive Power and Equipment disciplines assist in ensuring a safe environment for HM transportation.

Tank Car Committee

FRA continues to be an active member of the AAR Tank Car Committee. The Committee meets four times a year to discuss various tank

car related issues as well as review and approve drawings and applications for alterations, conversions, manufacture and repair of tank cars, and approve valves and fittings. In addition, the Committee establishes minimum welder qualifications and determines personnel and equipment standards for shop certification. These procedures are reviewed by FRA to ensure that the Department's objectives are met. FRA has maintained an active role with the AAR since 1983 and has been very instrumental in the tank car industry adopting standards, such as a quality assurance program.

FRA is active on several AAR Tank Car Committee Task Groups including:

Safety Relief Device Task Group--This group came together in response to a need identified by FRA and Transport Canada to validate current safety relief device sizing methods.

Tank Car Sump Task Group--This task group was formed in 1995 in response to a National Transportation Safety Board (NTSB) recommendation for the investigation of tank car sump failures to ascertain if design plays a role in sump failure.

Non Destructive Testing Task Group-- this group evaluates the use of new technologies to improve tank car safety. Presently, this group is working on a performance standard for NDT methods.

Stub-Sill Working Group

FRA actively participates as a member of the RPI/AAR/FRA/Tank Car (TC) Stub-Sill Working Group. FRA is currently involved in conjunction with Southwest Research

Institute, RPI and AAR analysts in performing DTA of TC Stub-Sills. With this FRA and industry cooperative review of fracture mechanics, fatigue crack growth, Finite Element Analysis (FEA) and DTA, FRA has developed the necessary in house FEA modeling skills and fracture mechanics expertise to provide engineering support for current and future safety assessments, emergency orders, exemptions and rulemakings relating to tank car safety.

Reduction of Releases of HM

FRA is a team member on the AAR Non-Accident Release (NAR) Committee. The Committee is reviewing NAR's to determine how to reduce the number of injuries (approximately 50 per year) due to spills and splashes from tank car appliances that are defective or not properly secured.

A leading cause of releases of HM from tank cars is leaks from pressure relief devices. Two things that can reduce the incidence of NAR's are the reduction in the size of the orifice in tank car safety vents and the elimination of the safety vent for tank cars carrying certain commodities. However, both of these options are considered in regard to the effect they have on the need for pressure relief in the event of an accident in which a tank car is involved in a fire.

Two computer models were developed this year (AAR TCFIRE and FRA TANK CAR THERMAL ANALYSIS) to model the fire effects on tank cars. FRA has evaluated both (Fortran) programs, assessing model methodology to determine future model development needs. Findings will be incorporated in the FRA research goals for the Ensuring Tank Car Safety project.

IM Portable Tank Standards

FRA has worked with the AAR to establish operating standards for the transportation of IMO Type 5 and 7 containers loaded with compressed gases. Presently this transportation is not permitted under the regulations without formal pre-approval. Established standards will enhance safety of compressed gases transportation by allowing the use of the rail mode.

Electronic Data Interchange

FRA, through the HM Division, participates as an active partner with railroads, shippers, and steamship lines, in the American National Standards Institute (ANSI) X12/TG5 committee. The committee develops standards for transmission of information via electronic data interchange. The committee has been instrumental in significantly reducing the number of problems concerning hazard communications information. Through the committee, FRA has fostered mutual solutions which improve information accuracy for railroad personnel and emergency responders as well as improving the railroads position in a highly competitive market. FRA's role with the committee has been instrumental in prompting EPA to use the rail mode of transportation for a pilot project for hazardous waste manifests. This selection was due to the partnership between the FRA and the regulated community and the advance state of rail information transfer technology.

Emergency Order 17

Beginning early in 1990, FRA learned of 10 noncontinuous center sill tank cars ("stub sill tank cars") that had experienced complete failure in the draft sill areas. Four failures occurred in Canada and six in the United States

The failures did not cause any injuries or deaths and no HM were released. In response to these incidents, FRA initiated, in 1991, four separate inspection programs relating to tank cars equipped with stub sill assemblies. These programs were developed to determine if tank car stub sill assemblies are prone to weld and parent metal cracking and pose a risk in transportation. These inspection programs resulted in the inspection of over 1,400 tank cars. These inspections indicated that a potential problem existed among the entire fleet and inspections of the entire fleet was necessary.

FRA issued EO 17 requiring owners of stub sill tank cars to perform inspections of the stub sills. FRA continues to monitor EO 17, now into its fourth year. Over 75,000 stub-sill tank cars have been inspected. Notice No. 3 of EO 17 was published in the *Federal Register* on March 27, 1995. This amendment to the EO requires that tank car owners provide tank car repair facilities and the FRA with the owner's inspection procedures to identify structurally significant components and welds, access means, inspection techniques, and identification and measurement of cracks located. FRA now monitors these inspection procedures in addition to yearly reporting requirements.

Research and Special Programs Administration

Office of Hazardous Materials Enforcement

The primary focus of the RSPA inspector is compliance with packaging specifications, testing requirements, and exemption and/or approval authorities. HM shipments are examined for proper packaging, classification, marking, labeling, and necessary

documentation. Inspections are conducted at packaging manufacturing facilities; facilities involved in retesting, reconditioning, rebuilding, and repairing packages; shipper facilities; and transportation interchange points such as ports. In addition, RSPA purchases packaging on the open market and arranges testing to determine compliance with the regulations.

RSPA utilizes the HMIS to track enforcement activities and to identify potential compliance problems. HMIS data on incidents, exemptions, approvals, and inspection history are used to identify trends and to assist in developing the direction of the enforcement program. RSPA inspections are scheduled based on the following priorities: complaints received, manufacturers of specific types of packagings, companies that ship certain high-risk HM, follow-up inspections of companies involved in past enforcement actions, and companies identified through the incident reporting system as having a large number of HM incidents.

RSPA continued its policy of coordination and cooperation with the modal administrations and other federal enforcement agencies. In 1994 and 1995, RSPA participated in numerous joint compliance inspections, including port inspections in Los Angeles/Long Beach, California with the FAA, FRA, USCG, and U.S. Customs (Customs); in Seattle, Washington with the FRA, FHWA, USCG, and Customs; in Honolulu, Hawaii with the USCG and FHWA; in Houston, Texas with the USCG, Customs, and the Drug Enforcement Administration; in New Orleans, Louisiana with the FRA, FHWA, USCG, and Customs; in Charleston, South Carolina with the USCG, FHWA, and FRA; and Newark, New Jersey with USCG, FHWA, and Customs. In conjunction with the Bureau of Alcohol,

Tobacco, and Firearms, RSPA conducted a fireworks investigation in Walls, Mississippi. RSPA also assisted FAA in the investigation of an illegal air shipment of explosives by an airline employee in Minneapolis, Minnesota.

RSPA published its guidelines for assessing penalties for violations of the regulation, in the *Federal Register*, to assist the regulated community in understanding how RSPA determines penalties for violations of the HM regulations.

RSPA developed a NPRM for a two-year pilot ticketing program to streamline and simplify enforcement of certain violations which do not have a direct impact on safe HM transportation. Those violations include failure to register, failure to renew exemption authority in a timely manner, failure to retain training records, and failure to file a HM incident report.

RSPA's HM enforcement personnel participated in RSPA's 1995 outreach meetings to encourage the regulated community to provide suggestions for improving the HMS program.

Special Enforcement Activities

In 1994, RSPA conducted the following significant investigations:

- M RSPA, after receiving a report of a radioactive material spill in New York City, New York, from USCG's National Response Center, conducted an investigation in conjunction with the New York City Health Department's Bureau of Radiological Health. Based on the joint investigation, RSPA determined that the packaging used by the radioactive material

shipper failed to comply with the regulations. This investigation resulted in a follow-up inspection at the shipper's headquarters where additional packaging noncompliance was discovered. Enforcement action was initiated.

- M RSPA participated in joint inspections with FRA, FHWA, USCG, Customs, the New Orleans Port Police, and the Louisiana State Police. The inspections took place over a four-day period both inside and immediately outside the Port of New Orleans. Each agency focused on its area of expertise with FHWA stopping trucks going into and out of the port area, inspecting drivers and cargo. RSPA and FRA inspected intermodal portable tanks and non-bulk packages containing hazardous material. Customs checked for declaration and duty violations, while the New Orleans Port Police and Louisiana State Police checked for violations of state law. During the inspection, the police made several felony arrests on outstanding warrants. Based on these inspections, each agency discovered a number of violations and followed up with appropriate enforcement actions.

In 1995, RSPA conducted the following significant investigations:

- M RSPA, at the request of the USCG, Governor's Island, New York, assisted in the investigation of an incident involving a freight container fire on board ship in Bayonne, New Jersey. RSPA and USCG found that the material involved had been offered for transportation completely unregulated in nonspecification fiber drums inside a freight container by a shipper in the People's Republic of China. Subsequent testing of the material verified that it was

spontaneously combustible and subject to the regulations. This cooperative effort resulted in enforcement action being taken against the responsible parties by the USCG.

- M RSPA, at the request of the City of Detroit Fire Department, Detroit, Michigan, conducted an investigation of a failed high pressure fiberglass-reinforced compressed gas cylinder manufactured under exemption DOT-E 7277 that was being used by the fire department as a self-contained breathing apparatus. The cylinder failed while stored on a fire engine parked in the station. No injuries resulted, but the damage to the engine required that it be taken out of service. RSPA obtained the failed cylinder and the harness it was in at the time it failed. Through interviews with the crew of the damaged fire engine, RSPA and the fire department learned that the cylinder may have been struck by the engine at a fire scene prior to its failure. RSPA obtained the harness that had been damaged at the fire scene and compared the damage on that harness with markings on the cylinder. A determination was made that the failed cylinder had been in that harness when it was struck by the engine. RSPA also had the cylinder examined by an independent laboratory to determine if any other structural deficiency could have contributed to or caused the failure.

United States Coast Guard

The USCG manages a comprehensive compliance program for HM transportation, including vessel carriers (both U.S. and foreign flag), waterfront facilities at the port interface, and HM cargoes shipped by vessel. Inspections and examinations are conducted by

personnel from marine safety units around the country. Beginning in 1994, two major initiatives were undertaken that greatly expanded USCG HM marine transportation safety compliance activities; the Port State Control (PSC) Program and the national Container Inspection Program (CIP).

targeting, the USCG has increased the

Port State Control Program

Implementation

The PSC program was formally established on May 1, 1994 with congressional allocation of 27 new vessel inspector billets. In 1995, Congress provided an additional 68 new billets. The need for the PSC was recognized due to the dramatic changes which have occurred in the demographics of the shipping industry in recent years. As the numbers of U.S. flag deep-draft vessels have declined, our nation has evolved from a flag state to a predominantly port state. This change has rendered the United States vulnerable to the potential safety and environmental consequences posed by substandard foreign flag shipping. Traditionally, the skills and focus of USCG marine inspectors were primarily targeted on U.S. flag vessels, and foreign cruise ships, tankers, and liquefied gas carriers. With the implementation of the PSC initiative, USCG marine inspector focus has been expanded to include foreign freight vessel examinations.

Purpose

The purpose of PSC is to identify and eliminate substandard foreign vessels from U.S. waters, including those which carry HM cargo. This program pursues that goal through the systematic targeting of high risk and substandard vessels. Through selective

frequency of examinations performed on those ships that appear to present the greatest risk to life, property and the environment.

Inspections

In 1994, during the eight months of PSC inspections, 10,271 foreign ship boardings occurred and vessel deficiencies were identified during 29 percent of these examinations. During the same period, 278 foreign ship detentions enforcing international treaty standards occurred. This translates to about four percent of the foreign fleet being detained in U.S. seaports until appropriate corrective actions were completed. In 1995, 7,412 foreign vessel boardings were conducted and 518 vessel detentions occurred. This translates to about seven percent of the foreign fleet being detained in U.S. seaports. Firefighting and lifesaving deficiencies account for half of all the deficiencies identified, with 15 percent for administrative deficiencies, 13 percent for pollution prevention deficiencies, 13 percent for machinery deficiencies, and 9 percent for structural deficiencies.

Program Impacts

The PSC program has had a significant impact, catching the attention of the maritime shipping industry worldwide and bringing the United States into the forefront of international efforts to eliminate substandard ships. Publication of the names of those associated with substandard ships has received considerable coverage within the international maritime trade papers. This coverage has caused a number of flag administrations and vessel carrier companies to reexamine the way they do business.

Business Practices

Vessel charterers are paying increased attention to the performance records of ships prior to entering into business relationships.

Additionally, several ship owners have reflagged their ships to disassociate themselves from flag states with poor performance records.

Classification Society Changes

Communication between the USCG and classification societies has improved dramatically. Several classification societies have initiated major changes in an effort to improve their performance records.

Classification society disciplinary action, seldom exercised prior to this initiative, has been taken more frequently by the societies against vessel surveyors who fail to perform to their satisfaction.

Container Inspection Program

Implementation

The CIP was formally established on May 11, 1994 from congressionally earmarked funding and allocation of 76 new USCG billets. The need for the CIP was based upon the recommendations stemming from the USCG Board of Inquiry for the January 1992 M/V SANTA CLARA I casualty (Marine Board Report 16732/03 HQS 92), other major HM transportation incidents, and the results of several pilot programs indicating the existence of a high rate of HM container transportation noncompliance. Detailed program guidance was distributed prior to program implementation. A qualification standard was established, and training of field inspectors occurred soon after the billets were filled.

Purpose

The CIP's purpose is to prevent transportation related HM container incidents at U.S. commercial seaports and the national surface transportation systems that serve them. It does this by improving shippers' compliance with packaging regulations and intermodal shipping container standards. The program balances educational outreach programs for shippers with targeted compliance inspections and interagency cooperation at all levels of government.

Inspections

In 1994, during the initial 7 months of CIP inspections, 1,942 containers were inspected, an average of 258 per month. During 1995, inspections increased to 6,793, an average of 570 per month. Detention of HM containers for corrective action is occurring for about eight percent of the containers inspected and a five-fold increase in the detection of HM violations has occurred. The greatest numbers of violations are: shipping papers accounted for 40 percent of the violations, 21 percent for HM stowage violations, 17 percent for placarding violations, and 10 percent for marking/labeling violations.

Interagency Cooperation & Partnerships

Program effectiveness is strongly related to efforts taken in support of USCG's strategy, "Quality Safety and Environmental Protection Through Partnerships," to promote improved public and private sector cooperation.

DOT Administrations

USCG has enhanced its level of interagency cooperation with other agencies within the Department. Local container inspectors augment RSPA personnel conducting compliance inspections at shipper's facilities and intermodal terminals, Non-Vessel Operating Common Carriers (NVOCC), freight consolidators, and others involved in intermodal transportation. Similarly, there has been a substantial increase in cooperation between the USCG and FHWA's OMC, and the FRA. Enhanced intermodal cooperation, including participation in joint working groups and multimodal field inspections, has been taking place.

To date, some of the best examples of this new spirit of cooperation occurred through Multi-Agency Strike Force Operations (MASFO) occurring at the port interface. From CIP implementation to the end of 1995, seven operations have been conducted in major container ports, four of which were sponsored by local USCG Captain of the Ports. Captain of the Port sponsored MASFOs took place at Puget Sound, Washington (November 15-17, 1994), Los Angeles/Long Beach, California (May 16-18, 1995), New York, New York (July 11-13, 1995) San Francisco, California (July 18, 1995), and Honolulu, Hawaii (November 1-2, 1995). Much has been gained from these joint operations, including improved multi-agency cooperation and assessment of compliance levels at the port interface.

U.S. Customs Service

The 1988 MOU with Customs, which clarified roles, authorities, jurisdiction, and provided a framework for interagency inspection

coordination activities, has been reinvigorated. More than 25 Customs inspectors have participated in scheduled operational training visits by the Container Inspection Training and Assistance Team (CITAT) to local USCG units. Local ties between USCG and Customs inspectors continue to improve. Additionally, new national level efforts are being jointly pursued to facilitate coordinated inspections and use of Customs automated information for risk-based hazardous material container targeting.

Department of Defense

New cooperative operational and planning efforts are ongoing with DOD logisticians and transporters in support of DOD's shift to containerized conventional military explosives movements. USCG has been an active member of joint service logistics committees including the Joint Intermodal Container Working Group chaired by representatives of the U.S. Transportation Command, Scott Air Force Base, Illinois, and the Joint Ordnance Commander's Group chaired by representatives of the U.S. Army's Industrial Operations Command, Rock Island, Illinois. USCG participation in these groups has contributed to DOD planning efforts to develop the capacity and doctrine to move 80 percent of conventional military explosives in containers, including U.S. Army's Containerized Ammunition Distribution System (CADS) shipments of military explosives through commercial port areas. Furthermore, operational cooperation with DOD has rapidly matured during 1994 and 1995 through USCG participation in first-time tests of CADS during TURBO CADS (series) exercises sponsored by the Joint Chiefs of Staff.

National Cargo Bureau, Inc.

In July 1994, USCG implemented a MOU with the National Cargo Bureau (NCB), Inc., a not-for-profit maritime safety organization. Under Title 49 CFR Section 176.18, NCB is authorized to assist the USCG in administering the HM regulations. This MOU acknowledges joint packaged HM inspection responsibilities and cooperative maritime safety efforts.

Additionally, several NCB inspectors have attended CITAT seminars conducted at the local port level.

Program Impacts

It is too early yet to fully measure CIP impact, given the steady growth of container throughput (averaging a 4.7 percent annual increase since 1990) coupled with increasing port transportation risks measured in terms of frequency of incident, average hazardous material spilled, and loss perceptions by commercial transportation interests. While the frequency of container incidents increased in 1994, the net consequence to public health in terms of injury frequency

has decreased from 1990-1993 baseline averages. HM shipper compliance with transportation standards appears to be improving, particularly in terms of hazard communication requirements (such as, shipping papers, marking/labeling of packagings, container placarding, etc.).

Civil Penalty Enforcement Actions

USCG initiation and completion of HM civil penalty cases has continued to increase during 1994 and 1995. The number of civil penalty actions initiated almost doubled from the previous two-year total (1992/1993 actions initiated totaled 1,307 and those for 1994/1995 totaled 2,046). During the same period, the numbers of civil penalty cases completed increased 300 percent (1992/1993 completed actions totaled 363 and those for 1994/1995 totaled 1,025). Furthermore, an 84 percent reduction in Letters of Warning issued by USCG hearing officers for probable minor violations occurred during this period (1992/1993 Letters of Warning totaled 288 and those for 1994/1995 totaled 46) as CIP enforcement efforts matured.

Hazardous Materials Inspectors

<i>Administratio n</i>	<i>Full-Time Inspectors</i>		<i>Part-Time Inspectors</i>	
	1994	1995	1994	1995
FAA	12	13	377	265
FHWA	28	28	258	258
FRA*	59	59	0	0
RSPA	18	20	0	0
USCG**	57	155	933	942
TOTALS	206	275	1568	1465

* Includes 45 Federal Inspectors and 14 State Inspectors.

** 1994 full-time figures include 51 CIP HM Inspectors, 27 PSC Inspectors and 9 Inspectors assigned to Oklahoma City, OK (1994 full-time work year data was normalized for the 8 month period that the CIP and PSC programs existed); 1995 full-time figures include the 87 identified in 1994 plus an additional 68 PSC Inspectors assigned in CY 1995. Part-time figures: 1994 includes 449 USCG vessel inspectors and 484 port safety inspectors; 1995 includes 458 USCG vessel inspectors and 484 port safety inspectors.

Hazardous Materials Enforcement Actions

Enforcement Actions (CY)	FAA		FHWA		FRA		RSPA		USCG**	
	1994	1995	1994	1995	1994	1995	1994	1995	1994	1995
Criminal Cases Initiated	0	1	0	0	0	0	0	0	0	0
Criminal Cases Completed	1	0	0	0	0	0	0	0	0	0
Civil Penalty Actions Initiated	653	494	523	564	531	341	262	246	852	1,194
Civil Penalty Actions Completed	330	292	425	370	433	387	176	189	449	576
Letters of Warning Issued	0	0	* 25	* 16	0	0	134	168	# 17	# 29
Total Penalties Collected (\$)	1,750,659	1,117,000	1,622,951	1,252,096	1,923,245	1,514,394	960,600	1,047,842	877,110	1,000,027
Average Penalty (\$)	5,305	3,825	3,818	3,384	4,442	3,913	5,458	5,544	1,953	1,736

* Number of FHWA 45-day OOS orders issued.

** USCG data summarizes HM transportation by water of break-bulk, packaged, or containerized cargoes.

Number issued by hearing officers for probable minor violations.

Hazardous Materials Inspections and Investigations

Inspections & Investigations	FAA		FHWA		FRA		RSPA		USCG	
	1994	1995	1994	1995	1994	1995	1994	1995	1994	1995
General Carriers	6,493	3,135	1,567	1,554	5,257	4,418			4,230	6,104
General Shippers	899	622	249	137	6,053	4,245	416	562	1,942	6,793
Bulk Packaging (IM Tanks, Railcar, Trailer/Containers)			164,072	143,443	99,356	79,515				
Waterfront Facilities			1,243	938					*1,298	*1,243
Shipment Observations/ Documents	28,390	8,444			11,310	8,604	292	224	1,311	1,352
Container Manufacturers					***	11	157	138		
Repair/Retest/ Recondition Facility			144	192	***	83	189	179		
Accidents & Incidents	930	812	2,376	1,933					**1,692	**1,096
Other					982	***	141	114		

* Annual inspections of HM waterfront facilities at the port interface (33 CFR 126, 127 and 154).

** Data summarizes all completed HM bulk and non-bulk cargo vessel casualty investigations (46 CFR 4.05-1).

*** Data not available.

Chapter 6

Intergovernmental Partnerships

Federal Coordination Activities

National Response Team

The National Response Team (NRT) consists of 16 Federal agencies with interests and expertise in various aspects of emergency response to incidents. The NRT is primarily a national planning, policy and coordinating body and does not respond directly to incidents. EPA serves as chair and USCG serves as vice-chair. RSPA's Associate Administrator for HMS serves as the NRT representative for the Department.

NRT Prevention Committee

The primary objective of the NRT Prevention Committee is to provide a forum for basic HM information exchange, to prevent duplication of effort and decrease costs in Federal agencies. Such efficiency is of particular importance for interagency interests such as materials classification, rather than for those specialized interests of individual agencies, e.g., vessel or tank car construction. More specifically, the general objectives of the committee are as follows:

- m Provide and facilitate communication and information exchange among the NRT member agencies regarding prevention activities,
- m Maintain awareness of interagency Federal HM and oil spill prevention activities, and

- m Promote coordination of prevention activities among Federal agencies.

Nuclear Regulatory Commission

The Secretary and the NRC work together to ensure the safe movement of RAM within the United States and to destinations outside the United States. To accomplish this task, RSPA and the NRC transportation staff conduct monthly meetings to coordinate regulatory activities involving the safe transport of both fissile and non-fissile RAM. To ensure that our decisions reflect the needs of the nuclear industry, we invite DOE, nuclear trade associations and representatives from the nuclear industry to attend these monthly coordination meetings. Some of the important issues discussed during the meetings held in 1994 and 1995 included:

- m Review of the 1996 draft of the international regulations governing the safe transport of RAM;
- m The safe transport of uranium hexafluoride;
- m Classification and shipment of low specific activity material and surface contaminated objects;
- m Radiation protection program standards for transportation; and
- m Implementation, compliance and enforcement of the domestic transportation regulations.

National Transportation Safety Board

RSPA, FHWA, FRA, FAA, and the USCG continue to work closely with the NTSB in matters relating to the safe transportation of HM. NTSB investigates transportation accidents, conducts special studies and makes recommendations to Government agencies, the transportation industry and others on safety measures and practices. In response to a variety of NTSB safety recommendations, a number of research projects, test programs, rulemaking actions, and other activities are in various stages of development. These recommendations address the following: remote cut-off valves for cargo tanks, evacuation distances for munitions accidents, and rollover protection for cargo tanks involved in HM accidents. Other recommendations address the transportation of HM in passenger and cargo carrying aircraft, a wide range of safety issues concerning cylinders, safety improvements for new and future rail tank cars, and regulations regarding periodic testing and inspection of rail tank cars.

Department of Energy

DOE continues to ship 90 percent of the high-level spent nuclear fuel in the United States by rail transport, to a temporary or permanent repository. As a result of this decision, in 1994 and 1995 FRA's HM Division has been an active member of the Transportation Coordination Group (TCG) and the Transportation External Coordination Working Group (TEC/WG). As a rule, both groups meet bi-annually. FRA has maintained an active and productive role in the dissemination of information and the resolution of problems associated with aspects of rail transportation of RAM.

The TCG's focus is to provide a forum for the exchange of information and to update members and attendees on progress made in regard to the various issues surrounding the packaging, transportation and storage of high-level spent nuclear waste.

The WG\TEC's focus is in the area of problem resolution. This group's intent is to identify, discuss and ultimately resolve questions and issues dealing with the packaging, transportation and storage of high-level spent nuclear waste. The WG\TEC is a forum that enables all involved parties concerned - industry, state and federal government, tribal and the general public - to take an active role in the identification and resolution of the many issues, both actual and perceived, that exist with the packaging, transportation and storage of nuclear material.

State Coordination Activities

HM Specialist Intern Program

RSPA encourages state and local government agencies to take an active role in HM transportation safety. Since 1989, 22 law enforcement officers have participated in RSPA's HM Specialist Intern Program, authorized under the Intergovernmental Personnel Act. The purpose of this program is to achieve uniformity among local, state, and Federal HM regulations, enforcement methodologies, and penalty actions.

This internship program allows a state or local government HM program manager to attend an eight-week residency program at DOT Headquarters. While at DOT headquarters, the intern participates in

enforcement and training activities with RSPA, FAA, FRA, FHWA and USCG. RSPA's goal is for the interns to use the knowledge gained to establish and administer HM transportation safety programs within their state or local jurisdictions. The intern gains valuable insight into program development while actively participating with departmental staff, as well as visiting National Response Center and related agencies, such as Federal Emergency Management Agency (FEMA), and EPA.

Cooperative Hazardous Materials Enforcement Development Program

Federal efforts are complemented by state enforcement programs. To support state efforts, RSPA sponsors an outreach program, COHMED, for persons involved in HM transportation, enforcement, or emergency management. In 1994-1995, COHMED continued its vital role in facilitating coordination, cooperation, and communication among Federal and state agencies, local government, and the tribal. The COHMED program promotes the uniform enforcement of the regulations. Non-uniform regulations create an unnecessary and inequitable burden on industry, both carriers and shippers, and may result in preemption of state laws as being inconsistent with the Federal requirements. COHMED encourages states to adopt the regulations as state law and to regularly update state law as the Federal regulations change.

RSPA, sponsor of the COHMED program, encourages private sector involvement and works closely with industry and associations to assist them in emergency response and emergency preparedness programs. In addition, COHMED participants play an integral role in the development of a uniform national HM program by providing feedback on proposed amendments to the regulations

and by suggesting problem areas for further study. A major facet of each COHMED conference is a free training component available to all attendees.

In 1994, semiannual conferences were held in Norfolk, Virginia and St. Louis, Missouri; in 1995 conferences were held in Tampa, Florida and San Diego, California. More than 150 state and local government and industry representatives attended each of these conferences. The conference agendas focused on training and educational programs, regulatory updates, and information exchange through numerous general, break-out, and working sessions.

COHMED participants contributed to the production of a video completed and distributed in 1994: *What is COHMED?* This video describes COHMED, its goals, activities, programs, and successes. It encourages participation by individuals and organizations whose occupations or missions require dealing with HM issues.

FRA State Participation

The FRA/State Rail Safety Program currently has 14 State HM inspectors from 12 States. State participants are provided the same comprehensive training as that provided to Federal inspectors. FRA continued an outreach effort primarily through meetings with the FRA/State Rail Safety Working Group to expand the states involvement in the rail safety HM inspection program

RSPA State Participation

In addition to the primary mission of conducting compliance inspections, the four regional offices and Headquarters unit of RSPA's Office of Hazardous Materials Enforcement actively

pursued their secondary mission--to coordinate with and provide assistance to state agencies. In 1994 and 1995, RSPA coordinated with, had contact with, or worked with representatives from the following States: Alabama, California, Florida, Hawaii, Illinois, Louisiana, Maryland, New Jersey, New Mexico, New York, Ohio, South Carolina, Tennessee, Texas, Utah, Washington, and West Virginia. In particular, in 1994, the Illinois State Police, through coordination with RSPA's Central Region Office, conducted a photography class for RSPA inspectors.

Public Outreach

Presentations by FRA at Industry Meetings

To promote the safe transportation of HM by rail, FRA prepares and presents information on this topic to the public, around the country. FRA participated in numerous transportation industry seminars, trade association meetings, and conferences. FRA's 1994-1995 participation included presentations to the Chemical Manufacturers Association (CMA) at their biannual meetings in Washington, DC; AAR Hazardous Materials Seminar, Dallas, Texas; American Society of Nondestructive

Testing International Chemical and Petroleum Industry Inspection Technology Topical, Tank Car Session, Houston, Texas; American Federation of Government Employees (AFGE) Labor Management Safety Committee meetings on safety; Chemical Industry Data Exchange committee meeting; presentation to Vessel Operators Hazardous Materials Association; Southern States Energy Board planning meeting for the water/rail shipment of imported spent nuclear fuel from overseas; and the National Conference on Nuclear Waste Transportation sponsored by the State of Nevada.

Presentations by FHWA at Industry Meetings

Interest has been expressed by both the Compressed Gas Association (CGA) and the National Welding Supply Association (NWSA) in the existence of FHWA's Cylinder TAG and appreciation for being included in the "Partners for excellence" program. The TAG members have participated in both state and national meetings of compressed gas groups. In 1994 and 1995, TAG members participated in the NWSA Annual Convention in Orlando, Florida, and the CGA Convention in Philadelphia, Pennsylvania. The NWSA through a local distributor in New Orleans, Louisiana, supplied cylinders for the packaging exercise in Challenge '95.

Chapter 7

International Activities

The Department continues to support a uniform, global approach to the safe transportation of HM through participation in the work of five international organizations. The Department represents the United States at working sessions, providing leadership and support in the development of international HM transportation standards. The U.S. objective is to promote a worldwide system that affords the necessary consistency between modal and regional regulations that will guarantee the free movement of shipments. Participation is essential to assure that U.S. policy and practices are considered in the development of any international standard and to safeguard economic interests of the domestic industry. Adoption of inequitable or incompatible international requirements could have a serious impact on the domestic industry which has consistently earned a balance of trade surplus.

Representatives from the U.S. domestic market have a considerable interest in the Department's involvement in these international organizations. RSPA and the USCG host periodic public meetings to keep the public informed of work underway in the various international bodies and of U.S. positions. The meetings provide an opportunity for government, industry, and public interest groups to exchange information and to present their views on significant issues and proposed changes to international requirements that may have a

potential impact on the domestic market. A description of each organization and the Department's participation in its activities follows.

ECOSOC

The Committee of Experts on the Transport of Dangerous Goods of the United Economic and Social Council (ECOSOC) is the focal point of international activity regarding all transportation of packaged HM (except RAM). It meets biennially to consider the work of its subsidiary body, the Subcommittee of Experts on the Transport of Dangerous Goods. The Committee is responsible for the UN Recommendations which form the basis for international modal dangerous goods regulations prepared by the IMO, ICAO, and the European rail and highway regulatory organizations. RSPA is charged by the Department of State to represent the United States at meetings of the Committee and the Subcommittee.

In 1994, the Subcommittee of Experts on the Transport of Dangerous Goods met once. The results of its work were considered by the Committee of Experts at its 18th Session in December of 1994. Items adopted by the Committee were reported to and approved by ECOSOC. The decisions were reflected in the ninth revision of the UN Recommendations and will provide the basis for proposed amendments to the HM regulations in future rulemaking initiatives.

The Committee's work program covered a wide variety of topics, including many of great interest to the United States. These included:

Packaging Requirements for Explosives

Based on U.S. proposals, the lists of packagings that may be used to transport various types of explosives were substantially revised to take into account current packaging practices. This eliminated the need for RSPA to issue numerous special packaging approvals required by international transportation requirements when explosives are transported in types of packagings not specifically authorized.

Manual of Tests and Criteria

The United Nations Manual of Tests and Criteria includes procedures for classifying various substances such as explosives, self-reactive substances, oxidizers and organic peroxides. The Committee prepared a comprehensive revision to this document to clarify and consistently present test procedures and criteria and to eliminate outdated tests. The manual currently serves as a basis for harmonizing classification criteria with those of other international organizations with chemical safety responsibilities in accordance with decisions reached at the UN Conference on the Environment and Development held in Rio de Janeiro in 1992.

Requirements for Multimodal Tanks

Multimodal tank containers intended for world wide use are subject to at least four different sets of construction standards. As a result of a U.S. initiative having the intention of facilitating multimodal portable tank transport on an international level, the Committee initiated a four-year effort to

harmonize these requirements into one common set of regulations. Tanks that are certified as being constructed in accordance with these internationally harmonized requirements should be accepted for transport by any mode.

Harmonization of Classification Criteria

On the basis of objectives set out by the UN Conference on the Environment and Development, the Committee is evaluating proposed criteria developed in international working group meetings held at the invitation of the Organization for Economic Cooperation and Development. Criteria for acute oral, dermal and inhalation toxicity as well as hazard to the environment are currently under consideration. The decisions taken with respect to these criteria will ultimately result in some adjustment of the internationally harmonized classification criteria contained in the UN Recommendations.

The Committee is currently in the midst of its 1995-96 biennium. In 1995, its Sub-Committee considered a number of new issues of interest to the United States, including:

Model Regulation

Acting on a U.S. proposal, the Sub-Committee is revising the UN Recommendations into the form of model regulations which could be adopted by international modal organizations such as IMO and ICAO and national governments. This effort has the potential for significantly simplifying compliance with HM transportation regulations worldwide. As a result of this effort, IMO is considering reformatting the IMDG Code consistent with the format being adopted for the UN model regulations.

Harmonization of Classification Criteria

In the continuing effort to establish internationally harmonized classification criteria among all international and national organizations responsible for chemical safety, the UN Committee has assumed the leadership role in developing harmonized criteria for flammable and reactive materials. This work is ongoing at this time.

Harmonization of Portable Tank Requirements

The Sub-Committee is continuing with its four-year effort to establish internationally harmonized requirements for multimodal portable tanks.

Working Party on the Transport of Dangerous Goods of the UN Economic Commission for Europe

The Working Party on the Transport of Dangerous Goods is responsible for updating and revising the European Agreement Concerning the Carriage of Dangerous Goods by Road (ADR). Although the ADR is a European Convention, it is administered through a duly constituted committee of the UN and, for this reason, the United States (represented by RSPA) has full voting rights with respect to the ADR. At least twice each year, the ADR meets jointly with the organization responsible for updating the International Regulations Concerning the Carriage of Dangerous Goods by Rail (RID) to ensure consistency between the two sets of regulations. Although these are European conventions, they are of interest to the United States because of the direct impact of their requirements on shipments of HM from the United States. Furthermore, many members of ADR and RID, who are also members of the

ECOSOC Committee of Experts on the Transport of Dangerous Goods, have demonstrated a tendency to favor close alignment of the international standards with those previously adopted by RID/ADR. The following matters of particular interest to the United States were discussed at the four joint RID/ADR meetings held in 1994 and 1995:

- m Harmonization of the RID/ADR provisions for the transport of compressed gases, elevated temperature materials and infectious substances with the UN Recommendations;
- m Requirements for substances hazardous to the aquatic environment (marine pollutants);
- m Harmonization of procedures for conveying emergency response information and hazard communication information;
- m Harmonization of the requirements for the transport of limited quantities of HM with the UN Recommendations; and
- m Reformatting of the RID and ADR.

Minor differences between the UN and European requirements could have significant impacts on non-European transporters. The United States has followed these efforts closely to ensure that such differences do not develop.

Dangerous Goods Panel of the ICAO

The Dangerous Goods Panel (DGP) of the ICAO is responsible for periodic updating of Annex 18 to the Convention on International Civil Aviation which prescribes basic requirements for the safe transport of dangerous goods by air and its supporting

ICAO Technical Instructions which provide the detailed requirements necessary to implement Annex 18. RSPA provides the panel member for the United States

RSPA participated in meetings of one working group of the panel and one meeting of the panel itself during 1994 and 1995. The primary purpose of these meetings was to update the ICAO Technical Instructions in order to incorporate provisions consistent with the amendments to the UN Recommendations reflected in the ninth revised edition. Major amendments to the ICAO Technical Instructions included revisions to the packaging requirements for explosives, the requirement for infectious substances, and the classification of numerous dangerous goods subject to the ICAO Technical Instructions. The amendments to the ICAO Technical Instructions will become effective on January 1, 1997.

International Maritime Organization

The Subcommittee on Carriage of Dangerous Goods (CDG) publishes and maintains the IMDG Code. This code is recognized as the worldwide standard for the transportation of packaged HM by vessel. The HM regulations incorporate substantial portions of the IMDG Code by reference in order to promote harmony in transport requirements for import and export shipments.

In 1994-1995, the USCG and RSPA represented the United States at the 45th session of the CD Subcommittee and at three sessions of the Subcommittee's Editorial and Technical (E&T) Group. The major accomplishment of CDG45 was the completion of Amendment 27 to the IMDG Code. This amendment, which became effective on a

voluntary basis on January 1, 1995, contained many important revisions and improvements. The incorporated culminated four years of changes to the multimodal recommendations published by the UN Committee of Experts on the Transport of Dangerous Goods and was a major step in intermodal harmonization of transport regulations.

In addition to completing Amendment 27, the subcommittee finalized a comprehensive document concerning recommendations on the safe transport, handling, and storage of dangerous substances in port areas. These recommendations provide guidance to member governments, especially in developing countries, to assist in their development of port safety regulations. At CDG45, the subcommittee agreed to draft amendments to Regulations II-2/53 and 54 of the International Convention for the Safety of Life at Sea (SOLAS). These regulations contain the requirements specific to vessel design and equipment for the carriage of packaged dangerous goods and solid bulk HM.

The focus of the three 1994-1995 E&T group meetings was on the development of amendment 28 to the IMDG Code. This amendment will harmonize requirements in the IMDG Code with those contained in the ninth revised edition of the UN Recommendations which are expected to enter into force in January 1997.

A major initiative of the U. S. at CDG 45 was a proposal to consider fundamental change to the format of the IMDG Code to make the code more user-friendly for both shippers and mariners, harmonize it with the format of other modal regulations, make it easier to update, and reduce its cost thereby making it more readily

available to users. The proposal received considerable support and the subcommittee recommended to its parent committee, the Maritime Safety Committee (MSC), that the initiative be included on its work agenda. The MSC agreed to the request and the United States is now leading work on this project in conjunction with similar work taking place at the UN to make the UN Recommendations into a model rule.

Revision of the International Regulations for Transport of RAM

The IAEA Technical Committee on the Revision of the International Regulations for the Safe Transport of Radioactive Material is responsible for researching, developing and drafting the changes to be included in the 1996 edition of the regulations governing the international transport of RAM. These regulations serve as the foundation of our domestic regulations and serve as domestic regulations for many IAEA member states. As a full member of the IAEA, the United States, represented by RSPA, has full voting rights on this Technical Committee. The committee meets annually, along with representatives of major international modal organizations, to review and approve changes proposed by other IAEA departments, technical committees, and research programs.

The following were discussed at the IAEA Technical Committee meetings held in 1994 and 1995:

- m Development of performance oriented packaging standards for large quantities or high activity air shipments of RAM;
- m Review of the radiation protection standards for transportation, particularly the

development of radionuclide specific exclusion and exemption values. These values would replace the currently used exemption concentration value and would be based on the individual characteristics of each radionuclide;

- m Review of the performance oriented packaging standards used for shipment of uranium hexafluoride; and
- m Review of the criticality evaluation standards used for the transportation of fissile materials.

NAFTA

The North American Free Trade Agreement (NAFTA) provides for the establishment of the Land Transportation Standards Subcommittee (LTSS) and requires the LTSS to implement a work program for making the HM transportation standards of Canada, the United States and Mexico compatible by January 1, 2000. Since the United States and Canadian standards are substantially compatible, the effort within the LTSS working group is focused primarily on ensuring that regulations being developed by Mexico are consistent with existing United States and Canadian regulations. A key principle in participating in this effort is to maintain the level of safety provided by the U.S. HM regulations. Harmonizing HM regulations and practices of the three countries will facilitate trade and improve compliance and transport safety.

Accomplishments of this effort in the 1994-1995 period include:

- m Mexico, which prior to NAFTA had no substantial HM regulations, issued 24 HM standards as FRs which are compatible with

U.S. regulations. An additional eight standards are planned;

- m RSPA and Mexican counterparts published and distributed over 70,000 copies of a Spanish language edition of the 1993 ERG to the emergency response community in the United States and Mexico; a NAERG merging the contents of the ERG and a similar guidebook published by the Canadian government was developed in 1995 and is to be published in French, Spanish, and English in early 1996; and
- m Mexico harmonized its emergency response information requirements with U.S. requirements, eliminating a significant paperwork burden for U.S. shippers and carriers transporting HM into Mexico.

To facilitate evaluation of the Mexican standards being developed and to inform the U.S. public of their content, RSPA translates the Mexican HM standards into English and makes them available through its docket unit. RSPA also translates materials aiding in compliance with U.S. regulations into Spanish to improve compliance with U.S. regulations by Mexican shippers and carriers responsible for transporting HM into the U.S.

Transport Canada

FRA's HM Division continues to maintain a close relationship with counterparts in Mexico and Canada on critical HM issues. The Division also continues to support joint inspections with and provide investigation assistance to Transport Canada.

FRA developed, with Transport Canada, the first performance standard for the use of the nondestructive testing method, acoustic emission (AE), on tank car tanks. Acoustic emission testing may now be used, under DOT exemption, in lieu of hydrostatic testing to requalify tank car tanks. The FRA and Transport Canada observed the first AE test requalification of tank car tanks in Cleveland, Texas in August 1995.

FRA coordinates enforcement efforts with Transport Canada and Mexico for the HM enforcement program, including the enforcement of Emergency Order 17. The Division performed stub sill inspections on Tank Cars in cooperation with Transport Canada at Chicago, Illinois in January 1995.

Chapter 8

Training and Information Dissemination

Training

Training and education are an integral part of both the HM regulatory program and the Department's responsibility to ensure the safe handling of HM in transportation. The Department has developed a comprehensive educational program to assist industry, Federal inspectors, state/local law enforcement officers, and emergency management personnel. The program has three purposes:

- m To promote HM compliance by informing public and private sector personnel of the principles and application of DOT's regulatory program;
- m To encourage uniform enforcement of the HM regulations by Federal, state, and local enforcement personnel; and
- m To enhance emergency preparedness and response by state and local personnel through training information and programs on the risks, implications, and or consequences of emergencies involving the transportation of HM.

Transportation Safety Institute

RSPA develops and disseminates HM training programs. Classroom instruction is provided at RSPA's Transportation Safety Institute (TSI) and at field locations around the country. TSI offers a variety of HM training programs for a diverse audience. The principal audience for TSI training is Federal and state personnel; the

secondary audience is industry and the HM response community. Technical assistance is provided by the modal administrations, other Federal agencies, state and local officials, and industry representatives.

In 1994, TSI offered 15 HM training classes:

- m Awareness for Initial Response to Hazardous Materials Incidents
- m Awareness for Initial Response to Hazardous Materials Incidents, "Train the Trainer"
- m Cargo Tank Regulatory Compliance Course for Industry
- m Cargo Tank Regulatory Enforcement Course
- m DOT Refresher for Distribution Personnel
- m Hazardous Materials Compliance and Enforcement Course
- m Hazardous Materials Seminar
- m Hazardous Materials Shipment Release for Distribution Personnel
- m Hazardous Materials Training for FAA Field Personnel
- m Intermodal Transportation of Hazardous Materials-Recurrency Seminar

- m Intermodal Transportation of Hazardous Materials-Training for Industry
- m Instructor Training: Hazardous Materials Transportation Modules
- m Radioactive Materials
- m Transportation of Hazardous Materials Shippers Course

In addition to the above training classes, TSI offered the following in 1995:

- m 1995 Multimodal Hazardous Materials Transportation Seminars
- m Associate Staff, "Train the Trainer"
- m DOT Hazardous Materials & Waste Transportation Regulations
- m DOT/DOE Hazardous Materials Transportation Modules (Recurrency)
- m Hazardous Materials Regulations Resident Course (FAA)
- m Hazardous Waste
- m Intermodal Transportation of Hazardous Materials-Recurrency Seminar for Industry

TSI offered Hazardous Materials Seminars in the following areas:

- m In 1994--Los Angeles, California; Houston, Texas; Boston, Massachusetts; and Seattle, Washington
- m In 1995--New Orleans, Louisiana; Minneapolis, Minnesota, Philadelphia, Pennsylvania; and San Francisco, California

TSI's "Awareness for Initial Response to Hazardous Materials Incidents" Train-the-Trainer (TTT) course provided state and local governments and industry with a cadre of training personnel. As a result, in 1994, more than 301 persons received awareness level training from the TTT graduates. A total of 1,742 students were trained through 71 HM and emergency response residence classes conducted by TSI's staff in 1994. In 1995, more than 501 persons received awareness level training from the TTT graduates. TSI staff also conducted a total of 60 classes in 1995, training a total of 1,535 persons.

Through resident and TTT courses, 2,776 students were trained in 1994. These students included 605 Federal (22 percent), 489 state (18 percent), 168 local government (6 percent), 1461 industry (52 percent), and 53 international (2 percent) personnel. In 1995, the 2,666 students trained, included 637 Federal (24 percent), 790 state (30 percent), 249 local government (9 percent), 978 industry (37 percent), and 6 international personnel.

Research and Special Programs Administration

In 1994 and 1995, RSPA continued to expand its educational programs in order to increase the public's awareness of the risks involved in the transportation of HM. Increased emphasis was placed on the development of outreach programs and on the prevention and preparedness training materials for the special needs of technical audiences and management. RSPA uses the latest technology to deliver new training programs and to reach broader audiences.

Hazardous Materials Transportation Training Modules

In 1995, RSPA completed revision and production of the HM compliance and enforcement training modules on CD-ROM, and began distribution of them. This training program is a cooperative effort by the Department, industry representatives of HMAAC, and state enforcement/emergency management personnel of the COHMED program.

The modules are designed to provide "off-the-shelf" training on the safe transportation of HM. The first set of six modules teaches the basics for transporting HM. Topics covered are:

- m Hazardous Materials Table,
- m Shipping Papers,
- m Packaging,
- m Marking and Labeling,
- m Placarding, and
- m Carrier Requirements (Highway).

Each module includes a self-paced visual presentation and files for printing the following: an instructor manual, student manual, pre- and post-module evaluation tests, masters for making transparencies, and a media package. The training modules are designed for self-study. They also can be used to train large or small groups.

Preproduction development is ongoing for the remaining modules: hazardous wastes and substances, RAM, compressed gas cylinders, and portable tanks.

Modules were distributed at no charge to DOT Headquarters and regional offices (FAA, FHWA, FRA, USCG), and other HM specialists within other Federal agencies.

Seminars and Conference Support

Federal Aviation Administration

In 1994, one basic and five recurrent classes dealing with the air transportation of HM were conducted at the FAA's Mike Monroney Aeronautical Training Center, in Oklahoma City, Oklahoma. Basic training was provided to 17 new inspectors, while 92 inspectors received recurrent training.

In 1995, one basic and two recurrent classes were conducted at the FAA Training Center. Basic training was provided to 19 new agents, while 41 agents received recurrent training. A third recurrent class was provided to 36 agents, located at five separate satellite downlink facilities, from an FAA television studio located at the FAA Training Center. This prototype course represents FAA's first use of the interactive distance learning concept in the area of HM training.

One headquarters HM specialist participated as an advisor to RSPA's International Standards Coordinator at Ottawa and Montreal meetings of the ICAO Dangerous Goods Panel. The primary purpose of the meetings was to update the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air by incorporating provisions consistent with recommendations developed by the UN Committee of Experts on the Transportation of Dangerous Goods. The resulting changes will appear in the 1997-1998 edition of the ICAO Technical Instructions.

Federal Highway Administration

MCSAP, administered by OMC, received new funding for HM training of MCSAP officers as a result of the Intermodal Surface Transportation Efficiency Act of 1991. For each of the fiscal years 1993 through 1997, \$1.5M was authorized. In 1992, 1993, and 1994, \$1 million was distributed by formula to the states each year for the purpose of providing HM training to their enforcement officers and in 1995 the amount was \$1.5 million. In 1992, 1993, and 1994, the State of Missouri was selected to be the lead State in coordinating and developing a comprehensive and uniform HM training curriculum. The State of Missouri received \$1.5 million for this effort.

TAG Training

The HW/S TAG conducted a short course for all its members on the new requirements pertaining to Infectious Substances (Etiologic Agent) regulations listed in 42 CFR Section 72.3, Division 6.2. The TAG members in each Region assisted in the training of state enforcement personnel conducting activities involving hazardous waste and substances.

The HW/S TAG participated in upgrading the Specialized HW/S Training Course as well as presenting the course to State and Federal personnel. Tag members in each region took the lead in conducting reviews on hazardous waste transporters. Some members conducted specialized reviews at DOE RAM waste facilities.

Federal Railroad Administration

In 1994 and 1995, FRA personnel presented 212 seminars on HM to the following audience:

Federal employees	168
State employees	158
Railroad employees	795
Shipping employees	1,407
Emergency responders	331
Public attendees	2
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Total	2,861

Research and Special Programs Administration

The modal administrations conducted additional training seminars in industry-sponsored training programs and conferences. At numerous meetings and conferences, the RSPA staff provided information in the following areas:

- m the ERG;
- m implementation of the cargo tank rule;
- m performance-oriented packaging standards;
- m the modular enforcement and compliance training series;
- m emergency response communications;
- m hazmat employee training requirements; and
- m the HMEP grant program.

U.S. Coast Guard

In 1994 and 1995, the USCG headquarters and field staff continued to provide HM training to NVOCCs and to various industry and government groups nationwide. Training included USCG-sponsored training seminars as well as participation at industry conferences. The USCG assisted in providing modal transportation training for business, industry, and government at TSI as well as at the Multimodal Hazardous Materials Transportation Seminars sponsored by RSPA and TSI around the country.

The USCG instructors participated in most of TSI's compliance courses, including "Intermodal Transportation of Hazardous Materials Industry Seminar", "Intermodal Transportation of Hazardous Materials for Industry", and the pilot convening of "International Maritime Dangerous Goods Code Training Course." These seminars, designed for commercial shippers and carriers, provide effective training fora and resulted in the training of over 200 private sector personnel.

The USCG's CITAT, established in 1994 at TSI, provides container inspection and on-the-job HM training for field units. During the biennium, the CITAT conducted over 30 container inspection seminars at commercial seaports. These seminars provided HM transportation familiarization to USCG, other government agencies, and industry representatives. Formal presentations concerning the CIP were made to national level organizations including the National Defense Transportation Association, HMAAC and the Vessel Operators Hazardous Materials Association.

In addition to TSI, the USCG's Reserve Training Center (RESTRACEN) in Yorktown, Virginia, is the primary source of resident training for the USCG's HM inspection program and the backbone of USCG training worldwide. Formal resident training courses provide emphasis on HM transportation safety. Such courses include: Port Operations Department Course, Marine Safety Petty Officer's Course, Explosive Handling Supervisor's Course, and Port Security "A" Course. In 1994 and 1995, approximately 800 students successfully completed these training courses at RESTRACEN. Although most students at RESTRACEN are USCG active duty and reserve members, training is also provided to other U.S. Government, and foreign government agencies upon request.

Information Dissemination

An important goal of the Department is to ensure that individuals in the transportation community receive the information they need to manage their HM and emergency response programs. To maximize outreach efforts, DOT uses many resourceful methods to disseminate information. The agency encourages reproduction and wide distribution of the numerous noncopyrighted publications, guides, and charts it publishes. DOT also produces and distributes/loans videotapes on a variety of HM awareness, enforcement, and response subjects. Recipients are encouraged to reproduce and maximize the use of these visual training aids. In addition, the Department provides HM information, downloadable files, and response to queries through a 24-hour HM electronic bulletin board system.

Safety Advisories

RSPA developed and published in the *Federal Register*, several safety advisory notices which addressed the following: rupture of a high pressure aluminum self-contained underwater breathing apparatus cylinder, high pressure composite hoop wrapped cylinders, and service life of composite cylinders.

Publication Development

DOT publishes a variety of training and educational materials to foster compliance with the HM regulations. The publications inform the regulated, public, and enforcement communities of newly issued regulations or changes to existing regulations. In addition, various technical guides are developed and published for use by emergency management and enforcement personnel.

RSPA publishes approximately 40 different pamphlets, charts, fact sheets, and technical guides. These noncopyrighted publications are widely reproduced and used by industry and public sector personnel (fire, police, sheriffs' departments; civil defense/emergency management agencies; universities and colleges; and other Federal, state and local government agencies) in training programs across the Nation. In 1994, RSPA disseminated over 400,000 of these publications.

Emergency Response Guidebook

Following the completion and distribution of the 1993 ERG, RSPA solicited comments from emergency response agencies, industry, other Federal agencies, and the public. These comments will be used to improve the 1996 NAERG's content and presentation of emergency guidance, as well as

recommendations for public protection. Updated every three years, the ERG is RSPA's most widely distributed technical guide for emergency response personnel. Over one million copies of the 1993 ERG were distributed free of charge to emergency response agencies nationwide. RSPA directed this distribution process by coordinating local delivery through a network of key state agencies.

Videotape Series

RSPA, in cooperation with the Office of Personnel Management, has produced the videotape entitled *Overview of the HazMat Regulations*. This videotape, the first of four in the *Compliance Partnership Videotape Series*, provides an overview of the HM regulations and discusses the importance of a strong Federal, state, and industry partnership. The target audience of this video is elected officials, state and local government, and middle to upper management in law enforcement.

The second video in this four-part series, *Impact of Judges and Attorneys*, was completed and distributed. The target audience of this video is judges and environmental prosecutors. Two additional videotapes addressing state programs and investigative techniques were also completed and distributed.

Hazardous Materials Safety Newsletter

To meet the public's need for information, clarification, or interpretation of various aspects of the regulations, RSPA publishes the *Hazmat Safety News*. This newsletter contains informative articles, updates on regulatory actions, special notices, training schedules, and

responses to frequently asked questions from the public. In addition, stories addressing casualties are presented to promulgate lessons learned. The newsletter is distributed to shippers, carriers, freight forwarders, and to Federal, state, and local government agencies. RSPA maintains a current mailing list of over 7,500 individuals and associations involved with HM transportation safety and emergency response.

USCG Magazine

In 1995, the March-April issue of the USCG's *Proceedings of the Marine Safety Council* magazine was devoted exclusively to stories on port state control, including a summary of the PSC Program and the CIP. Each issue of that magazine also has a piece, entitled "Chemical of the Month," which provides a breakout of the properties and hazards associated with a particular HM commonly transported by vessel. Regulatory updates, stowage and packaging requirements, and industry changes are regular monthly topics.

Internet Bulletin Board (HMIX)

RSPA continues to disseminate HM information through HMIX. Jointly sponsored by RSPA and FEMA, the HMIX offers Federal and state agencies and constituency groups a means to find and exchange information on domestic and international HM transportation safety. The bulletin board contains information regarding the availability and status of HM training courses; print and media training aids; state and regional activities; conferences; laws/regulations; literature selections; contacts-Federal and state agencies, associations, and publishers; and other pertinent and downloadable data. Technical assistance is also available to individuals needing help in

setting up computers and software through the HMIX information center. Technicians also provide information to those without computer capability.

For the combined years, 1994 and 1995:

- m Over 59,000 calls were made to access the information on HMIX;
- m Over 18,000 calls were made to the technical information center; and
- m Over 69,500 HMIX users were identified.

During the biennium, one new topic was added to the bulletin board:

Cross-Border Emergency Response. This topic provides a forum for government and industry emergency responders to address the complexities involved in responding across international boundaries.

Hazardous Materials Information Center

In response to overwhelming telephone inquiries regarding information, clarification, or interpretation of the regulations, the Hazardous Materials Information Center was established in 1993. The center provides excellent customer service to industry and to the public in understanding and complying with the regulations. Staffed by RSPA personnel, the center has six rotating teams of two specialists.

RSPA continued operating the Hazardous Materials Information Center, handling over 60,000 calls during the biennium 1994-1995. In order to provide better service, RSPA implemented a toll free number (1-800-467-4922). A caller is provided a number of options via an automated system.

Callers can be connected, via a touch tone telephone, with a HM specialist who can assist them with regulatory and compliance issues relating to the HM regulations.

This system also allows callers to request copies of recent *Federal Register* and other publications, training materials, and to report violations of the regulations. Another feature of the system allows a caller who has questions on the regulations to leave a voice mail message, which is returned by the end of the next business day.

Public Meetings and Hearings

RSPA continually monitors domestic transportation practices and international regulatory developments. The agency

evaluates requests received from the general public, regulated industry, other government agencies, and the Department's modal administrations to determine the need for new or amended regulations. Amendments are also issued to address specific safety problems and to incorporate new technology.

There are times during the rulemaking process when a number of comments and exemption applications will raise issues for which additional input is needed. A public meeting or hearing is then scheduled to gain more detailed information on the regulatory action. RSPA also schedules hearings when it is aware of extensive public interest in its proposed rulemakings.

Chapter 9

Registration and Grant Programs

RSPA has operational responsibility for both the HM Registration and HMEP grants programs. Certain shippers and carriers are required to pay an annual fee which funds HMEP grants to states, territories and Native American tribes to train and prepare to respond to HM emergencies.

Registration Program

The HM Registration Program was established in 1992, as mandated by the Federal hazmat law. A FR establishing this program was published in the *Federal Register* on July 9, 1992. After

September 16, 1992, persons who transport or offer for transportation, any of the following types or quantities of HM, must file an annual registration statement and pay a fee of \$300 to DOT:

- Ⓜ any highway route-controlled quantity of a Class 7 (radioactive) materials;
- Ⓜ more than 25 kilograms (55 pounds) of a Division 1.1, 1.2, or 1.3 (explosive) material in a motor vehicle, rail car, or freight container;
- Ⓜ more than 1 liter (1.06 quarts) per package of a material extremely toxic by inhalation (Division 2.3, Hazard Zone A, or Division 6.1, Packing Group I, Hazard Zone A);
- Ⓜ a HM in a bulk packaging having a capacity equal to or greater than 13,248 liters (3,500 gallons) for liquids or gases, or more than 13.24 cubic meters (468 cubic feet) for solids; or
- Ⓜ a shipment, in other than a bulk packaging, of 2,268 kilograms (5,000 pounds) gross weight or more of a class of HM for which placarding (of a vehicle, rail car, or freight container) is required for that class.

Federal, state or local governmental agencies, employees of those agencies with respect to their official duties, and HM employees, including owner-operators of motor vehicles under a 30-day or longer lease to a registered motor carrier, are specifically excepted from registration requirements. Implementation of this requirement was deferred until July 1, 1996, for foreign shippers of HM.

An extensive public information program was continued through 1995. This included direct mailing of an informational brochure and registration statement to all parties that had previously registered. Brochures were sent to others who may have been required to register. Other governmental agencies, trade associations, and cooperating parties assisted RSPA in making the program more widely known and understood by providing mailing lists, distributing brochures, publishing articles in newsletters, and carrying out other educational efforts.

During 1994, persons involved in the transportation of the specified HM submitted 27,775 registration statements and paid fees amounting to \$8,390,000. Of this amount, \$6,963,000 was set aside to support a grant program that provides funding to states, territories, and Native American tribes for

emergency response planning and training and to support other activities related to emergency response. The remaining amount is collected to defray the Department's costs of administering the registration program. During 1995, 27,500 registration statements were submitted and the fees collected amounted to \$8,327,000. Of this amount, \$6,889,000 was set aside for the grant program.

During 1994 and 1995, modal administrations initiated a more aggressive registration enforcement program. A significant effort that demonstrated the Department's change in focus from education to enforcement during the year was indicated by the number of civil penalty actions initiated. In 1994, FHWA initiated 115 registration cases which was 22 percent of the total actions processed for that year. In 1995, 100 cases, or 18 percent of FHWA cases involved registration noncompliance.

Grants Program

The Federal hazmat law requires RSPA, through delegated authority from the Secretary, to: (1) develop and implement a reimbursable HMEP grant program; (2) monitor public sector emergency response training and planning and provide technical assistance to states, territories subdivisions and Native American tribes; and (3) develop and update periodically a national training curriculum for emergency responders. The program evolved from a proposal developed by the Department, FEMA, EPA, the Occupational Safety and Health Administration (OSHA), and the DOE and was presented to Congress during the legislative process to reauthorize the HMTA. The grant program and associated activities are financed by receipts from the registration program.

Grants are made to states and Native American tribes for: developing, improving, and implementing emergency plans under the Emergency Planning and Community Right-To-Know Act of 1986 (EPCRA); including determination of flow patterns of HM within a state and between states; and determining the need for regional HM emergency response teams. In addition, grants are made to states and Native American tribes for training public sector employees to respond to accidents and incidents involving HM.

Grants are awarded based on the needs for HM emergency response planning and training. The award amount is determined by factors such as population, HM truck miles within the state or territory, number of HM facilities, and other factors. Governors in each state, or their counterparts within territories or Native American tribes designate a state agency to receive the grant. That agency distributes funds within the state in accordance with grant rules and required certifications. The system promotes representation of all interests, such as paid and volunteer firefighters, within a state.

To date, over 333,000 emergency responders have been trained with grant funds. In the first grant budget period over 200,000 responders and others were trained with HMEP grant funds. Also over 500 commodity flow studies and hazard analyses were performed, 1,000 emergency plans were created or updated, 1,200 local emergency planning committees were assisted and over 600 exercises were held using HMEP grant funds. Thus far in the second grant budget period over 133,000 responders and others have been trained with HMEP grant funds. Also, over 300 commodity flow studies and hazard analyses were performed, over 1,200 emergency plans were created or

updated, over 2,200 local emergency planning committees were assisted and over 860 exercises were held using HMEP grant funds. All 50 States, the District of Columbia, 5 U.S. territories and 12 Native American tribes have received emergency planning and training grants to improve their ability to respond to HM emergencies. In

order to leverage funds HMEP grantees used innovations in training at the local level. Innovations included mobile training facilities. State education satellite networks were also used in Arkansas to train responders with practical sessions at local fire departments, and state wide training events to ensure the largest class size possible.

Chapter 10

Safety Performance Data

RSPA maintains the HMIS. This information system is the principal source of safety data related to HM transportation. It contains comprehensive information on HM incidents, exemptions and approvals, enforcement actions, and other elements that support the regulatory program.

The HMIS is used by the Department, other Federal agencies, state and local governments, industry, researchers, the media, and the general public. In 1994, RSPA responded to 676 requests for HMIS data, and in 1995, RSPA responded to 742 requests. HMIS data supports regulatory evaluation and policy making, training programs, the better understanding of HM transportation incidents, and identification of possible safety problems.

To enhance the HMIS, menu-driven programs used by state and local governmental agencies continued to be improved. These improvements permit generation of additional summary statistical reports, expand the search criteria, and give the ability to sort records prior to printing. Other system and database modifications improved HMIS information storage and retrieval capabilities. The five subsystems improved are:

- ! Incidents generally involving the interstate transport of HM by one or more modes;
- ! Exemptions issued under the HMR;
- ! Interpretations of regulations issued by

RSPA;

- ! Approvals of specialized container manufacturers, reconditioners, retesters, shippers, and explosives manufacturers; and
- ! Compliance activities, inspection data, and completed enforcement proceedings.

In addition, RSPA used emerging technologies to improve the responsiveness of the HMIS. Alternative methods of archiving incident source documents were put in place to improve the HMIS storage capability and the ease of retrieving reports. Also, a software assessment of the HMIS data entry and migration approach was completed in 1995. Personal computer upgrades were implemented and a full system conversion to an enhanced VAX computer is planned for 1996.

1994 Safety Statistics

In 1994, the number of reported incidents increased from 12,834 to 16,092. Most of this increase involved small packages carried by highway and were not considered serious. This continues to reflect the growth in this industry as well as improved awareness of reporting criteria. Examining 1994 incidents by mode, we find that reported HM air incidents increased by 304, and reported highway incidents increased by 2,920. These increases are consistent with the trend that emerged with the implementation of the new incident report

form in 1990. Reported rail incidents increased slightly, while reported non-bulk water incidents remained at a low level. Examining the incidents by hazard class, flammable-combustible liquids and corrosive materials were involved in the most incidents, accounting for over 75 percent of all incidents.

While non-bulk, non-serious incidents increased greatly in 1994, the increase in bulk serious incidents remained low. Serious incidents, which RSPA has defined as involving a fatality, major injury, closure of a major transportation artery or facility, evacuation of 6 or more persons, or a vehicle accident or derailment, increased from 357 in 1993 to 430 in 1994, and non-bulk incidents increased from 2,643 to 2,654. In addition, incidents involving fatalities declined to 11, with one fatality in each incident, and injuries decreased to 576. Although incidents substantially increased in number, there appears to be no indication of a compromise to the safe transportation of HM.

1995 Safety Statistics

In 1995, 14,688 HM incidents were reported. The main reason for the decrease in incidents is related to reporting by small-package carriers. The companies that accounted for the majority of the increase in incidents in 1994 reported 1,745 fewer incidents in 1995. Highway carriers reported 12,710 incidents in 1995. Rail incidents remained at about the same level as in 1994, and air incidents dropped by over 100. The decrease in air incidents shows a reversal of a trend that had been caused by the increase in HM small shipments by air package carriers.

Serious incidents decreased to 400, and bulk incidents remained relatively stable. Fatalities and injuries also decreased in 1995, with

fatalities totaling six, the lowest level since the inception of the HMIS in 1971. Injuries dropped substantially, from 576 in 1994 to 399 in 1995. The drop in serious incidents, fatalities, and injuries may indicate some improvement in the safe transportation of HM in 1995.

Charts and Graphs

Exhibit 1 and Figures I-VI summarize HM transportation incidents over the past eight years. Over those eight years, the number of incidents increased every year until 1995. Highway, clearly the most prevalent mode for incidents, accounted for all fatalities and the majority of incidents in that time frame.

Exhibit 2 displays the breakdown of HM incidents, injuries, fatalities, and property damage by state. States with large population centers and industrial cities had the most HM incidents.

Exhibit 3 displays reported incidents and damages by hazard class. The first three columns present and rank incidents by hazard class, and the last five columns present damages by dollar amount, rank, percentage, and number of incidents. The majority of the incidents and damage involved flammable-combustible liquids and corrosive materials hazard classes.

Exhibit 4 displays injuries by hazard class. Also included is a breakdown between major and minor injuries. Corrosive materials, flammable-combustible liquids, and poisonous materials accounted for over 75 percent of all injuries in 1994 and 1995.

Exhibit 5 lists the HM that were involved in

the incidents resulting in fatalities. Gasoline accounted for the majority of fatalities in both years.

Exhibit 6 shows the breakdown of incident causes by mode of transport. Human error was the main cause of incidents in both 1994 and 1995. Combined with package failure, these two causes are responsible for approximately 95 percent of all incidents.

Exhibit 7 ranks the top fifty HM involved in incidents. These fifty materials, out of approximately 2,800 hazardous materials identified in the Hazardous Materials Table, 49 CFR §172.101, make up about three-fourths of all incidents in 1994, and about two-thirds of all incidents in 1995. The table lists the commodity, corresponding hazard class, number of incidents reported for that commodity, and corresponding percentages.

Exhibit 8 summarizes hazardous waste incidents over the past eight years. No fatalities have occurred due to hazardous waste incidents in this time period, and all injuries involved highway and rail modes of transport.

Exhibit 9 displays the HM incidents reported since 1971 and regulatory changes affecting reporting requirements. The graph is segmented into highway-for-hire and all other incidents, and shows the impact highway-for-hire incidents has on the trend of incidents.

Exhibit 10 characterizes incident damages into the five categories that appear on the report form. Decontamination/cleanup costs continue to be the largest cost associated with incidents involving damages.

Exhibit 11 displays information on incidents involving an evacuation. The incidents are broken down by mode, consequence, and cause.

Maps 1 - 5 display 1994 and 1995 incident data by three-digit zip code area. The areas with the greatest concentration of HM incidents either were industrial centers or included numerous terminal facilities. Map 1 displays the location of all incidents reported to RSPA. Map 2 shows the origin of shipments that resulted in an incident. Map 3 displays the destination of shipments resulting in an incident. Map 4 shows the location of highway incidents. Map 5 displays the location of rail incidents.

Chapter 11

Future Challenges

During 1994-1995, we have seen the phased transition, by shippers, carriers, packaging manufacturers, and other affected persons, to compliance with most of the rules and regulations issued since 1990 to harmonize the HM regulations with the UN

Recommendations. With few exceptions, such as transitional placarding, compliance with all of the revised regulations will be mandatory on October 1, 1996. While this milestone is recognized as a significant achievement in the advancement of transportation safety, there is still much to be done.

Performance Commitments

As a result of the National Performance Review, and modal Strategic Plans, the Department will continue to develop specific recommendations for improving services, using resources better, working more effectively and focusing on its customers.

Paperwork Reduction

In an effort to reduce paperwork burdens, RSPA plans to initiate the following:

Cargo Tank Registration Program - Initiate rulemaking to extend the renewal of cargo tank registrations from three years to five years.

HM Exemptions - Submit a legislative proposal to Congress to extend the two year exemption renewal process to four years.

Approval Authorizations - Eliminate duplicate approval authorizations by issuing a single document which can be used by anyone who offers or transports a product as long as they comply with the requirements set forth in the document.

Consolidation of Regulations

Regulations for the manufacture, testing, and retesting of cylinders and other pressure vessels used for the transportation of compressed gases were first codified in the regulations in 1950. Many of those specifications do not reflect technological and manufacturing process improvements that have occurred in the industry since that time.

In Docket HM-220, Specifications for Cylinders, RSPA is undertaking an effort to contemporize these regulations by adopting quality standards that better assure safety in the design, manufacture, testing, retesting, and use of cylinders.

Information Technology

Future developments in electronic media create both opportunities and challenges to training production and information delivery methods. The Department strives to keep current with new technologies in electronics, computer capabilities, audio/visual improvements and learning techniques, such as distance learning through teleconferencing, videotape

productions, interactive CD-ROM, on-line Internet activities, and World Wide Web sites. Tremendous capabilities exist, but our ability to maintain state-of-the-art activities depends upon employee training and development, and keeping abreast of rapid changes and improvements to existing technologies. Our goal is to provide quality training and technical regulatory information to the HM transportation community in greater quantities while reducing actual costs. We believe that meeting our goal depends in large part on utilizing state-of-the-art developments and a willingness to try new and different ways to do things, which supports the philosophy of a government that works quicker and better for less.

Extending the HMR To Intrastate Transportation

The Federal hazmat law requires the Secretary to issue regulations that govern the intrastate transportation of HM. In Docket HM-200, Hazardous Materials in Intrastate Transportation, RSPA is taking a common sense approach to its planned expansion of the regulations.

Based upon the merit of comments submitted in response to RSPA's original notice of proposed rulemaking, RSPA intends to issue a supplemental notice of proposed rulemaking that provides an appropriate level of relief from certain requirements in the regulations for "materials of trade." In addition, it would propose to permanently "grandfather" non-specification cargo tank motor vehicles that have been permitted by State law or regulation to transport HM within that State's jurisdiction.

Grants Program Reauthorization

To date, the HMEP grants program has provided funds for training over 333,000 emergency responders. Congressional authorization for this program will expire in FY 1998. RSPA will study the options concerning reauthorization of the grants program including possible means to stabilize funding for the ERG, which has been supported through the HMEP grant program funds since 1994.

Adoption of IAEA Regulations for RAM

As the U.S. Competent Authority for HM, RSPA has participated extensively in drafting the next edition of international regulations governing the transportation of RAM. RSPA has involved both the NRC and the nuclear industry in the international regulations development process. The final draft was completed by the IAEA in 1995 and, once approved by the IAEA Board of Governors, will be published in 1996. Major changes involve: replacement of the generic, activity concentration based exemption value with values that are based on the characteristics and hazards of each individual radionuclide; establishing of air transport performance oriented packaging standards; and revision of the performance oriented packaging requirements for cylinders and packages containing uranium hexafluoride.

The challenge now is to maintain and improve the current level of transport safety and harmonization by initiating a rulemaking process to adopt these regulations as soon as they are approved by the international modal

organizations. Since many of the proposed regulatory changes are new and are a significant departure from the existing requirements, RSPA expects substantial controversy associated with the public rulemaking process. RSPA has initiated discussion with the NRC on developing a consensus approach and plan for simultaneous RSPA and NRC rulemakings to implement the new IAEA regulations into domestic regulations.

Development of a UN Model Regulation

Based on a U.S. proposal, the UN Committee of Experts on the Transport of Dangerous Goods is working to rewrite its UN Recommendations into the form of a model regulation which can be more easily adapted into national or international regulations. While progress has already been made on a first stage of this effort--an editorial reformatting of the current recommendations--the more challenging second stage still lies ahead. This second stage will involve incorporating provisions which are common to most HM regulations which until now have not been included in the existing UN Recommendations. These provisions include identification of the appropriate types of packaging for each type of HM; including requirements for segregating HM which may be incompatible within freight containers; and placarding requirements for shipments that contain two or more HM which present different hazards and requirements for RAM. In the case of these requirements, the challenge will be to merge related requirements in international and national regulations into a single set of UN requirements. The effort is expected to result in increased compatibility of HM regulations worldwide.

The work of the UN has far reaching implications. Coincident with the work in developing the UN Model Regulation, efforts are already underway at the IMO to revise the IMDG Code to be consistent with the new model rule format. Also at this time, European countries are adapting their regulations governing the transport of HM throughout Europe by highway or rail transport to the new UN Model Regulation format. Finally, consideration is also being given to developing a single set of regulations governing transborder shipments of HM in North America on the basis of the UN Model Regulation. Each of these efforts is expected to streamline compliance with international HM regulations and improve transportation safety.

Stub Sill DTA Program

Based on a 1992 NTSB report, Docket HM-201 addressed the use of Damage Tolerance Principles to improve the safety of railroad tank cars used in the transportation of HM. The NTSB report focused on the inspection and testing of tank cars and disclosed that many tank car defects are not routinely detected. These defects under fatigue loading may suddenly grow to a critical size resulting in failure of the tank car. The NTSB recommended that FRA and RSPA develop requirements for the periodic inspection and testing of tank cars to help ensure the detection of cracks before the cracks propagate to a critical length. Such requirements would establish inspection and test intervals based on the defect size detectable by the inspection and test method used and on the stress level and crack propagation characteristics of the tank car structural element. This is referred to as a damage tolerance approach. Both

Docket HM-201, addressing test inspection intervals for tank car tanks, and the FRA EO 17 addressing the inspection of tank car stub sills bring the implementation of damage tolerance based life management programs to the forefront of tank car safety.

Today, FRA, the railroad, shipping, and tank car industries are working together to apply a damage tolerance based life management program to tank car stub sills. In 1995, the industry and FRA undertook a joint Stub Sill DTA Program. In 1996, stress analysts from industry and government will begin work on DTA for a variety of stub sill designs. Government and industry sponsored work has begun at the AAR Transportation Technical Center regarding stub sill loading, nondestructive evaluation methods, and preparation for validation of the damage tolerance methodology. Both RSPA and FRA realize that in order to fully implement a damage tolerance program, it will take years for each tank car owner or manufacturer to analyze each principle structural element and to support the results of such analysis with test evidence and service experience.

Ensuring Tank Car Safety Project

The Ensuring Tank Car Safety Project was established in support of the Transportation Research Board's recommendations for improved tank car safety.

Currently recommendations being addressed are for FRA and RSPA to:

- ! define long-term safety goals;
- ! develop a long-range research plan to

- define major research needs and programs to meet them;
- ! improve tank car safety data; and
- ! ensure prompt establishment of requirements to verify the structural integrity of in-service tank cars by continuing to work with industry to establish new test and inspection methods.

The project is being sponsored by the FRA HM Division and represents the FRA, AAR, CMA, RPI, Transport Canada and Secretaria de Comunicaciones y Transportes (SCT) of Mexico. The project is devoted to an ongoing dialogue between government, industry, state and local emergency responders, and the general public to further transportation safety.

The Ensuring Tank Car Safety Planning Committee met twice in 1995 to plan a series of public meetings planned to both provide information to the public and to seek to find prevailing issues of public concern. Several workgroups have been set up to focus on short- and long- term research, operational changes, training, and development of industry standards. The first Public Information Meeting is planned for February 13-14, 1996 in Houston, Texas.

The Future

To meet new challenges and accomplish its mission--to make America's transportation systems more integrated, effective, and secure--the Department continues to strengthen existing programs and cultivate new programs that improve safety in HM transportation, and nationwide uniformity in application and enforcement of the regulations.

Appendix A

Rulemaking Actions 1994-1995

**APPENDIX A
RULEMAKING ACTIONS TAKEN IN 1994**

<u>SUBJECT AND DOCKET NUMBER</u>	<u>ACTION</u>	<u>DATE PUBLISHED</u>	<u>SYNOPSIS</u>
Construction of Cargo Tank Motor Vehicles; Extension of Compliance Date (HM-183)	Final Rule Extension of compliance date; FR	01/12/94	Extended the compliance date for continued construction of cargo tank motor vehicles to MC 306, MC 307, MC 312, MC 331, and MC 338 specifications. The date is extended from April 21, 1994 to August 31, 1995. Allowed cargo tank manufacturers additional time for manufacture of new cargo tank motor vehicles DOT 406, DOT 407, DOT 412.
Safety Advisory: Service Life of Composite Cylinders Used in Self-Contained Breathing Apparatus (SCBA) in Other Services (Notice No. 94-1)	Safety advisory notice, correction	01/15/94	Corrected a safety advisory notice published in the Federal Register on 11/18/93 [Notice No. 93-22; 58 FR 60899] by adding two DOT exemptions, which were inadvertently omitted from the list of affected exemptions.
Construction of Cargo Tank Motor Vehicles; Confirmation of Effective Date (HM-183)	Notice; confirmation of effective dates	03/18/94	The effective date of the rule was March 14, 1994, contingent upon RSPA receiving no comments opposing the extension by February 11, 1994. This document confirms that RSPA received no opposing comments, and therefore the effective date of the final rule is March 14, 1994.
Hazardous Materials Transportation Registration and Fee Assessment Program (HM-208A)	NPRM	04/01/94	Proposed certain changes to the current registration program, established in 1992. The notice proposed to delay the requirement for foreign offerors to register and specifies that both the offeror and transporter may offer or transport hazmat only if they are currently registered with RSPA.

<u>SUBJECT AND DOCKET NUMBER</u>	<u>ACTION</u>	<u>DATE PUBLISHED</u>	<u>SYNOPSIS</u>
Hazardous Materials Transportation; Registration and Fee Assessment Program (HM-208)	Notice of filing requirements	04/29/94	Notified persons who were registered for the 93-94 registration year that they will be mailed a registration statement and information brochure informing them that they are required to annually file a registration statement and pay a fee.
Carbon Fiber Composite Cylinder Technology Symposium (Notice No. 94-5)	Notice of public symposium	05/11/94	RSPA hosted a public symposium on carbon fiber composite technology and its application to the design of over wrapped metallic cylinders for transportation of compressed gases.
Transportation of Hazardous Materials; Miscellaneous Amendments (HM-166Z)	Final Rule	06/02/94	Incorporated into the HMR a number of changes based on rulemaking petitions from industry and RSPA initiative. The changes are necessary to recognize recent editions of certain matter incorporated by reference, to eliminate certain inconsistencies and typographical errors, and to reinstate a shipping description.
Hazardous Substances (HM-145J)	Final Rule	06/20/94	Updated the "List of Hazardous Substances and Reportable Quantities which appears in an Appendix to the hazardous materials table to comply with the Superfund Amendments and Reauthorization Act (SARA) of 1986, which amended the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), requiring hazardous substances be regulated under the HMR.
Hazardous Materials Transportation; Registration and Fee Assessment Program (HM-208A)	Final Rule	06/27/94	Adopted certain changes to the current registration program, effective July 1, 1994, beginning of the next registration year. Delayed the requirement for foreign offerors to register, and required a carrier to maintain the Certificate of Registration on board each vessel carrying hazmat subject to registration or to annotate its registration number on any document readily available to enforcement personnel.
Transportation of Hazardous Materials; Miscellaneous Amendments (HM-166Z)	Final Rule	07/11/94	Federal Register [59 FR 35411] correction was made to the Hazmat Table for Ammonium nitrate fertilizers.

<u>SUBJECT AND DOCKET NUMBER</u>	<u>ACTION</u>	<u>DATE PUBLISHED</u>	<u>SYNOPSIS</u>
Implementation of the United Nations Recommendations, International Maritime Dangerous Goods Code, and International Civil Aviation Organization's Technical Instructions (HM-215A)	NPRM	07/18/94	Proposed to amend the HMR to maintain alignment with corresponding provisions of international standards based on current changes in of the IMDG Code, the ICAO Technical Instructions, and to more fully align the HMR with the seventh and eight editions of the UN Recommendations.
Safety Advisory; High Pressure Aluminum Seamless and Aluminum Composite Hoop-Wrapped Cylinders (Notice No. 94-7)	Safety advisory notice	07/26/94	Advised owners of certain cylinders made of aluminum alloy 6351--T6 to follow the precautionary measures outlined in this notice because RSPA is aware of ruptures involving two DOT-3AL cylinders made of aluminum alloy 6351-T6. RSPA also sought information on ruptures involving other cylinders made of aluminum alloy 67351-T6.
Intermediate Bulk Containers for Hazardous Materials (HM-181E)	Final Rule	07/26/94	Adopted requirements for the construction, maintenance and of use of IBCs for transportation of hazardous materials based on standards contained in the UN Recommendations and commodity assignments in the IMDG Code.
Improvements to the Hazardous Materials Identification Systems (HM-206)	NPRM	08/15/94	Proposed changes to the hazard communication requirements of the HMR. The proposals would improve the existing hazard communication system to better identify hazardous materials in transportation and assist emergency response personnel in responding to and mitigating the effects of incidents involving hazardous materials. Changes would be made to the placarding, marking and emergency response information requirements. Federal Register Corrections were made on 08/26/94 [59 FR 44230} and on 08/30/94 [59 FR 44795].

<u>SUBJECT AND DOCKET NUMBER</u>	<u>ACTION</u>	<u>DATE PUBLISHED</u>	<u>SYNOPSIS</u>
Hazardous Substances (HM-145J)	Final Rule; decision on petition for reconsideration; FR	08/31/94	Designated 15 hazardous substances as hazardous materials and changed the RQ for 34 other hazardous substances already designated as hazardous materials. Denied a petition to modify HMR to except designation of copper molybdenum and zinc concentrates containing small amounts of lead sulfide, a hazardous substance, and to stay the effective date to allow the docket to remain open for public comment. Extended the effective date of the part of the rule that reduces the RQ for lead sulfide for 90 days -- from 08/29/94 to 11/29/94.
Performance-oriented Packaging Standards; Technical Revisions (HM-181F)	Final Rule	09/21/94	Corrected two errors and clarified a third matter in a final rule published under HM-181F [58 FR 50224;09/2/93] which adopted changes to the HMR based on petitions, and RSPA initiative to clarify certain aspects of a final rule issued on 12/21/90, under HM-181 [55 FR 52402]. Corrections were made to the special provisions, rail handling restrictions, and legal citations under the HMR.
Infectious Substances; Extension of Compliance Dates (HM-181G)	Final Rule	09/22/94	Extended the compliance dates for classification hazard communication, and packaging requirements of the HMR applicable to infectious substances, including regulated medical waste. The extension is intended to provide RSPA with time to evaluate the need for changes scheduled to go into effect 10/01/94, and to ensure coordination with other Federal agencies to avoid overlapping or inconsistent requirements for infectious substances.
Hazardous Materials Regulations; Editorial Corrections and Clarifications (HM-189K)	Final Rule	09/26/94	Corrected editorial errors, making minor regulatory changes, and in response to requests for clarification, improving the clarity of certain provisions of the HMR. Also, revised legal citations based on codification of the hazmat transportation laws.

<u>SUBJECT AND DOCKET NUMBER</u>	<u>ACTION</u>	<u>DATE PUBLISHED</u>	<u>SYNOPSIS</u>
Alternate Standards for Open Head Fiber Drum Packaging (HM-221)	ANPRM	10/07/94	Section 122 of the Hazardous Materials Transportation Authorization Act of 1994 required RSPA to examine requirements pertaining to open head fiber drum packaging in domestic transportation. RSPA must determine whether there are standards other than POP packaging standards that will provide an equal or greater level of safety for transportation of liquid hazardous materials.
Infectious Substances; Confirmation of Effective Dates and Compliance Dates (HM-181G)	Final Rule confirmation of effective dates; FR	10/21/94	RSPA published a final rule on 09/22/94 to extend the compliance dates applicable to infectious substances, including regulated medical waste. The effective date of the rule was 09/22/94, unless RSPA received, by 09/30/94, any comments showing that an extension of the compliance dates is not in the public interest. RSPA received two comments opposing the extension, but with no specific information to support the extension. This document confirms the compliance dates are extended as set forth in the 09/22/94 final rule.
Cargo Tanks; Miscellaneous Requirements (HM-183C)	Final Rule	11/03/94	Changed certain requirements for manufacture, qualification and maintenance of cargo tank motor vehicles based on petitions for rulemaking, exemptions, NTSB recommendations, and RSPA initiative. These actions relax certain unnecessary economic burdens on industry where there will be no adverse effect on safety.
Hazardous Materials in COFC and TOFC Service (HM-197)	Final Rule	12/15/94	Established standards for transporting portable tanks containing certain hazmat in container-on-flatcar (COFC) or trailer-on-flatcar (TOFC) service, without obtaining prior approval from the FRA. This action is intended to reduce the need for obtaining written approval for certain COFC or TOFC services to facilitate domestic and international commerce.

<u>SUBJECT AND DOCKET NUMBER</u>	<u>ACTION</u>	<u>DATE PUBLISHED</u>	<u>SYNOPSIS</u>
Implementation of the United Nations Recommendations, International Maritime Dangerous Goods Code, and International Civil Aviation Organizations Technical Instructions (HM-215A)	Final Rule	12/29/94	Amended the HMR to maintain alignment with corresponding provision of international standards. Because of recent changes in the IMDG Code, the ICAO Technical Instructions, and the UN Recommendations, the revisions are needed to facilitate the transport of hazmat in international commerce.
Supplemental Emergency Preparedness Grant Program (Notice 95-1)	Notice	01/24/95	Announced the availability of grant funds in the amount of \$250,000 and solicited applications from national nonprofit employee organizations engaged solely in fighting fires to train instructors to conduct hazmat response training. Seeks comments on improving operation of the grant program.
Alternate Standards for Open-Head Fiber Drums Packaging (HM-221)	SANPRM; reopening of public comment period and announcement of public hearing	01/25/95	Invited additional proposals and comments concerning alternate standards for open-head fiber drum packagings, for domestic transportation of liquid hazmat. Matters on which further comments may be submitted are the alternate standards proposed by the International Fibre Drum Institute, a proposed exception for certain shipments of hazardous waste, and other factors which should be considered.
Hazardous Materials Transportation Registration and Fee Assessment Program (HM-208B)	NPRM	01/30/95	Proposed to increase the annual registration fee for a number of persons by distinguishing between large, medium and small entities that conduct operations in one or more of the several categories for which registration is required. The proposed increase in fees would provide a sound basis for funding the national emergency response and training planning grant program.
Enforcement of Motor Carrier Financial Responsibility; Withdrawal of ANPRM	Withdrawal of ANPRM	01/31/95	Comments were solicited on the merits of a petition requesting DOT to promulgate a regulation to require each person offering a hazmat for transportation in a cargo tank to obtain proof of financial responsibility from the carrier. This notice is withdrawn and removed from the regulatory agenda because there is sufficient evidence that carriers are already complying.

<u>SUBJECT AND DOCKET NUMBER</u>	<u>ACTION</u>	<u>DATE PUBLISHED</u>	<u>SYNOPSIS</u>
Supplemental Emergency Preparedness Grant Program; Correction (Notice No. 95-1)	Correction Final Rule	02/01/95	Several corrections were made because of errors in notice document 95-1720 , beginning on page 4657 in the issue of Tuesday, January 24, 1995. The comment period was corrected to read March 1, 1995, the telephone number changed to (202) 366-0001, and the budget period date (September 15, 1995 to September 15, 1996) was included.
Implementation of the United Nations Recommendations, International Maritime Dangerous Goods Code, and International Civil Aviation Organization's Technical Instructions (HM-215A)	Correction Final Rule	02/08/95	Federal Register corrections were made in document 94-31175 beginning on page 67390 in the issue of Thursday, December 29, 1994. The corrections should read "Maximum capacity not over" in the first column heading, and "Minimum thickness of packaging material" in the second column heading.
Hazardous Materials Regulations; Penalty Guidelines (HM-207D)	Final Rule	03/06/95	Published RSPA's hazmat transportation enforcement civil penalty guidelines in order to provide the regulated industry and the general public with guidance as to the factors RSPA considers in its hazmat penalty assessment process. This action was in response to a request contained in the Senate Report 103-150 in the DOT and Related Agencies Appropriations Act, 1994.
Improving the Hazardous Materials Safety Program; Public Meetings and Request for Comments Related to Regulatory Review and Customer Service (HM-222)	Notice of public meetings and request for comments	04/04/95	Announced a nationwide series of seven public meetings during April and May. This notice invites comments on both regulatory reform and improved customer service for the hazmat safety program.
Cargo Tanks; Miscellaneous Requirements; Revisions and Response to Petitions for Reconsideration (HM-183C)	Final Rule; response to petitions for reconsideration; FR	04/05/95	Amended provisions set forth in a final rule [HM-183C; 59 FR 55162; 11/03/94], which established requirements for the manufacture, qualification, and maintenance of DOT specification cargo tank motor vehicles. A revision is made to design loading requirements for MC 331 cargo tank motor vehicles and other minor editorial and technical changes are made for clarity.

<u>SUBJECT AND DOCKET NUMBER</u>	<u>ACTION</u>	<u>DATE PUBLISHED</u>	<u>SYNOPSIS</u>
International Radioactive Material Transportation Standards; Preliminary Draft of 1996 Revision Available for Comment (Notice No. 95-6)	Notice of document availability and request for comments	04/11/95	Invited the public and industry to provide comments on the revised draft of Safety Series No. 6 to assist RSPA in submitting comments to the IAEA by July 1, 1995. Comments will also aid in preparing U.S. positions on issues that need to be resolved prior to the final Revision Panel meeting in September 25-29, 1995, at IAEA in Vienna, Austria.
Use of Post-Consumer Recycled Plastic Material in the Manufacture of New Plastic Drums; Request for Comments (Notice No. 95-7).	Request for comments	04/28/95	Comments are solicited on a request for approval for the limited use of post-consumer recycled plastic material in the manufacture of new plastic drums. The HMR prohibit used plastic material, with certain exceptions, in the manufacture of new plastic drums.
Implementation of the United Nations Recommendations, International Maritime Dangerous Goods Code, and International Civil Aviation Organization's Technical Instructions (HM-215A)	Final rule; editorial revisions and response to petitions for reconsideration; FR	05/18/95	Amended a final rule published on December 29, 1994 [59 FR 67390], which revised the HMR to maintain alignment with corresponding provisions of international standards. This final rule corrects errors in that final rule and responds to petitions for reconsideration.
Hazardous Materials Transportation Registration and Fee Assessment Program (HM-208B)	Final Rule	05/23/95	Maintained the current annual registration fee for persons engaged in transportation or offering for transportation certain categories and quantities of hazmat. Expanded applicability of the registration requirement to include PIH materials in other than Division 2.3 or Division 6.1; and an exception is provided from the registration requirement for foreign offerors, as authorized by the amended statute.
Hazardous Materials Transportation; Registration and Fee Assessment Program (HM-208)	Notice of filing requirements (Notice No. 95-8)	06/14/95	Notification to file a registration statement and pay a fee to the DOT/RSPA for the 1994-95 registration year was provided to persons who transport or offer for transportation certain categories and quantities of hazmat for which registration is required.

<u>SUBJECT AND DOCKET NUMBER</u>	<u>ACTION</u>	<u>DATE PUBLISHED</u>	<u>SYNOPSIS</u>
Hazardous Substances (HM-145K)	Final Rule	08/02/95	Amended the "List of Hazardous Substances and Reportable Quantities" which appears in an appendix to the Hazmat Table. This action enables shippers and carriers to identify CERCLA hazardous substances to comply with the applicable rules under the HMR.
Implementation of the united Nationals Recommendations, International Maritime Dangerous Goods Code, and International Civil Aviation Organization's Technical Instructions (HM-215A)	Correction Final Rule	08/04/95	Federal Register correction in rule document 94-31175 beginning on page 67390 in the issue of Thursday, December 29, 1994. A "+" must be shown in column 1 of the hazmat table before the entry "Bromine trifluoride".
Intermediate Bulk Containers for Hazardous Materials (HM-181E)	Final Rule; revisions and response to petitions for reconsideration; FR	08/04/95	Amended a final rule published July 26, 1994 [59 FR 38040] in response to a number of petitions for reconsideration. This document also clarifies and makes corrections to requirements for the construction, maintenance and use of IBCs.
Hazardous Materials Pilot Ticketing Program (HM-207E)	NPRM	08/21/95	Proposed to implement a pilot program for ticketing of certain hazmat transportation violations to streamline administrative procedures, cut costs, and reduce regulatory burdens on persons subject to hazmat transportation law.
Exemption, Approval, Registration and Reporting Procedures; Miscellaneous Provisions (HM-207C)	NPRM	09/14/95	Proposed to revise procedures for applying for exemptions and to establish procedures for applying for approvals, registering (other than hazmat registration program) and reporting in order to expedite processing of applications and to promote clarity and program consistency.
Infectious Substances (HM-181G)	Final Rule	09/20/95	Updated the requirements for Division 6.2 to clarify the scope of regulation for infectious substances, provide relief for certain shipments of regulated medical waste (RMW), allowed certain quantities of RMW to be transported by aircraft, and clarified other regulations.

<u>SUBJECT AND DOCKET NUMBER</u>	<u>ACTION</u>	<u>DATE PUBLISHED</u>	<u>SYNOPSIS</u>
Crashworthiness Protection Requirements for Tank Cars; Detection and Repair of Cracks, Pits, Corrosion, Lining Flaws, Thermal Protection Flaws and Other Defects of Tank Car Tanks (HM-175A)	Final Rule	09/21/95	Amended the HMR to require facilities that build, repair and ensure the structural integrity of tank cars to develop and implement a quality assurance program (QAP); allowed use of non-destructive testing (NDT) techniques; continued use of tank cars with limited reduced shell thicknesses for certain hazmat; increased the frequency for inspection and testing of tank cars, and clarified tank car pretrip inspection requirements. Several other changes were made.
Hazardous Materials Regulations; Editorial Corrections and Clarifications (HM-189L)	Final Rule	09/21/95	Corrected editorial errors, made minor regulatory changes, and in response to requests for clarification, improved the clarity of certain provisions of the HMR.
Hazardous Materials Transportation Regulations; Compatibility with Regulations of the International Atomic Energy Agency (HM-169A)	Final Rule	09/28/95	Amended the HMR pertaining to radioactive materials to harmonize requirements with those of the International Atomic Energy Agency (IAEA) and most major nuclear nations of the world. The intended effect of this rulemaking is to increase the level of safety and facilitate international commerce.
Alternate Standards for Open-Head Fiber Drum Packaging (HM-221)	Termination of rulemaking concerning alternate standards for open head fiber drum packaging	09/29/95	Terminated the rulemaking [ANPRM; 59 FR 51157; 10/07/94] without proposing alternate standards because RSPA finds that there are no known alternate standards that provide an equal or greater level of safety.
Elimination of Unnecessary and Duplicative Hazardous Materials Regulations (HM-222A)	NPRM	10/13/95	Proposed to remove unnecessary, obsolete, and duplicative regulations found in the HMR. Also proposed to reformat the Hazmat Table and List of Hazardous Substances and RQs that could eliminate approximately 100 pages of the CFR.

<u>SUBJECT AND DOCKET NUMBER</u>	<u>ACTION</u>	<u>DATE PUBLISHED</u>	<u>SYNOPSIS</u>
Hazardous Materials Pilot Ticketing Program; Extension of Comment Period (HM-207E)	Proposed rule; extension of comment period	10/17/95	Comment period extended for 30 days for the NPRM [60 FR 43430] issued August 21, 1995. Hazardous Materials Advisory Council (HMAC) requested more time to evaluate the proposals contained in the NPRM to implement a pilot program for ticketing of certain hazmat transportation violations.
Periodic Inspection and Testing of Cylinders (HM-220A)	NPRM	10/18/95	Proposed to amend the HMR pertaining to the maintenance and requalification of DOT specification and exemption cylinders use for transportation of compressed gases in commerce. The changes would enhance public safety by providing greater guidance to persons who perform periodic inspection and testing of cylinders.
Hazardous Materials Transportation Regulations; Compatibility with Regulations of the International Atomic Energy Agency (HM-169A)	Correction Final Rule	10/23/95	Federal Register correction was made in rule document 95-22773 beginning on page 50292 in the issue of Thursday, September 28, 1995. Section heading should read "178.350".
Implementation of the United Nations Recommendations, International Maritime Dangerous Goods Code, and International Civil Aviation Organizations' Technical Instructions (HM-215A)	Response to petition for reconsideration; FR	11/13/95	Denied petition for reconsideration to the May 18, 1995 final rule [60 FR 26796] concerning adoption of certain testing provisions for plastic aerosol containers.
Direct Final Rule Procedure; Petitions for Rulemaking (RSP-1)	NPRM	12/18/95	Proposed to implement a new and more efficient procedure for adopting noncontroversial rules, in response to the recommendations of the National Performance Review and the Administrative Conference of the U.S.
Transportation of Hazardous Materials By Rail; Miscellaneous Amendments	NPRM	12/19/95	Proposed to incorporate into the HMR a number of changes to rail requirements based on petitions for rulemaking. Proposed changes are needed to update the HMR, improve safety and reduce costs to shippers and carriers of hazmat.

Appendix B

Exemptions in Effect 1994-1995

ACTIVE EXEMPTIONS FOR 1994-1995

Listed below in numerical sequence are the exemptions that were issued, renewed, or amended during 1994 or 1995. The reason for each issuance is indicated in the right-hand column as coded below:

1. to develop information and gain experience concerning innovative forms of packaging, shipping conditions, or carrier operations;
2. to authorize packaging of similar nature and integrity equivalent to DOT specification containers;
3. to permit one of a limited number of shipments of a material for which an amendment of the regulations would be impractical;
4. to permit emergency movement of materials in order to prevent risk to life or property;
or
5. to permit emergency movement of a material in order to prevent serious economic loss.

NUMBER	PURPOSE	REASON
868	Authorizes the exceptions to requirements for carrier inspection of manufacture, vehicle, loading, etc. for transportation of Division 1.1, 1.2 and 1.3 explosives loaded by Department of Defense shippers in DOT Specification containers.	2
970	Authorizes the transportation of diboran classed as a Division 2.3 material in DOT Specification AA cylinders overpacked in certain insulated drums or wooden boxes.	1
1479	Authorize the transportation of a poisonous cryogenic liquid and a nonflammable cryogenic liquid classed as Division 2.3 material, in non-DOT specification cargo tanks.	1
1862	Authorizes the shipment of nitrogen, compressed, Division 2.2 in non-DOT specification hydraulic accumulators.	1

NUMBER	PURPOSE	REASON
2000	Authorizes the use of a non-DOT specification portable tank or a DOT Specification 4L cylinder for shipment of flammable liquefied compressed gases.	2
2136	Authorizes the shipment of radioactive materials with explosives in Department of Defense containers packaged and loaded by the Department of Defense without carrier inspection.	2
2582	Authorizes the transportation of Division 2.3 and Division 5.1 materials in non-DOT specification cylinders made in compliance with DOT specification 3E1800 with exceptions.	1
2709	Authorizes the transportation of certain 1.G, 1.1D and 1.3G liquid explosives in DOT specification packagings.	1
2787	Authorizes the shipment of certain Division 2.2 materials in non-DOT specification pressure vessels equipped with w regulating valve.	2
3004	Authorizes the use of a non-DOT specification cylinder for transportation of certain Division 2.1 or 2.2 materials.	2
3095	Authorizes the use of a privately owned and operated steel non-DOT specification cargo tank motor vehicle designed and constructed in full conformance with DOT Specification MC-300, MC-306, MC-307 or MC-311, MC-312 for shipment of certain class 3 and 8 materials.	2
3121	Authorizes the transportation of certain poisonous material classed as Division 2.3, in DOT Specification MC 338 cargo tanks.	2
3126	Authorizes the transport of Division 1.1 explosives in DOT Specification 5 metal drums, or in DOT Specification 42B aluminum drums.	2
3128	Authorizes the use of a non-DOT specification cylinder for transportation of a Division 1.4 explosive and Division 2.2 gas.	2

NUMBER

PURPOSE

REASON

NUMBER	PURPOSE	REASON
3142	Authorizes the shipment of Division 2.2 gases in a DOT Specification 3A1800 or 3A2000 cylinder, from which a controlled flow of gas is released to a leak calibration apparatus.	3
3187	Authorizes the shipment of Class 3 or Division 5.2 in various non-DOT and DOT specification containers.	2
3216	Authorizes the transportation of certain Division 2.1 and Division 2.2 gases in non-DOT specification multi-unit tank car tanks.	1
3302	Authorizes the use of non-DOT specification sampling bottles (cylinders) for transportation of certain Division 2.2 gases.	2
3330	Authorizes the use of non-DOT specification insulated containers overpacked in DOT Specification 17C, 17H, or 37A metal drums for transportation of certain Division 4. materials.	2
3415	Authorizes the transport of rocket motors, containing certain Division 1.1, 1.2 or 1.3 explosives, without overpacking.	3
3549	Authorizes the shipment of Division 1 explosives in a special non-DOT specification inside packaging.	2
3569	Authorizes the use of non-DOT specification nonrefillable cylinders for transportation of a Division 5.1 material.	2
3600	Authorizes the shipment of Lance rocket engines in specific configurations which contain Division 1.3 or 1.4 explosives.	3
3630	Authorizes the use of a DOT Specification 33A polystyrene case to contain four 5-pint glass bottles of nitric acid.	2
3768	Authorizes the use of DOT Specification MC-304, MC-307 and MC-312 cargo tanks for transportation	2

NUMBER	PURPOSE	REASON
	of certain Class 3 and 8 liquids.	
3941	Authorizes the transport of ammonium perchlorate in non-DOT specification aluminum portable tanks.	1
4039	Authorizes the shipment of liquefied hydrogen in a non-DOT specification vacuum insulated portable tank.	2
4052	Authorizes the shipment of an aerosol formulation pressurized with nitrogen in a DOT Specification 39 seamless aluminum cylinder.	2
4242	Authorizes the use of a non-DOT specification aluminum pressure vessel for transportation of a pyroforic mixture.	2
4262	Authorizes the shipment of charged oil well jet perforating guns with initiators attached.	2
4291	Authorizes the use of a non-DOT specification aluminum portable tank for transportation of a Division 5.1 material.	2
4338	Authorizes the use of DOT Specification 3AA2015 cylinders and DOT Specification 51 portable tanks for shipment of Class 8 and Class 3 liquids.	2
4354	Authorizes the shipment of chloroformates in a DOT specification 6D or 37M cylindrical steel overpack with an inside DOT Specification 2S, 2SL or 2T	1
4453	Authorizes the use of a non-DOT specification bulk, hopper-type tank for transportation of Division 1.5 or ammonium nitrate-fuel oil mixtures.	2
4575	Authorizes the use of DOT specification cargo tanks and tank car tanks not presently authorized and AAR approved non-DOT specification tank car tanks, for transportation of certain compressed or liquified gases.	2
4588	Authorizes the use of a packaging not presently	2

NUMBER

PURPOSE

REASON

prescribed for certain Division explosives.

NUMBER	PURPOSE	REASON
4612	Authorizes the shipment of small quantities of certain hazardous materials in inside glass bottles overpacked in metal cans further overpacked in DOT Specification 12B fiberboard boxes.	2
4661	Authorizes the transport of butyl lithium in petroleum solvent in DOT Specification 4BA240 cylinders with alternative retest procedures.	2
4719	Authorizes the shipment of certain compressed gases not listed in 49 CFR 173.314 and 173.315, in DOT Specification MC-330 and MC-331 cargo tanks or DOT Specification 105A300W, 112A340W, 114A340, 106A500, 106A500X, 110A500W and 120A300W tank car tanks.	2
4734	Authorizes the use of modified DOT Specification MC-331 cargo tanks, for transportation of certain Class 3 and 8 materials.	2
4844	Authorizes the use of non-DOT specification foreign made steel cylinders use only in aircraft of foreign manufacture for shipment of certain Division 2.2 gases.	2
4850	Authorizes the shipment of flexible linear shaped charges, metal clad, in 100' lengths, containing not more than 50 grams per linear foot of a high explosive.	1
4884	Authorizes the shipment of liquefied and nonliquefied compressed gases and a Class 3 material in stainless steel cylinders complying with DOT Specification 4BS with certain exceptions.	2
5022	Authorizes the shipment of certain Division 1.1, 1.2 and 1.3 explosives in temperature controlled equipment.	1
5038	Authorizes the shipment of dimethyldichlorosilane, trichlorosilane, other specifically identified Class 3 materials and silicon tetrachloride in non-DOT specification type 304 stainless steel cylinders.	2

NUMBER

PURPOSE

REASON

NUMBER	PURPOSE	REASON
5112	Authorizes the use of a specially designed kettle drum type aluminum containers for transportation of a Division 1 explosive.	1
5206	Authorizes the use of privately operated bulk, hopper-type units for transportation of a Division 1.5 material.	1
5243	Authorizes the modification of DOT specification packaging for transportation of Division 1.1, 1.2 or 1.4 explosives.	1
5403	Authorizes the use of non-DOT specification cargo tanks, meeting the requirements of DOT MC-312 with certain exceptions, containing Class 8 materials used in support of oil well acidizing and industrial cleaning operations.	1
5493	Authorizes the shipment of hydrogen sulfide in DOT-105A600W tank cars.	2
5600	Authorizes the transport of Division 2.1 or 2.2 gases, Class 3 or 8 materials or Division 5.1 materials presently authorized to be shipped in a non-DOT specification cylinder made to DOT specification 3A except monel metal may be used rather than steel.	1
5604	Authorizes the use of insulated non-DOT specification portable tanks for a Division 2.2 gas.	1
5643	Authorizes the shipment of a Division 2.2 gas in vacuum insulated non-DOT specification portable tanks.	1
5704	Authorizes the transport of certain Division 1.1, 1.2 and 1.3 explosives in non-DOT specification steel drums.	2
5749	Authorizes the use of an insulated nickel steel DOT Specification MC-331 cargo for transportation of a certain Division 2.1 gas.	2

NUMBER	PURPOSE	REASON
5820	Authorizes the shipment of Division 2.2 gases in non-DOT specification IMO Type 5 portable tanks.	2
5861	Authorizes the use of a stainless steel cylinder patterned after the DOT-4DS cylinder for transportation of a Division 2.2 gas.	2
5876	Authorizes the transport of a Division 6.1 poison in DOT-44D multiwall paper bags or non-DOT specification pinch bottom, heat-sealed multiwall bags.	2
5895	Authorizes the use of non-DOT specification inner container overpacked in a DOT-12H fiberboard box or a non-DOT specification wooden box for shipment of a Division explosive.	1
5923	Authorizes the transport of certain Division 2.1 and 2.2 gases in DOT-106A500X and 110A500W multi-unit tank cars.	1
5945	Authorizes the use of a small capacity DOT-51 portable tank for shipment of a Division 2.2 gas.	1
5948	Authorizes the shipment of radioactive waste materials in ATMX 500 or 600 rail cars.	2
5951	Authorizes the transport of Division 2.2 gases in DOT Specification 106 type tanks.	2
5967	Authorizes the use of a non-DOT specification cylinder for transportation of nonflammable gases.	1
6016	Authorizes the shipment of oxygen, refrigerated liquid, nitrogen, refrigerated liquid, and argon, refrigerated liquid in non-DOT specification portable tanks.	1
6071	Authorizes the use of non-DOT specification pressure vessels, for transportation of Division 2.2 gases.	2
6117	Authorizes the transport of hydrogen sulfide in DOT Specification 105A600W tank car tanks or	1

NUMBER

PURPOSE

REASON

proposed DOT Specification 120A600W tank car
tanks.

NUMBER	PURPOSE	REASON
6232	Authorizes the shipment of Division 1.1 and 1.2 gases and a Division 4.1 solid in the same outside package.	2
6250	Authorizes the transport of partially dis-assembled aircraft with Division 1 materials components (ejection seat and canopy related devices) remaining installed.	1
6263	Authorizes the transport of certain Division 2.2 gases, in non-DOT specification welded, cylindrical or spherical, steel tanks.	2
6267	Authorizes the use of DOT and non-DOT specification fiberboard boxes, for shipment of certain Division 5.1 materials.	2
6293	Authorizes the shipment of specific Class 8 materials, in DOT Specification MC-311 or MC-312 tank motor vehicles.	2
6299	Authorizes the manufacture, marking and sale of non-DOT specification portable tanks, for transportation of Division 2.2 materials.	2
6309	Authorizes the use of non-DOT specification steel portable tanks for transportation of certain Division 2.2 gases.	2
6325	Authorizes the transport of Division 5.1 materials in non-DOT specification cargo tanks or DOT Specification MC-306, MC-307, or MC-312 cargo tanks.	2
6349	Authorizes the use of non-DOT specification insulated portable tanks for shipment of certain flammable and nonflammable cryogenic liquids..	1
6369	Authorizes the use of DOT Specification 105A400W, 112A400W, 114A400W, 120A300W, and proposed 120A400W tank car tanks for shipment of certain Division 61. materials.	2

NUMBER

PURPOSE

REASON

NUMBER	PURPOSE	REASON
6442	Authorizes the transport of a 155 mm high explosive projectile containing either a Class 8 or Class 3 material, in a metal canister with an inner polyethylene container.	2
6443	Authorizes the use of DOT Specification MC-331 insulated cargo tanks not presently authorized, for transportation of a Division 2.1 material.	1
6484	Authorizes the transport of mixtures of nitromethane and various solvents in DOT Specification MC-307 or MC-312 tank motor vehicles.	2
6497	Authorizes the use of a modified DOT Specification 56 portable tank for transportation of Division 6.1 solids material.	2
6517	Authorizes the use of a non-DOT specification steel cylinder comparable to DOT Specification 4BW cylinder for shipment of acetylene.	2
6518	Authorizes the shipment of specified pyrophoric liquids and solids, water reactive solids and certain other Class 3 materials in non-DOT specification steel portable tanks or cylinders.	2
6530	Authorizes the shipment of hydrogen and mixtures of hydrogen with helium, argon or nitrogen in DOT Specification 3A, 3AA, 3AX or 3AAX steel cylinders.	2
6531	Authorizes the use of a non-DOT specification pressure vessel for shipment of a Division 2.2 material.	2
6538	Authorizes the use of a non-DOT specification inside nonrefillable metal container, for transportation of a certain Division 2.1 material.	2
6543	Authorizes the shipment of certain Class 8 and Class 3 materials in non-DOT specification 16 gauge, Type 304 stainless steel cylinders and/or 14 gauge Type 316 stainless steel cylinders.	2

NUMBER

PURPOSE

REASON

NUMBER	PURPOSE	REASON
6557	Authorizes deviation from the requirements of the inspector's report for DOT Specification 3A, 3AA, and 4B cylinders for shipment of certain Division 2.2 materials.	1
6563	Authorizes the shipment of certain Division 2.2 materials in non-DOT specification steel cylinders made in compliance with DOT Specification 3E with certain exceptions.	2
6583	Authorizes the shipment of a Class 8 material in a DOT Specification 51 portable tank.	1
6589 1	Authorizes the manufacture, marking and sale of non-DOT specification stainless steel cylinders for transportation of Division 2.2 materials.	
6610	Authorizes the shipment of a Division 5.2 Type F, liquid in DOT Specification MC-307 or MC-312 cargo tanks, or DOT Specification 412 cargo tank motor vehicles.	1
6611	Authorizes the use of a non-DOT specification vacuum insulated portable tank for transportation of a nonflammable cryogenic liquid.	1
6614	Authorizes the use of non-DOT specification polyethylene bottles, packed inside a high density polyethylene box for transportation of certain Class 8 materials.	1
6626	Authorizes the use of DOT Specification 3A or 3AA cylinders and cylinders marked ICC-3, 3A or 3AA for shipment of certain compressed gases.	1
6651	Authorizes the one-time reuse of the single-trip containers for transportation of certain Division 6.1 solids.	2
6657	Authorizes the use of DOT Specification 3A or 3AA cylinders having an age over 35 years for transportation of certain nonliquefied compressed gases.	1

NUMBER	PURPOSE	REASON
6658	Authorizes the use of a non-DOT specification open-head steel drum for transportation of a certain Division 1.1, or 1.2 material.	4
6670	Authorizes the shipment of tetrafluoromethane, in DOT Specification 3A2400, 3AA2400, 3AX2400 and 3AAX2400 cylinders.	1
6686	Authorizes the use of a modified DOT Specification 39 steel cylinder for transportation of a Division 2.1 material.	1
6691	Authorizes the use of DOT Specification 3A or 3AA cylinders over 35 years old, which can be retested every 10 years, for transportation of certain Division 2.1 and 2.2 materials.	1
6694	Authorizes the use of non-DOT specification IMO Type 5 portable tanks for transportation of Division 2.2 materials.	2
6704	Authorizes the use of non-DOT specification cargo tanks for shipment of certain Class 8 materials.	2
6712	Authorizes the shipment of certain Division 2.1 and 2.2 materials in DOT Specification 3A or 3AA cylinders or ICC-3, 3A or 3AA cylinders.	2
6735	Authorizes the transport of bromine in a non-DOT specification cylinder constructed in accordance with all requirements of DOT Specification 4B, 4BA or 4BW cylinders except that each cylinder shall be marked "DOT-E 6735" in lieu of the DOT specification marking.	1
6743	Authorizes shipment of a Division 5.1 material and a Division 5. 1 material in DOT Specification 56 or 57 portable tanks.	1
6746	Authorizes the shipment of anhydrous ammonia in portable tanks built, marked and maintained in compliance with the DOT Specification MC-331 cargo tank.	1
6762	Authorizes the transport of chemical kits in	1

NUMBER	PURPOSE	REASON
	plastic inside bottles, packed in plastic boxes overpacked in fiberboard boxes.	
6765	Authorizes the use of non-DOT specification portable tanks for transportation of a Division 2.1 and a Division 2.2 material.	1
6769	Authorizes the transport of trifluoromethane in DOT specification tank cars and cargo tanks.	2
6805	Authorizes the use of DOT Specification 3AAX steel cylinders for transportation of a Division 2.1 mixture.	1
6810	Authorizes the shipment of a nonliquefied, Division 2.2 material in seamless steel tanks (tubes) made in compliance with DOT Specification 107A except when are not mounted on a rail car.	1
6816	Authorizes the shipment of completely assembled liquid and solid fueled missiles in packagings prescribed in 49 CFR 173.57(a).	1
6874	Authorizes the transport of sodium and potassium cyanides in non-DOT specification wooden boxes.	1
6890	Authorizes the transport of an explosive severance system consisting of linear segments which may contain up to 79 grams of hexanitrostilbene.	2
6908	Authorizes certain variances from the specifications for DOT Specification 39 cylinders for shipment of certain Division 2.2 material, compressed gases.	2
6922	Authorizes the use of a DOT Specification 106A500-X multi-unit tank car tank, for shipment of certain compressed gases.	1
6929	Authorizes the shipment of a Division 1.2 or 1.3 material in rocket motors in a propulsive state.	1
6932	Authorizes the use of non-DOT specification IMO Type 5 portable tanks for transportation of	1

NUMBER	PURPOSE	REASON
	anhydrous hydrofluoric acid.	
6944	Authorizes the transport of a liquid Division 1.1 or 1.2 material in a specially designed stainless steel desiccator.	1
6946	Authorizes use of DOT Specification 3A or 3AA cylinders and ICC-3, 3A, or 3AA cylinders for shipment of certain compressed gases.	1
6962	Authorizes the shipment of argon or helium in DOT Specification 3AA1800 or 3AA2000 cylinders.	1
6971	Authorizes the transport of small quantities of reagent chemicals in inside glass bottles packed in metal boxes overpacked in a strong wooden or fiberboard box.	1
6974	Authorizes the use of non-DOT specification cylinders for transportation of certain nonliquefied compressed gases.	2
6999	Authorizes cargo loading hatches of vessels being loaded with military explosives to remain open overnight under certain conditions.	1
7007	Authorizes the shipment of chlorine in non-DOT specification multi-unit tank car tanks patterned after DOT Specification 110A500W.	1
7023	Authorizes the use of non-DOT specification steel portable tanks for shipment of a Division 5.1 material or Class 8 material.	2
7024	Authorizes the transport of an alkaline corrosive liquid in non-DOT specification collapsible rubber containers.	1
7026	Authorizes the manufacture, marking and sale of a non-DOT specification welded steel pressure vessel, for transportation of a compressed gas.	2
7032	Authorizes outside packages exceeding the 100 pounds limitation to be carried aboard cargo aircraft only for shipment of a certain Class 8	2

NUMBER	PURPOSE	REASON
	solid material.	
7041	Authorizes the shipment of pyrophoric waste materials in non-DOT specification cargo tanks of the MC-331 type.	2
7046	Authorizes the use of modified DOT Specification MC-312 glass lined cargo tanks, for transportation of Class 8 materials and a certain Division 5.1 material.	2

NUMBER	PURPOSE	REASON
7051	Authorizes the use of non-DOT specification Teflon bottles overpacked with either a DOT Specification 12A or 12B fiberboard box for transportation of a Class 8 material.	1
7060	Authorizes the carriage of radioactive materials aboard cargo aircraft only when the combined transport index exceeds 50.0 and/or the separation criteria cannot be met.	1
7073	Authorizes the use of non-DOT specification portable tanks for transportation of a Division 6.1 liquid.	2
7205	Authorizes certain stowage deviations in the transportation of military explosives by vessel.	1
7218 2	Authorizes the manufacture, marking and sale of non-DOT specification fiber reinforced plastic full composite cylinders, for shipment of certain Division 2.2 materials compressed gases.	
7227	Authorizes the use of a vacuum insulated, non-DOT specification portable tank for the shipment of a certain Division 2.2 material.	1
7235 2	Authorizes the manufacture, marking and sale of non-DOT specification fiber reinforced plastic hoop wrapped cylinders, for transportation of certain nonflammable compressed gases.	
7255	Authorizes simultaneous loading of two holds within the same hatch when handling military explosives.	1
7259	Authorizes the use of DOT Specification 56 and non-DOT specification portable tanks constructed of aluminum for shipment of phosphorous pentasulfide.	2
7268	Authorizes the use of a DOT Specification 39 nonrefillable cylinder for shipment of a Division 2.2 material.	2

NUMBER	PURPOSE	REASON
7269	Authorizes the use of sift-proof paper or plastic bags overpacked in DOT Specification 21C fiber drums for transportation of certain Division 1.1 or 1.2 materials.	2
7274	Authorizes the use of non-DOT specification portable tanks for shipment of certain Division 2.2 materials.	1
7275	Authorizes the carriage of certain Division 1.1, 1.2, 1.3 and 1.4 material that are not permitted for air shipment or are in quantities greater than those prescribed for shipment by air.	1
7277 2	Authorizes the manufacture, marking and sale of non-DOT specification fiber reinforced plastic full composite cylinder, for transportation of certain Division 2.2 materials, compressed gases.	
7280	Authorizes fuel tanks to be 3/4 full instead of 1/4 full and vehicles to be transported with battery cables connected if the holds or compartments of a vessel in which vehicles are loaded are mechanically ventilated.	1
7285	Authorizes the use of non-DOT specification IMO Type 5 portable tanks, for transportation of certain Division 2.2 materials.	1
7286	Authorizes the shipment of certain nonliquefied compressed gases in DOT Specification 3A or 3AA cylinders and cylinders marked ICC-3, 3A or 3AA.	2
7413	Authorizes the transport of carbon dioxide or nitrogen, in a non-DOT specification brazed steel cylinder.	2
7446 2	Authorizes the manufacture, marking and sale of dry powder-fire extinguishant charge with compressed air or nitrogen in non-DOT specification seamless aluminum cylinders.	

NUMBER	PURPOSE	REASON
7451	Authorizes the use of non-DOT specification pressure vessels for transportation of a Division 2.2 material.	1
7455	Authorizes the handling and stowage of explosive material in an anchored and unmanned barge, used as a magazine vessel.	3

NUMBER	PURPOSE	REASON
7458 2	Authorizes the manufacture, marking and sale of non-DOT specification seamless cylinders, for transportation of Division 2.2 materials.	
7465	Authorizes the stowage of transport motor vehicles and liquefied petroleum gases aboard passenger vessels.	1
7476 2	Authorizes the manufacture, marking and sale of certain non-DOT specification cargo tanks, for transportation of certain Class 3 and Class 7 liquids and Division 5.1 waste materials.	
7477	Authorizes the use of non-DOT specification seamless aluminum cylinders, for transportation of certain Division 2.2 materials.	2
7517	Authorizes the manufacture, marking, and sale of non-DOT specification fusion welded tank car tanks, for transportation of a Division 2.2 material.	1
7526	Authorizes the shipment of a pyrophoric liquid in non-DOT specification portable tanks.	2
7536	Authorizes an increase to the maximum allowable draft weights for five and ten ton rated booms for shipment of military explosives.	1
7541	Authorizes the use of non-DOT specification portable tanks for transportation of certain Division 2.1 and 2.2 materials.	2
7542 2	Authorizes the manufacture, marking and sale of non-DOT specification steel cylinders for transportation of certain Division 2.1 material.	
7546	Authorizes the use of a heat pipe radiator assembly for shipment of certain Class 3 materials and Division 2.1 and 2.2 materials.	3

NUMBER

PURPOSE

REASON

7548

1

Authorizes the stowage of explosives on deck of vessel, over the square of the hatch.

NUMBER	PURPOSE	REASON
7555	Authorizes the use of a cargo tank made from non-metallic materials for transportation of certain Class 8 materials.	1
7573	Authorizes the transport of certain hazardous materials presently forbidden or in quantities greater than allowed for cargo-only aircraft.	1
7594	Authorizes the transport of certain Division 6.1 liquids in DOT Specification MC-312 cargo tanks.	2
7605	Authorizes the transport of certain explosives contained in a partially dis-assembled aircraft or canopy assembly.	1
7607	Authorizes the shipment of hydrogen in certain non-DOT specification, seamless stainless steel cylinders.	1
7616	Authorizes the carrier to certify the shipping paper on behalf of the shipper when transporting hazardous materials by rail.	1
7625	Authorizes the transport of certain Class 8 materials in DOT Specification 56 portable tanks.	2
7628	Authorizes the use of DOT Specification 111A100W5 tank cars equipped with a safety relief valve instead of a vent for shipment of certain Class 8 materials.	5
7648	Authorizes the carriage of aerial illuminating flares for testing purposes in cargo aircraft only.	3
7650	Authorizes the use of non-DOT specification vacuum insulated steel portable tanks for shipment of certain Division 2.2 materials.	2
7654	Authorizes the use of a glass bottle not exceeding 500 millimeter capacity inside a metal container overpacked in a DOT Specification 12B fiberboard box for transportation of a Class 3 material.	2
7657	Authorizes the manufacture, marking and sale of	

NUMBER	PURPOSE	REASON
2	non-DOT specification cylinders, for transportation of certain compressed gases.	
7694	Authorizes the use of non-DOT specification welded, or seamless, nonrefillable cylinders containing nonliquefied compressed gases.	2
7708	Authorizes the use of non-DOT specification girth welded cylinders for shipment of a Division 2.2 material.	2
7716	Authorizes the transport of ammonium nitrate in inside polyethylene bottles or foil pouches, each containing less than 3 pounds or less, overpacked in DOT Specification 12H65 fiberboard boxes with a plastic liner bag containing not more than 36 pounds net weight.	2
7719	Authorizes the use of brazed DOT Specification 39 cylinders, for transportation of methylacetylene propadiene stabilized.	2
7721	Authorizes the manufacture, marking, and sale of non-DOT specification steel cylinders, for transportation of certain Division 2.2 material.	1
7730	Authorizes the use of a DOT Specification MC-312 cargo tank for transportation of certain Class 8 materials.	3
7731	Authorizes the manufacture, marking, and sale of non-DOT specification super-insulated portable tanks for shipment of pressurized liquid helium.	2
7737	Authorizes the manufacture, marking, and sale of non-DOT specification seamless aluminum cylinders for shipment of compressed gases.	2
7765	Authorizes the use of nonrefillable, non-DOT specification cylinders, for transportation of a Division 2.2 material.	2
7769	Authorizes the manufacture, marking and sale of a non-DOT specification fiber reinforced plastic	1

NUMBER	PURPOSE	REASON
	full composite cylinder for transportation of certain Division materials.	
7770	Authorizes the transport of anhydrous hydrogen fluoride or anhydrous methylchloromethyl ether in certain non-DOT specification portable tanks.	2
7774	Authorizes the shipment of bromine trifluoride in non-DOT specification cylinders.	2
7811	Authorizes the use of DOT Specification 12A corrugated fiberboard boxes, with handholes, for shipment of certain Class 8 and Class 3 materials.	2
7823	Authorizes the transport of iodine pentafluoride in non-DOT specification welded stainless steel cylinders complying with DOT Specification 4BW with certain exceptions.	2
7834	Authorizes the transport of nonliquefied sulfur hexafluoride in certain X-ray machines overpacked in strong wooden or fiberboard boxes.	1
7835	Authorizes the transport of compressed gas cylinders bearing the flammable gas label, the oxidizer label, or the poison gas label and tank car tanks bearing the poison gas label on the same vehicle.	1
7840	Authorizes the transport of a Division 1.4 material and a Division 2.2 material in the same non-DOT specification fiberboard shipping container.	1
7846	Authorizes frame mounting and manifolding of DOT specification seamless steel tank car tanks, for shipment of Division 2.2 materials.	1
7862	Authorizes the use of non-DOT specification aluminum, single trip, inside container, for transportation of a Division 2.2 material.	2
7879	Authorizes the shipment of bromine trifluoride in non-DOT specification seamless cylinders.	2

NUMBER	PURPOSE	REASON
7887	Authorizes the shipment of packages of toy propellant devices as an ORM-D material and excepted from labeling requirements.	1
7891	Authorizes the transport of packages bearing the DANGEROUS WHEN WET label, in motor vehicles which are not placarded FLAMMABLE SOLID W.	1

NUMBER	PURPOSE	REASON
7909	Authorizes the transport of limited quantities of Division 6.1 liquids and solids in non-DOT specification plastic, metal or plastic-coated glass containers.	1
7915	Authorizes the transport of certain propellant explosives in water in DOT Specification MC 307 or MC 312 cargo tanks.	1
7928	Authorizes the stowage of certain hazardous materials on the vehicle deck of passenger vessels.	1
7929	Authorizes the transport of flaked or pelletized TNT in woven polyethylene or polypropylene cloth outer bags, with plastic film liners.	1
7943	Authorizes the shipment of Class 8 materials in fiberboard boxes complying with DOT Specification 12B except for handholes in top flaps.	2
7945	Authorizes the use of a non-DOT stainless steel cylinder similar to the DOT Specification 4DS cylinder.	2
7946	Authorizes the transport of various Division 2.2 materials in non-DOT specification steel or aluminum pressure vessels contained in a radiation detector.	2
7951	Authorizes the transport of an aerosol foodstuff in a nonrefillable metal container, complying with DOT Specification 2P with certain exceptions.	2
7954	Authorizes the shipment of Division 2.2 materials in manifolded DOT Specification 3A2400, 3AA2400 or 3AAX2400 cylinders.	1
7959	Authorizes the stowage of recreational vehicles carrying liquefied petroleum gas for heating and cooking on the vehicle deck of passenger-carrying ferries and other passenger-carrying vessels.	1
7971	Authorizes the manufacture, marking and sale of	

NUMBER	PURPOSE	REASON
1	non-DOT specification cylinders, for transportation of Division 2.2 materials.	
7972	Authorizes the transport of limited quantities of explosives in a special shipping container without placarding the vehicle.	1
7985 1	Authorizes the manufacture, marking and sale of non-DOT specification vacuum insulated portable tanks for shipment of Division 2.2 materials.	
7991	Authorizes the transport of railway track torpedoes and fuses in flagging kits of specified construction.	1
8006	Authorizes certain Articles, explosives, n.o.s., Division 1.4 explosives to be offered for transportation in commerce without labels.	2
8008 1	Authorizes the manufacture, marking and sale of non-DOT specification aerosol container consisting of a glass bottle externally coated with plastic for shipment of compressed gases.	
8009	Authorizes the use of DOT Specification 3AAX cylinders made of 4130X steel for transportation of a compressed natural gas.	1
8013	Authorizes the use of a DOT specification cylinder not presently authorized for certain Division 2.1 and 2.2 materials.	2
8023	Authorizes the use of non-DOT specification hooped wrapped FRP cylinders, for shipment of certain compressed gases.	1
8035	Authorizes the transport of limited quantities of certain propellant explosives in a plastic tube packed in a DOT Specification 12B fiberboard box.	1
8059 1	Authorizes the manufacture, marking and sale of	

NUMBER	PURPOSE	REASON
8060	<p>non-DOT specification fiber reinforced plastic full composite cylinders, for transportation of certain Division 2.1 and 2.2 materials.</p> <p>Authorizes the use of non-DOT specification IMO Type 5 portable tanks, for transportation of certain Division 2.2 materials.</p>	2

NUMBER	PURPOSE	REASON
8074	Authorizes the use of a DOT Specification 3E cylinder without safety devices for transportation of certain Division 2.1 and 2.2 materials.	1
8077	Authorizes the use of non-DOT specification steel drums, for shipment of a Class 3 and Class 8 materials.	4
8084	Authorizes the transport of Class A explosives containing more than 5 percent moisture in plastic tubes overpacked in DOT specification wooden or fiberboard boxes.	1
8086	Authorizes the transport of a cruise missile containing hazardous materials.	2
8091	Authorizes the transport of certain mercury relays containing metallic mercury, classed as ORM-B, exempted from 49 CFR Parts 100-177.	1
8094	Authorizes the shipment of corrosive materials in a DOT Specification 56 tank where a DOT Specification 60 tank is permitted in the regulations.	2
8096	Authorizes the manufacture, marking and sale of non-DOT specification steel cylinders for shipment of certain nonflammable gases.	1
8125	Authorizes the use of non-DOT specification IMO Type 5 portable tanks for transportation of certain flammable and nonflammable gases and flammable liquids.	2
8126	Authorizes the use of non-DOT specification portable tanks, for transportation of certain liquefied petroleum gases and other gases Division 2.1 and a Class 3 material..	2
8131	Authorizes the use of a non-DOT specification container made of inconel 718 metal for shipment of a Division 2.2 material.	2
8151	Authorizes the shipment of certain liquid	2

NUMBER	PURPOSE	REASON
	hazardous materials in five-gallon capacity, removable head polyethylene drums.	
8156	Authorizes the shipment of Division 2.1 materials in DOT Specification 39 cylinders up to 225 cubic inches in volume.	1
8162	Authorizes the manufacture, marking and sale of a non-DOT specification cylinder for shipment of certain Division 2.2 material compressed gases.	1
8178	Authorizes the use of a non-DOT specification composite cylinder for a compressed nonliquefied gas.	1
8180	Authorizes the use of a non-DOT specification steel drum for shipment of a specific Class 8 material and a Class 3 liquid.	1
8184	Authorizes the shipment of trinitrotoluene in a non-DOT specification multi-wall paper polyethylene jute composite bag with net weight not exceeding 100 pounds.	1
8196	Authorizes the use of a non-DOT specification portable tank for the transportation of certain compressed gases.	1
8214	Authorizes the shipment of inflators and modules, containing a Division 1.4 material and a Division 4.1 solid for passive restraint systems use automobiles.	1
8215	Authorizes the shipment of certain identified Division 1.1, 1.2, 1.3 and 1.4 materials non-DOT specification containers.	3
8220	Authorizes the use of non-DOT specification small, high pressure cylinders of welded construction for aircraft use in the transportation of Division 2.2 materials.	1
8221	Authorizes the use of non-DOT specification high pressure cylinders of welded construction for military missile systems use only.	3

NUMBER	PURPOSE	REASON
8225	Authorizes the use of a non-DOT specification rotationally molded, cross-linked polyethylene portable tank for the shipment of Class 8 materials and a Division 5.1 materials.	2
8228	Authorizes the transport of packages containing not in excess of 35 grams of one type of explosive material or one explosive device, not exceeding 35 grams, in any one package.	4
8230	Authorizes the shipment of certain Division 5.1 materials in non-DOT specification containers.	1
8232	Authorizes the use of a non-DOT specification portable tank for the transportation of certain compressed gases.	2
8236	Authorizes the shipment of a passive restraint system, with inflator containing a Division 1.3 material Classed as a Class 3 material.	1
8239	Authorizes the use of non-DOT specification containers for the shipment of Division 2.2 materials.	1
8244	Authorizes the shipment of Class 3 materials, and Class 8 materials in lined marine portable tanks.	1
8248	Authorizes the shipment of various Class 8 materials in a modified DOT Specification 15C wooden box, compartmented to accommodate four (4) inner glass bottles, each secured in an aluminum canister.	2
8249	Authorizes hazardous materials, which are required to bear the POISON label, to be transported without the label when shipped in prescribed packaging.	1
8255	Authorizes the use of a non-DOT specification cylinder for shipment of certain Division 2.2 material.	2
8264	Authorizes the shipment of certain solid propellant explosives Division 1.2 or 1.3	1

NUMBER

PURPOSE

REASON

materials as appropriate , and smokeless powders
for small arms Class 3 materials in non-DOT
specification fiber cans or tubes packed in
fiberboard boxes.

NUMBER	PURPOSE	REASON
8265	Authorizes the transport of certain solid propellant explosives in non-DOT specification fiber tubes packed in telescoping DOT Specification 12B fiberboard boxes, and certain smokeless powders for small arms, in DOT Specification 21C fiber drums packed in fiberboard boxes.	1
8273	Authorizes the shipment of a passive restraint module with an inflator containing a Division 1.2 or 1.3 material as appropriate classed as Division 4.1 solid.	1
8278	Authorizes the use of a non-DOT specification container for specified Division 2.1 materials and Class 3 materials.	1
8299 2	Authorizes the manufacture, marking and sale of non-DOT specification pressure vessels for shipment of a compressed gases.	
8307	Authorizes the shipment of a nonpyrotechnic mixture of certain Class 8 materials, gas and an explosive charge in a non-DOT specification container.	2
8308	Authorizes the carriage of radioactive materials aboard highway vehicles when the combined transport index exceeds 50 and or the separation criteria cannot be met.	2
8329	Authorizes the use of DOT Specification 57 portable tanks in less than truckload quantities with other hazardous materials subject to 49 CFR 177.848 for the transportation of Division 5.1 material.	2
8354	Authorizes the use of a non-DOT specification portable tank for the transportation of certain Class 3 and Division 2.1 materials.	2
8386	Authorizes the transport of a Division 6.1 material in special pressure sealed polyethylene	2

NUMBER

PURPOSE

REASON

capsules without the POISON label.

NUMBER	PURPOSE	REASON
8390	Authorizes the shipment of 95 percent - 98 percent sulfuric acid in DOT Specification 2E polyethylene bottles overpacked in DOT Specification 12A80 fiberboard boxes.	2
8391	Authorizes the use of a non-DOT specification cylinder for shipment of various Division 2.2 materials.	2
8396	Authorizes the transport of a Class 3 material which is also an Division 5.1 material in DOT Specification MC-307 and MC-312 cargo tanks.	2
8401	Authorizes the carriage of fuel in Canadian 5B containers loaded in cargo compartments of passenger-carrying helicopters.	5
8414	Authorizes the transport of certain Division 2.2 materials in non-DOT specification intermodal portable tanks.	2
8431	Authorizes the shipment of monochloroacetic acid solution, Class 8 material, in DOT Specification 111A100W6 tank cars made of 316L stainless steel with bottom outlets and washout prohibited.	2
8432	Authorizes the transport of plastic bottles containing an aqueous solution of sodium perchlorate and plastic bottles containing aluminum powder together in the same outside packaging.	2
8439	Authorizes the manufacture, marking and sale of non-DOT specification cylinders complying with DOT Specification 4DS, with certain exceptions, for shipment of various Division 2.2 materials.	2
8445	Authorizes the shipment of various hazardous substances and wastes packed in inside plastic, glass, earthenware or metal containers, overpacked in a DOT specification removable head steel, fiber or polyethylene drum only for the purposes of disposal, repackaging or reprocessing.	5

NUMBER

PURPOSE

REASON

NUMBER	PURPOSE	REASON
8450	Authorizes the transport of rocket motors, Division 1.3 materials in non-DOT specification polyethylene containers.	1
8451	Authorizes the transport of not more than 25 grams of Division 1.1 materials and pyrotechnic materials in a special shipping container.	1
8453	Authorizes the use of non-DOT specification cargo tanks and DOT Specification MC-306, MC-307, or MC-312 stainless steel cargo tanks for transport of a Division 1.5 material.	2
8458	Authorizes the conversion of DOT Specification 105A500W or 112A400W tank cars to a DOT Specification 111A100W2 tank car.	2
8465 2	Authorizes the manufacture, marking and sale of non-DOT specification plastic bag (comparable to a DOT Specification 44P) for shipment of ammonium nitrate fertilizer.	
8467	Authorizes the use of non-DOT specification IMCO Type V portable tanks for shipment of Division 2.2 materials.	2
8470	Authorizes the use of a non-DOT specification box for shipping rocket motors.	5
8472	Authorizes the use of non-DOT specification, metal, single trip, inside container for shipment of a Division 2.2 materials.	1
8473	Authorizes the use of non-DOT specification IMO Type 5 portable tanks for shipment of a Class 3 material.	2
8487 2	Authorizes the manufacture, marking and sale of non-DOT specification, fiber reinforced plastic, aluminum lined, full composite cylinders for shipment of certain Division 2.2 materials.	

NUMBER	PURPOSE	REASON
8489	Authorizes the shipment of certain Division 5.1 materials and Class 8 material in a non-DOT specification nonreusable, collapsible, flexible disposable bulk bag.	2
8495 2	Authorizes the manufacture, marking and sale of non-DOT specification spherical containers similar to DOT Specification 4DS for shipment of bromotrifluoromethane pressurized with nitrogen.	
8516	Authorizes the shipment of ammonium nitrate-fertilizer, classed as an Division 5.1 and ammonium nitrate-fuel oil, classed Division 1.5 material, to be stowed in the same hold or compartment aboard ship.	2
8518 2	Authorizes the manufacture, marking and sale of non-DOT specification cargo tanks complying with DOT Specification MC-307/312 except for bottom outlet valve variations, for transportation of Class 3 or 8 waste liquids or semisolids.	
8520	Authorizes "pipe test" in lieu of "fire test" for blasting agents that will be packaged in drum size containers not to exceed 55 gallons.	1
8522 2	Authorizes the manufacture, marking and sale of nonreusable molded expanded polystyrene cases similar to DOT-33A except they will incorporate six cavities to contain a total of six 5-pint bottles.	
8523	Authorizes the shipment of various Division 2.1 and 2.2 materials in non-DOT specification IMO Type 5 portable tanks.	2
8526	Authorizes the shipment of Class 3 and/or Division 2.1 materials in temperature controlled equipment.	2
8538	Authorizes the shipment of a liquid high explosive in DOT Specification 15M boxes having inside	1

NUMBER	PURPOSE	REASON
	2-gallon polyethylene bottles wrapped in plastic bags and packed in sawdust.	
8539	Authorizes the carriage of certain Division 1.1, 1.2, 1.3 and 1.4 materials that are not permitted for air shipment or are in quantities greater than those prescribed for shipment by air.	1
8540	Authorizes the shipment of oxygen candles packaged in specially designed metal containers.	5
8545	Authorizes the transport of limited quantities of liquid high explosives within inside polyethylene bottles, placed on a layer of sawdust on the bottom of a DOT-37A drum, placed in a DOT-15A wooden box.	1
8554	Authorizes the transport of propellant explosives and blasting agents in DOT Specification MC-306, MC-307, and MC-312 cargo tanks.	1
8555	Authorizes the shipment of a large rocket motor segment on a special highway vehicle.	1
8556	Authorizes the use of non-DOT specification portable tanks for shipment of liquefied hydrogen.	2
8561 2	Authorizes the manufacture, marking and sale of non-DOT specification stainless steel cylinders similar to a DOT Specification 3HT, for shipment of oxygen.	
8569	Authorizes the shipment of 6.6 gallons of hydrazine, aqueous solution in non-DOT specification F-16 emergency fuel tanks.	1
8570 2	Authorizes the manufacture, marking and sale of non-DOT specification rotationally molded, cross-linked polyethylene portable tank for shipment of Class 8 materials and a Division 5.1 material.	

NUMBER	PURPOSE	REASON
8571	Authorizes the shipment of various Class 3 materials packaged in a DOT Specification 12A80 corrugated fiberboard box with two inside metal containers not over 10-liter capacity each.	2
8573 2	Authorizes the manufacture, marking and sale of non-DOT specification polyethylene bottles for shipment of certain Division 5.1 materials overpacked in a DOT Specification 12B fiberboard box.	
8579	Authorizes the shipment of ammonium nitrate fertilizer in strapped or stretch-wrapped palletized loaded bags aboard cargo vessel exempt from spacing criteria for bags and location.	2
8580	Authorizes the carriage of certain Division 1.1, 1.2, 1.3 and 1.4 materials that are not permitted for air shipment or are in quantities greater than those prescribed for shipment by air.	1
8582 1	Authorizes the transport of railway track torpedoes and fusees packed in metal kits in motor vehicles by railroad maintenance crews as nonregulated rail carrier equipment.	
8602 2	Authorizes the manufacture, marking and sale of non-DOT specification vacuum insulated portable tanks for shipment of argon, nitrogen and oxygen.	
8621	Authorizes the loading of ammonium nitrate mixtures containing more than 60% ammonium nitrate with no organic coating contained in combustible packagings on a break-bulk basis at a non-isolated facility.	5
8627	Authorizes the shipment of various Class 8 or Class 3 materials (oil well treating compounds) contained in six separate 60-gallon steel tanks firmly mounted on the chassis of a truck.	2

NUMBER	PURPOSE	REASON
8645	Authorizes the shipment of a viscous Division 5.1 material in DOT Specification MC-307/311 insulated tank motor vehicles at ambient temperature.	2
8650	Authorizes the use of a non-DOT specification steel portable tank for shipment of motor fuel antiknock compound.	2
8667	Authorizes the transport of steel encapsulated sources containing Type B quantities of Cesium 137, contained in calibrated radiological instruments which do not meet all current testing requirements.	2
8678	Authorizes the use of non-DOT specification IMCO Type V portable tank for shipment of Division 2.1 and 2.2 materials.	2
8679	Authorizes the shipment of a water reactive material packaged in the same outside packaging with other hazardous materials.	5
8684 2	Authorizes the manufacture, marking and sale of non-DOT specification cargo tanks constructed in accordance with DOT Specification MC 331 with certain exceptions for the shipment of Division 2.2 materials.	
8689	Authorizes the manufacture, marking and sale of a non-DOT specification oil well sampling device for the shipment of various compressed gases.	2
8692	Authorizes the shipment of sodium persulfate in collapsible polyethylene-lined, woven polypropylene bags having a capacity of approximately 2,200 pounds each.	2
8697	Authorizes the transport of propane in DOT Specification 4B240, 4BA240, 4BW240 cylinders via helicopter utilizing sling loads.	4
8698 2	Authorizes the manufacture, marking and sale of	

NUMBER	PURPOSE	REASON
	non-DOT specification portable tanks for shipment of non-pressurized nitrogen, refrigerated liquid.	
8710	Authorizes the shipment of an organic peroxide classed as a Class 3 material in a DOT Specification MC-307/312 cargo tank equipped with temperature and pressure sensing devices.	2
8718	Authorizes the manufacture, marking, and sale of non-DOT specification, limited cycle life, fiberglass reinforced plastic cylinders for shipment of various Division 2.2 materials.	2
8720 2	Authorizes the manufacture, marking and sale of non-DOT specification nonreusable welded steel cylinders similar to DOT Specification 39 for shipment of various nonflammable gases.	
8723	Authorizes the use of non-DOT specification motor vehicles for bulk shipment of certain blasting agents.	5
8725	Authorizes the manufacture, marking, and sale of non-DOT specification fiber reinforced plastic hoop wrapped cylinders, for shipment of certain compressed gases.	2
8748	Authorizes the shipment of boron trifluoride, classed as a nonflammable gas in non-DOT specification containers when shipped as a component of a radiation detector.	2
8750 2	Authorizes the manufacture, marking and sale of non-DOT specification girth welded steel cylinders for shipment of certain Division 2.2 materials.	
8757	Authorizes the manufacture, marking, and sale of non-DOT specification stainless steel cylinders, for shipment of compressed gases.	2
8760	Authorizes the display of FLAMMABLE placards, showing identification number 1993, on Barton	5

NUMBER	PURPOSE	REASON
	Solvents, Inc. cargo tanks having six or more compartments when transporting one or more hazardous material.	
8770	Authorizes shipment of a Class 8 material and minute quantity of a Class 3 Division 6.1 solid in DOT Specification 2A, 12B or 15A fiberboard or wooden boxes with inside glass bottles.	2
8779	Authorizes the shipment of phenol, classed as a poison B, in DOT Specification 57 portable tanks.	2
8780 2	Authorizes the manufacture, marking and sale of non-DOT specification reusable, blowmolded, polyethylene container for transportation of certain Class 8 and a Division 6.1 solid .	
8786	Authorizes the use of a non-DOT specification cylinder for shipment of limited quantities of compressed gases.	3
8795	Authorizes the manufacture, marking, and sale of non-DOT specification cylinders made in compliance with DOT Specification 4B240ET, for transportation of Division 2.2 materials.	2
8802	Authorizes the use of non-DOT specification IMO Type 5 portable tanks, for transportation of liquefied compressed gases.	2

NUMBER	PURPOSE	REASON
8811	Authorizes the use of modified DOT Specification MC-312 cargo tanks made of titanium for shipment of certain Class 8 materials.	2
8812	Authorizes the manufacture, marking, and sale of non-DOT specification five-gallon metal containers comparable to DOT Specification 5L for shipment of gasoline, and gasohol, Class 3 materials.	2
8814	Authorizes the manufacture, marking, and sale of non-DOT specification, fiber reinforced plastic full composite cylinders for transportation of certain Division 2.1 and 2.2 materials.	2
8815	Authorizes the transport of certain blasting agents in a cement mixer motor vehicle.	2
8820	Authorizes the use of a non-DOT specification IMCO Type 5 portable tank, for transportation of liquefied compressed gases.	2
8826	Authorizes the carriage of certain Division 1.1, 1.2, 1.3 and 1.4 materials that are not permitted for air shipment or are in quantities greater than those prescribed for shipment by air.	1
8839	Authorizes the manufacture, marking, and sale of non-DOT specification rationally molded, cross-linked polyethylene portable tanks, for shipment of Class 8 materials and a Division 5.1 material.	2
8840	Authorizes the manufacture, marking and sale of non-DOT specification inside seamless aluminum containers for transportation of various compressed gases.	2
8842	Authorizes the use of non-DOT specification small, high pressure cylinders of welded construction for aircraft use or military weapons system only.	2
8843	Authorizes the manufacture, marking and sale of	2

NUMBER	PURPOSE	REASON
	non-DOT specification cylinders for shipment of bromine trifluoride, classed as a Division 5.1 material, to be shipped without the poison label.	
8845	Authorizes the transportation of charged oil well jet perforating guns equipped with detonator and arrest device, classed as Division 1.1, 1.2 or 1.4 as appropriate.	2
8854	Authorizes the manufacture, marking, and sale of non-DOT specification IMCO Type 5 portable tanks, for shipment of hydrogen fluoride, classed as a Classed 8 material.	2
8860	Authorizes the extended periods in the retest frequency of DOT Specifications 103CW and 103EW tank cars in chlorosulfonic acid and nitric acid service.	1
8861	Authorizes the manufacture, marking, and sale of DOT Specification 57 portable tanks, for shipment of various Class 3 material which are also Class 8 or a Division 6.1 poison and certain Class B poison liquids.	2
8862	Authorizes the shipment of propylene oxide, classed as a Class 3 material, in DOT Specification 5P lagged steel drums.	2
8864	Authorizes the transport of a Class 8 material, in existing non-DOT specification cargo tanks comparable to DOT Specification MC-312 except for remote release valve and overturn protection.	2
8865	Authorizes the shipment of helium, classed as a nonflammable gas in a manifolded pressure vessel system including a steel cylinder similar to DOT Specification 39.	2
8871	Authorizes the manufacture, marking, and sale of large, collapsible polyethylene lined woven polypropylene bulk bags, having a capacity of approximately 2000 pounds each, and top and bottom	2

NUMBER	PURPOSE	REASON
	outlets, for shipment of Class 8 material and nitrates.	
8873	Authorizes the shipment of carbon disulfide, classed as a Class 3 materials in a special DOT Specification MC-312 cargo tank.	5
8877	Authorizes the shipment of certain materials described as flammable liquids, corrosive, n.o.s. (corrosive to skin only) and corrosive liquids, n.o.s., in DOT-12B65 fiberboard boxes with inside glass bottles having a capacity not to exceed 1 gallon.	2
8878	Authorizes the shipment of germanium tetrachloride, corrosive liquid, n.o.s., in glass containers of less than 3-gallon capacity, surrounded by vermiculite placed in a cylindrical steel overpack packed six to a compartmented wooden box.	2
8891	Authorizes the shipment of cigarette lighters containing flammable gas fuel and equipped with an ignition device packed to meet the test criteria for UN Specification 4GX.	1
8898	Authorizes the use of a non-DOT specification ASME Code stamped portable tank, for transportation of liquefied compressed gases.	2
8901	Authorizes the shipment of chloropicrin in polyethylene bottles overpacked in non-DOT specification triple-wall, corrugated fiberboard boxes.	2
8906	Authorizes the shipment of used, essentially empty containers with residual amounts of carbofuran, packed in a non-DOT specification double wall BC flute corrugated fiberboard box.	2
8910	Authorizes the use of non-DOT specification rotationally molded, linear low density polyethylene portable tank enclosed in a steel cage, for shipment of corrosive liquids.	2

NUMBER	PURPOSE	REASON
8911	Authorizes the shipment of scrap, guillotined small arms ammunition loosely packed in non-DOT specification, nonreusable, closed-top wooden crates or fiberboard boxes, in truckload lots to an incinerator for disposal.	2
8913	Authorizes the use of non-DOT specification IMO Type 5 portable tanks, for shipment of flammable liquids.	2
8914	Authorizes the shipment of certain Division 2.1 and 2.2 materials in DOT Specification 3AA, 3A, 3AX and 3T cylinders.	2
8915	Authorizes the shipment of various Division 2.1 and 2.2 materials in DOT Specification 3A, 3AA, 3AX, 3AAX and 3T cylinders.	1
8920	Authorizes the manufacture, marking, and sale of non-DOT specification welded high pressure nonrefillable cylinders, for transportation of Division 2.2 materials.	2
8921	Authorizes the manufacture, marking, and sale of nonreusable non-DOT specification steel jacketed polyethylene portable tanks for transportation of Class 8 materials.	2
8927	Authorizes the manufacture, marking, and sale of non-DOT specification girth, welded steel spheres, for transportation of Division 2.2 materials.	2
8932	Authorizes the use of cargo tanks complying with DOT Specification MC-307 and MC-312, for transportation of organic peroxide solution.	2
8937	Authorizes the shipment of coated magnesium granules in non-DOT specification collapsible flexible bag, disposable bulk container.	2
8939	Authorizes the manufacture, marking, and sale of six non-DOT specification portable tanks manifolded together within a frame and securely mounted on a truck chassis, for transportation of	5

NUMBER	PURPOSE	REASON
	Class 3 and Class 8 materials.	
8942	Authorizes the manufacture, marking, and sale of steel jacketed non-DOT specification rotationally molded, cross-linked polyethylene portable tanks, for shipment of Class 8 and Division 5.1 materials.	2
8943	Authorizes the shipment of a polyol filter cake classed as a Class 3 materials, in a non-DOT specification open top, metal cargo carrying box.	2
8944	Authorizes the use of a limited quantity of DOT Specification 3AAX or 3T cylinders that are retested by means other than the hydrostatic retest required in 49 CFR 173.34(e).	1
8955 2	Authorizes the transport of charged oil well guns with detonators attached.	
8958	Authorizes the transport of limited quantities of black powder, classed as a Class 3 material, in DOT Specification 12H fiberboard boxes.	3
8960	Authorizes the carriage of certain Division 1.1, 1.2, 1.3 and 1.4 material that are not permitted for air shipment or are in quantities greater than those prescribed for shipment by air.	1
8962 2	Authorizes the manufacture, marking and sale of non-DOT specification girth welded stainless steel cylinders for transportation of a compressed gas.	
8965 1	Authorizes the manufacture, marking and sale of non-DOT specification fiber reinforced plastic hoop wrapped cylinders for shipment of certain compressed gases.	
8966	Authorizes the shipment of sodium hypochlorite solution in four one-gallon polyethylene bottles enclosed in a bag of polyethylene film packed in a corrugated fiberboard box complying with DOT	2

NUMBER	PURPOSE	REASON
	Specification 12B except for handholes authorized in side panels of box.	
8967	Authorizes shipment of a solid propellant explosive, identified as MK 43 Grains and MK 90 grains in a non-DOT specification fiberboard tube, overpacked in a non-DOT specification palletized metal cage.	2
8968	Authorizes the use of a non-DOT specification IMO Type 1 portable tank, for transportation of a Division 4.1 materials.	2
8971	Authorizes the use of non-DOT specification steel cylinders of equal or greater integrity than those currently authorized for transportation of a liquid oxidizer.	2
8977	Authorizes the use of a non-DOT specification IMO Type 5 portable tank, for transportation of liquefied compressed gases.	2
8986	Authorizes the transport of slurry blasting agent in non-DOT specification stainless steel cargo tanks.	2
8988	Authorizes the transport of charged oil well guns	
2	as Division 1.4 explosive when the net weight of explosive material in the vehicle or vessel does not exceed 200 pounds.	
8990	Authorizes the manufacture, marking, and sale of non-DOT specification nonrefillable steel inside cylinders, for transportation of Division 2.2 materials compressed gases.	2
8995	Authorizes the use of non-DOT specification steel portable tanks for transportation of certain nonpoisonous, nonflammable compressed gases.	2
9001	Authorizes the manufacture, marking, and sale of non-DOT specification steel cylinders complying in part with DOT Specification 3T cylinders, for	2

NUMBER	PURPOSE	REASON
	transportation of certain Division 2.2 and 2.2 materials.	
9004 2	Authorizes the manufacture, marking and sale of non-DOT specification containers for transportation of Class 3 and Division 2.1 materials.	
9010	Authorizes the shipment of rocket motors, Class B explosive in a specially designed container to be shipped in a propulsive state.	2
9017	Authorizes the shipment of hydrogen fluoride anhydrous in non-DOT specification IMO Type portable tank comparable to DOT Specification 51.	2
9023	Authorizes the shipment of various refrigerant gases in non-DOT specification IMO Type 5 portable tanks.	2

NUMBER	PURPOSE	REASON
9024	Authorizes the shipment of various refrigerant gases in non-DOT specification IMO Type 5 portable tanks.	2
9030	Authorizes the use of non-DOT specification, metal, single trip, inside container for shipment of a Division 2.2 material.	2
9034	Authorizes the shipment of insecticide, liquefied gas (containing no Division 6.1 material) insecticide, liquefied gas (containing Division 6.1 material), compressed gas, n.o.s., disilane and disilane mixture in DOT- 3AL cylinders.	2
9036	Authorizes manufacture, marking and sale of cylinders complying with Specification 3AA except for inspection of certain billets after parting, for shipment of those gases presently authorized in DOT Specification 3AA cylinders.	2
9047	Authorizes the use of copper-bearing (brass) valves in DOT specification cylinders and DOT Specification 5P drums containing ethylene oxide.	2
9048	Authorizes the manufacture, marking, and sale of non-DOT specification containers for transportation of Class 3 materials and Division 2.2 materials.	2
9052	Authorizes the manufacture, marking, and sale of non-DOT specification 225 gallons rotationally molded polyethylene portable tanks for shipment of those Class 8 materials and hydrogen peroxide presently authorized in DOT Specification 34 and certain Class 3 materials.	2
9059	Authorizes the shipment of a fluorine - helium mixture contained in appropriate DOT specification cylinders to be described as fluorine mixture classed as nonflammable gas.	2
9061	Authorizes the shipment of a small quantity of a flammable solid labeled Flammable Solid and Dangerous When Wet but without a Flammable Solid W	2

NUMBER	PURPOSE	REASON
	placard on the vehicle.	
9063	Authorizes the use of non-DOT specification IMO Type 5 portable tanks for transportation of nonflammable compressed gases.	2
9064	Authorizes the shipment of corrosive materials in a glass container placed in a cushioned cylindrical steel overpack, which is then packed in a cushioned plywood box, of which no more than four can be overpacked in a wooden outer box.	2
9066	Authorizes the transportation of an airbag gas generator as flammable solid in a box constructed of single wall corrugated fiberboard with an inside styrofoam container insert for shock absorption.	1
9067	Authorizes the manufacture, marking and sale of non-DOT specification portable tanks manifolded together with a frame and securely mounted on a truck chassis for transportation of flammable liquids and corrosive liquids.	2
9070	Authorizes the use of non-DOT specification steel portable tanks, for transportation of a flammable liquid.	2
9092	Authorizes the manufacture, marking, and sale of non-DOT specification portable tanks manifolded together within a frame and securely mounted on a truck chassis, for transportation of Class 3 and Class 8 materials.	2
9101	Authorizes shipment of several rocket motors having gross weight in excess (172.102 by cargo aircraft only).	2
9106	Authorizes the carriage of certain Division 1.1, 1.2, 1.3 and 1.4 materials that are not permitted for air shipment or are in quantities greater than those prescribed for shipment by air.	1
9108	Authorizes the transportation of PETN wet with 25% water in 4 mil polyethylene bags placed in DOT Specification 12H65 fiberboard boxes.	2

NUMBER	PURPOSE	REASON
9110	Authorizes the shipment of sodium chlorate (Division 5.1 material) in non-DOT specification collapsible polyethylene-lined, woven polypropylene bags.	2
9114	Authorizes the transport of electron tubes containing small amounts of Class 7 materials (Radium 226 or Krypton 85) without specific determination of total activity or Transport Index for the package.	2
9116 2	Authorizes the manufacture, marking and sale of non-DOT specification rotationally molded, cross-linked polyethylene portable tank enclosed within a protective steel frame for shipment of Class 8, Class 3 or Division 5.1 materials.	
9120	Authorizes the use of a non-DOT specification pressure vessel for transportation of certain Division 2.1 materials.	2
9130	Authorizes the shipment of an Division 5.1 materials, in polyethylene containers, not over 10 pounds capacity each, overpacked in a non-DOT specification corrugated fiberboard box as prescribed in 49 CFR 173.217(c).	2
9138	Authorizes the shipment of nitrogen in a fiber reinforced plastic full composite cylinder without a safety relief device.	2
9140 2	Authorizes the manufacture, marking and sale of non-DOT specification rotationally molded, cross-linked polyethylene portable tanks for shipment of Class 8, Class 3, liquids or Division 5.1 materials.	
9141	Authorizes the shipment of certain hand signal devices as a Division 4.1 solid instead of a Division 1.4 material.	2
9142	Authorizes the use of a non-DOT specification IMO	2

NUMBER	PURPOSE	REASON
	Type 5 portable tank for transportation of Division 2.1 materials.	
9144	Authorizes the manufacture, marking and sale of large, non-DOT specification collapsible, polyethylene-lined woven polypropylene bulk bags, having a capacity of approximately 2,000 pounds each, for shipment of a Division 5.1 and a Class 8 solid material.	2
9145	Authorizes the use of a non-DOT specification container, for shipment of Division 2.1 materials.	2
9149	Authorizes the use of non-DOT specification IMO Type 1 portable tanks for transportation of motor fuel antiknock compound.	2
9150	Authorizes the manufacture, marking, and sale of non-DOT specification rotationally molded, cross-linked polyethylene portable tanks with bottom outlet for shipment of Class 8, Class 3, or a Division 5.1 material.	2
9157	Authorizes the use of a non-DOT specification multiunit tank car tank, for transportation of a Division 2.1 material.	2
9162	Authorizes the use of a non-DOT specification container for transportation of Class 3 or Division 2.1 materials.	2
9164	Authorizes the manufacture, marking, and sale of a non-DOT specification steel portable tank of 345 gallon capacity, with removable head, for shipment of waste paint and waste paint sludge.	2
9166	Authorizes the manufacture, marking, and sale of cargo tanks manufactured from glass fiber reinforced plastics, for transportation of Class 3 liquids, Class 8 materials and Division 6.1 materials.	1
9168	Authorizes the manufacture, marking, and sale of	1

NUMBER	PURPOSE	REASON
	<p>specially designed composite type packaging, for shipment of small quantities of various Class 3, and Class 8 materials, and Division 6.1 liquids and solids shipped without labels.</p>	
9174	<p>Authorizes the use of non-DOT specification cylindrical and spherical pressure vessels for transportation of helium and nitrogen.</p>	2
9181	<p>Authorizes the transport of lithium metal and a thionyl chloride solution in the same non-DOT specification stainless steel vessel.</p>	2
9184	<p>Authorizes the shipment of calcium carbide and substances which in contact with water emit Division 2.1 gases, solid n.o.s. (strontium aluminate), in polyethylene-lined woven polypropylene collapsible bags in truckload or carload lots only.</p>	1
9193	<p>Authorizes the shipment of a downhole logging tool (snode) that contains an accelerator housing, one section of which is charged with sulfur hexafluoride to a pressure of 80 psig.</p>	1
9198	<p>Authorizes the DOI, and other government agencies under contract to DOI, to use aircraft which are under exclusive direction and control of DOI for periods of less than 90 days.</p>	1
9211	<p>Authorizes the installation and operation of electrically-powered lighting, air conditioning, alarm, and fire detection systems in cargo holds containing Division 1.1, 1.2, 1.3 and 1.4 explosives in a Maritime Prepositioning Ship (TAKX).</p>	2
9213	<p>Authorizes the manufacture, marking, and sale of large, collapsible polyethylene-lined woven polypropylene bulk bags, having a capacity of approximately 2000 pounds each and top and bottom outlets, for shipment of Class 8 solids and nitrates.</p>	1

NUMBER	PURPOSE	REASON
9220	Authorizes the manufacture, marking, and sale of non-DOT specification collapsible flexible bag, disposable bulk container, for transportation of Class 8 solids and Division 5.1 materials.	2
9221	Authorizes the manufacture, marking, and sale of non-DOT specification girth welded stainless steel cylinders, for shipment of Division 2.2 materials.	2
9222	Authorizes the use of non-DOT specification metal tanks for transportation of a Class 3 liquid or Class 4.1 materials.	5
9228	Authorizes the use of non-DOT specification cargo tanks, for transportation of Class 8 materials.	2
9232	Authorizes the shipment of explosives and other hazardous materials forbidden or in quantities greater than those prescribed by commercial air carriers activated under the Civil Reserve Air Fleet during a contingency airlift or national emergency.	1
9233	Authorizes the shipment of dry chromic acid, in a non-DOT specification 900 cubic-foot, two-compartment, sift-proof covered hopper type tank motor vehicle.	2
9248	Authorizes the transport of a safety kit containing two 15-minute highway fusees as a Consumer Commodity.	1
9262	Authorizes the transport of oil well cartridges containing not more than 500 grains of a Division 1.4 explosive.	1
9263	Authorizes the shipment of compressed gas, n.o.s., classed as a Division 2.1 gas in DOT Specification 4L cylinders.	2
9266	Authorizes the use of non-DOT specification IMO Type 5 portable tanks for shipment of liquefied compressed gases.	2

NUMBER	PURPOSE	REASON
9269	Authorizes the shipment of ammonium nitrate solution, containing not less than 15% water, in DOT Specification 103DW tank car tanks.	2
9270	Authorizes the shipment of hydrogen fluoride, in DOT Specification 112A400W tank cars stenciled DOT Specification 112A200W.	2
9271	Authorizes deviation from car separation requirements for transportation of Division 1.1 and 1.2 explosives.	1
9275	Authorizes further exceptions to specification packaging, marking and labeling requirements for certain ethyl alcohol formulations.	2
9277	Authorizes the shipment of organic phosphate compound mixture, dry, Division 6.1, in non-DOT specification five-ply kraft multiwall, laminated bags of 50 pounds capacity having a minimum total basis weight of 250 pounds.	2
9279	Authorizes the transport of a Class 4.1 which is water reactive in open-top freight containers and open top trailers covered with tarpaulins.	1
9281	Authorizes the transport of cylindrical pellets of desensitized RDX in DOT Specification 12B65 fiberboard boxes.	2
9287	Authorizes the use of non-DOT specification containers, for transportation of Class 3 materials and gases.	5
9295	Authorizes the manufacture, marking, and sale of non-DOT specification toroidal pressure vessel equivalent to a DOT Specification 39 cylinder, for transportation of Division 2.2 and 2.1 materials.	2
9305	Authorizes the use of a non-DOT specification container, for transportation of Class 3 materials and gases.	2
9316	Authorizes the manufacture, marking, and sale of a	2

NUMBER	PURPOSE	REASON
	non-DOT specification inside packaging of teflon PFA plastic, similar to DOT-2SL, contained in a DOT-6D steel overpack, for shipment of up to 70 percent nitric acid and those Class 8 materials authorized in a DOT-6D/2SL or 2SL composite packaging.	
9317	Authorizes the use of non-DOT specification skid mounted portable tanks to be transported on public highway within company property.	2
9323	Authorizes the shipment only by the U.S. Department of Defense of gasoline and JP-4 and JP-5 fuel, Class 3 liquids, in non-DOT specification collapsible, fabric reinforced rubber drums of 500-gallon capacity.	2
9327	Authorizes the manufacture, marking, and sale of mechanical displacement meter provers mounted on a truck chassis or trailer, for shipment of Class 3 liquids and gases.	2
9329	Authorizes the transport of charged well casing jet perforating guns classed as Division 1.1 or Division 1.4.	5
9331	Authorizes the shipment of sodium chlorite solutions, in DOT Specification MC-306 and MC-307 cargo tanks.	2

NUMBER	PURPOSE	REASON
9332	Authorizes the transport of a solid explosive dissolved in an ammonia solution as a flammable solid in DOT Specification 34 polyethylene containers or DOT Specification 3E polyethylene bottles, packed in DOT Specification 15A wooden boxes.	2
9338	Authorizes the use of DOT Specification 106A500X and 110A500W multi-unit tank car tanks without a gas tight valve protection housing for transportation of a Class 8 material.	2
9343	Authorizes the transport of lithium metal in stainless steel DOT specification portable tanks.	2
9346	Authorizes setting of the brakes and blocking the wheels of the first and last tank cars on up to a 12 tank car assembly, instead of each individual car, when engaged in unloading crude oil and petroleum.	2
9347	Authorizes the manufacture, marking and sale of non-DOT specification stainless steel cylinders for shipment of Division 2.1 and 2.2 materials used for sampling purposes.	2
9348	Authorizes the transport of a limited number of certain lithium batteries on passenger carrying aircraft.	3
9352	Authorizes the manufacture, marking, and sale of non-DOT specification container described as mechanical displacement meter provers mounted on a truck chassis or trailer, for transportation of Class 3 liquids and Division 2.1 gases.	2
9355	Authorizes the transport of a limited number of certain lithium batteries on passenger carrying aircraft.	3
9357	Authorizes the use of non-DOT specification IMO Type 5 portable tanks for transportation of liquefied compressed gases.	2

NUMBER

PURPOSE

REASON

NUMBER	PURPOSE	REASON
9367 2	Authorizes the manufacture, marking and sale of large non-DOT specification collapsible polyethylene-lined woven polypropylene bulk bags having a capacity of approximately 2000 pounds each and top and bottom outlets, for shipment of Class 8 solids and nitrates.	
9370	Authorizes the manufacture, marking, and sale of non-DOT specification steel cylinders complying in part with DOT Specification 3T cylinders for transportation of Division 2.2 gases.	2
9371	Authorizes the transportation in commerce of certain Division 1.1, 1.2, 1.3 and 1.4 explosives which are forbidden or exceed quantities authorized for transportation by cargo aircraft only.	1
9372 2	Authorizes the transport of charged oil well guns with detonators attached.	
9374	Authorizes the manufacture, marking, and sale of non-DOT specification rotationally molded, cross-linked polyethylene portable tank enclosed within a protective steel frame, for shipment of Class 8 liquids, Class 3 liquids or a Division 5.1 material.	2
9377	Authorizes the transport of Division 1.1 explosives containing more than 5 percent moisture in packagings without inner plastic bags or other linings.	2
9380	Authorizes the use of a non-DOT specification container described as a mechanical displacement meter prover mounted on a truck chassis for transportation of hydrocarbon products.	2
9381 2	Authorizes the transportation of a water reactive solid, in open packagings such as drums, hopper trucks and gondola cars.	

NUMBER	PURPOSE	REASON
9386 2	Authorizes the manufacture, marking and sale of non-DOT specification pressure vessel comparable to DOT Specification 3HT cylinder with certain exceptions for transportation of compressed gases.	
9387 2	Authorizes the transport of an organic phosphate compound pressurized, with a Division 2.2 gas, in concentrations and quantities greater than now authorized in the regulations, in DOT Specification 3B cylinders.	
9388	Authorizes the use of DOT specification tank cars which have had the amount of liquefied gas loaded into the tank measured by a metering device.	2
9393 2	Authorizes the manufacture, marking and sale of non-DOT specification steel cylinders in compliance with DOT Specification 39, with certain exceptions, for transportation of Division 2.2 gases.	
9400	Authorizes the manufacture, marking, and sale of non-DOT specification rotationally molded, spherical polyethylene portable tank enclosed in a steel skid unit for shipment of Class 8 liquids, Class 3 liquids or a Division 5.1 material.	2
9401	Authorizes the use of non-DOT specification IMO Type 5 portable tanks for transportation of Division 2.1 and 2.2 liquefied compressed gases.	2
9402	Authorizes the use of non-DOT specification IMO Type 5 portable tanks for transportation of Division 2.1 and 2.2. liquefied compressed gases.	2
9408	Authorizes the transport of silicon tetrafluoride in DOT Specification 3AAX cylinders.	2
9413	Authorizes the transport of a chemical kit which contains small amounts of hydrochloric acid and zinc powder.	2

NUMBER	PURPOSE	REASON
9414	Authorizes the shipment of tetrafluoromethane in DOT Specification 3AL aluminum cylinders.	2
9416	Authorizes the shipment of organophosphorous pesticide, liquid, in a DOT Specification 12P fiberboard box containing two inside DOT Specification 2U polyethylene containers of 2-1/2 gallons capacity.	2
9418	Authorizes the manufacture, marking, and sale of non-DOT specification portable tank assemblies manifolded together withing a frame and securely mounted on a truck chassis for transportation of Class 3 and Class 8 liquids.	2
9419	Authorizes the use of DOT Specification 3AAX or 3T cylinders that (i) are owned or leased by any of its subsidiaries and (ii) are retested by means other than the hydrostatic retest required in 173.34(e) for transportation of certain Division 2.1 and 2.2 gases.	2
9421	Authorizes the manufacture, marking and sale of a non-DOT specification steel cylinder complying in part with DOT Specification 3AA for transportation of certain Division 2.1, 2.2 gases and Division 6.1 materials.	2
9426	Authorizes the manufacture, marking, and sale of 5-gallon and 6-gallon capacity removable head molded polyethylene drums for transportation of Class 8 liquids and Class 3 liquids.	2
9431	Authorizes the packing of several types of explosives in the same package in quantities greater than authorized by 49 CFR 173.87.	2
9436	Authorizes the manufacture, marking and sale of non-DOT specification portable tanks for transportation of nonflammable refrigerated liquid.	2
9440	Authorizes the manufacture, marking, and sale of non-DOT specification rotationally molded,	2

NUMBER	PURPOSE	REASON
9441	cross-linked polyethylene portable tanks enclosed with a protective steel frame, for shipment of Class 8 liquids, Class 3 liquids or a Division 5.1 material.	
9441 2	Authorizes the manufacture, marking and sale of non-DOT specification steel water pump system tanks with outside diameter not exceeding 26 inches for transportation of Division 2.2 gases.	
9443	Authorizes the shipment of Division 1.3 rocket motors with igniters installed.	2
9450 2	Authorizes the manufacture, marking and sale of non-DOT specification cylinders made in compliance with DOT Specification 4B240ET with certain exceptions for transportation of Division 2.1 and 2.2 gases.	
9456	Authorizes the use of DOT Specification MC-330 and MC-331 cargo tanks for transportation of certain corrosive materials.	2
9460	Authorizes the transport of a Division 1.1 type 4 explosive in sealed velostat bag containing not more than one pounds of powder or pellets packed in DOT Specification 17C or 17H metal drums.	2
9462 2	Authorizes the manufacture, marking and sale of non-DOT specification portable tanks manifolded together within a frame and securely mounted on a truck chassis for transportation of Class 3 and Class 8 liquids.	
9478 2	Authorizes the manufacture, marking and sale of non-DOT specification cylinders conforming with DOT Specification 3AL for shape and certain tests for shipment of Division 2.2 gases.	
9480	Authorizes the transport of tetrafluoromethane in	2

NUMBER	PURPOSE	REASON
	DOT Specification 3AL cylinders.	
9485	Authorizes the transport of an insecticide, liquefied gas mixture in DOT Specification 4BA260 cylinders.	2
9487	Authorizes the transport of an insecticide, Division 2.2 gases, in DOT Specification 39 cylinders.	2
9490	Authorizes the use of non-DOT specification IMO Type 5 portable tanks for shipment of Division 2.1 and Division 2.2 gases.	2
9491	Authorizes the transport of hexafluoroethane and trifluoromethane in DOT Specification 3AL cylinders.	2

NUMBER	PURPOSE	REASON
9498	Authorizes the shipment of potassium cyanide, solid, and sodium cyanide, solid, in collapsible, water-tight, polyethylene-lined, woven polypropylene bag each having a capacity not exceeding 2,205 pounds each.	2
9503 2	Authorizes the manufacture, marking and sale of non-DOT specification rotationally molded, polyethylene portable tank enclosed in a steel frame for shipment of Class 8 materials, Class 3 liquids, or a Division 5.1 material.	
9507	Authorizes the use of a non-DOT specification full removable head salvage cylinder of 45-gallon capacity for overpacking damaged or leaking packages of pressurized and nonpressurized hazardous materials.	1
9508	Authorizes the use of a DOT Specification 4BW240 cylinder that is retested decennially instead of quinquennially, for transportation of a Division 4.3 material.	2
9513 2	Authorizes the transport of an organic phosphate formulation in a bulk motor vehicle.	
9519	Authorizes the manufacture, marking, and sale of non-DOT specification rotationally molded, cross-linked polyethylene or linear medium density polyethylene portable tank enclosed within a protective steel frame for shipment of Class 8 liquids, Class 3 liquids or a Division 5.1 material.	2
9525	Authorizes the use of a welded stainless steel cylinder equivalent to DOT Specification 3E with exceptions, for transportation of certain pyroforic liquids, Class 3 liquids, Division 6.1 liquids and Class 4.1 materials.	2
9527	Authorizes the carriage of various Division 1.1, 1.2, 1.3 and 1.4 explosives not permitted for air	1

NUMBER

PURPOSE

REASON

shipment or in quantities greater than those prescribed for air shipment.

NUMBER	PURPOSE	REASON
9528	Authorizes the transport of nonself-propelled Aerospace Ground Equipment with gasoline or aviation fuel in the tanks.	2
9530	Authorizes the use of non-DOT specification IMO Type 5 portable tanks for transportation of Division 2.2 gases.	2
9533 2	Authorizes the manufacture, marking and sale of large, collapsible polyethylene-lined woven polypropylene bulk bags having a capacity of approximately 2200 pounds each and top and bottom outlets, for shipment of Class 8 solids and Division 5.1 solids.	
9548	Authorizes the use of a non-DOT specification IMO Type 1 portable tank, for shipment of motor fuel antiknock compound.	1
9549	Authorizes the transport of oil well cartridges containing more than 350 grains, but not more than 600 grains of Division 2.2 type 3 explosive, as a Division 1.4 explosive, in a DOT Specification 12H fiberboard box.	2
9551	Authorizes the carriage of Division 1.1, 1.2, 1.3 and 1.4 explosives that are not permitted for air shipment or in quantities greater than those prescribed for shipment by air.	1
9568	Authorizes use of a DOT Specification MC-306 tank motor vehicle for transportation of sodium hydroxide, liquid.	2
9571	Authorizes the transport of not more than 5 grams of an approved or unapproved explosive in a special packaging essentially without regulation.	1
9579	Authorizes the use of a non-DOT specification motor vehicle for bulk shipment of Division 5.1 materials.	1
9583	Authorizes the use of a non-DOT specification	2

NUMBER	PURPOSE	REASON
	welded, high pressure cylinder for oil sampling purposes.	
9584	Authorizes the use of a non-DOT specification seamless cylinder designed and constructed in accordance with DOT Specification 3A, for gas sampling purposes.	2
9595	Authorizes the transport of certain unapproved Division 1.1 explosives for disposal in packagings not presently authorized for Division 1.1 explosives, in metal or fiber drums not exceeding 55-gallon capacity with liners consisting of two polyethylene leak-proof bags.	1
9596	Authorizes the use of a non-DOT specification insulated portable tank for transportation of a Division 2.2 gases.	1
9599 2	Authorizes the manufacture, marking and sale of non-DOT specification portable tanks constructed of 304 stainless steel with a carbon steel jacket and approximately 4,000 gallon capacity for shipment of argon, refrigerated liquid, a Division 2.2 gas.	
9606	Authorizes the shipment of more than 110 detonators in one inside specially designed packages.	5
9609	Authorizes the manufacture, marking, and sale of welded non-DOT specification nonreusable, nonrefillable steel toroidal pressure vessel for a military system.	2
9610	Authorizes the transport of DOT Specification 21C fiber drums which contain not more than 5 grams of smokeless powder essentially without regulation.	2
9617	Authorizes the transport of a specially defined detonating cord on the same motor vehicle with Division 1.1 and Division 1.4 detonators.	2

NUMBER	PURPOSE	REASON
9618 2	Authorizes the manufacture, marking and sale of polyethylene, removable head, salvage drums of 90-gallon capacity for overpacking damaged or leaking packages of hazardous materials or for packing hazardous materials that have spilled or leaked for repackaging or disposal.	
9623	Authorizes the transport of a blasting agent or a Division 5.1 material in a DOT Specification MC-306 or MC-307 cargo tank with a storage box containing Division 1.1 explosives mounted directly behind the tractor cab.	2
9628	Authorizes the use of large, collapsible polyethylene-lined woven polypropylene bulk bags having a capacity of 1,000 kilos (approximately 2200 pounds) each and top and bottom outlets, for shipment of a Class 8 solid material.	2
9632	Authorizes the use of non-DOT specification IMO Type 5 portable tanks for transportation of Division 2.2 and Division 2.1 liquefied compressed gases.	2
9634	Authorizes the manufacture, marking, and sale of non-DOT specification fiber reinforced plastic, full composite cylinders for shipment of certain Division 2.2 and Division 2.1 gases.	2
9637	Authorizes the manufacture, marking, and sale of nonreusable, fiberboard bulk boxes made of triple-wall corrugated fiberboard having a inside lining of 0.006-inch minimum thickness polyethylene film for transportation of various Class 8 and Division 6.1 materials.	2
9638	Authorizes the manufacture, marking, and sale of non-DOT specification welded pressure vessel comparable to a DOT Specification 3HT cylinder with certain exceptions for transportation of compressed gases.	2
9642	Authorizes the use of DOT Specification 106A500X	2

NUMBER	PURPOSE	REASON
	and 110A500W multiunit tank car tanks for a waste liquid mixture that is corrosive to skin only.	
9645	Authorizes the manufacture, marking and sale of non-DOT rotationally molded, cross-linked polyethylene or linear low density polyethylene portable tanks enclosed within either a protective steel frame or a foam-filled steel reinforced outer cage.	2
9649	Authorizes radiation levels slightly higher than normally allowed for limited quantity Class 7 materials and relief from certain marking requirements for the depleted uranium component of the packages.	3
9657	Authorizes the use of DOT Specification 111A100W2 tank cars with bottom outlets, for transportation of sulfuric acid or oleum, Division 8 materials.	2
9658	Authorizes the manufacture, marking, and sale of non-DOT specification rotationally molded, composite crosslinked or noncrosslinked polyethylene and Teflon PTA plastic portable tank for shipment of Class 8 liquids, Class 3 liquids or Division 5.1 materials.	2
9659	Authorizes the manufacture, marking, and sale of non-DOT specification fiber reinforced plastic (FRP) full composite (FC) cylinder, for transportation of certain Division 2.2 and 2.1 gases.	2
9666	Authorizes approximately 150 DOT Specifications 4BA240 and 4BW240 cylinders to be hydrostatically retested every ten years, rather than every 5 years, when used solely for the shipment of non-corrosive, metal alkyl solutions, for transportation of a Class 3 liquid.	5
9672	Authorizes the shipment of metal alkyl solutions in a DOT Specification MC-330 or MC-331 cargo tank with a filling/discharge opening that does not have a remote self-closing internal valve.	2

NUMBER	PURPOSE	REASON
9676	Authorizes the shipment of certain Class liquids contained in four inside glass bottles or PVC coated glass bottles of one-gallon capacity each, overpacked in a corrugated fiberboard box conforming to DOT Specification 12B65 except for handholes in the same side panels of the box.	1
9677	Authorizes the shipment of hydrochloric acid in non-DOT specification bottles of one-gallon capacity, overpacked no more than 60 to a specially-designed, heavy-wall cart, molded of high density polyethylene.	1
9678	Authorizes the use of dry bulk tank semi-trailers for shipment of magnesium and calcium salt mixtures.	5
9683	Authorizes the manufacture, marking and sale of non-DOT specification containers, for transportation of Class 3 liquids and gases.	5
9686	Authorizes the manufacture, marking, and sale of non-DOT specification rotationally molded Teflon PFA container of 20 liter capacity with filament-wound fiberglass reinforcement, for shipment of those Class 3 or Class 8 liquids authorized in DOT-34 and DOT-6D/2S or 2SL composite packagings.	1
9689	Authorizes drums containing dense or heavy materials, such as toluene diisocyanate, and other hazardous materials not exceeding 12.09 pounds per gallon, to be secured against movement in a transport vehicle by the use of a fabric restraint dunnage system when shipped by cargo vessel.	1
9694	Authorizes the use of MC-331 cargo tanks equipped with angle valves and pressure relief valves not presently authorized in the regulations.	2
9696	Authorizes the manufacture, marking and sale of non-DOT rotationally molded Teflon PFA container	1

NUMBER	PURPOSE	REASON
	of 100 liter capacity with filament-wound fiberglass reinforcement and a high density polyethylene overpack for shipment of those liquids authorized in DOT-34 and DOT-6D/2S or 2SL composite packagings.	
9697	Authorizes the use of DOT Specification 105A300W and 105A400W tank car tank with the tank overdue for retesting for a one-time shipment of a waste Class 8 liquid.	3
9700	Authorizes the use of a DOT Specification 51 portable tank having pressure relief devices with a start-to-discharge pressure of 75 psig, for transportation of flammable, poisonous liquid.	1

NUMBER	PURPOSE	REASON
9701	Authorizes the manufacture, marking, and sale of large, collapsible polyethylene-lined woven polypropylene bulk bags, having a capacity of not more than 2500 pounds each and top and/or bottom outlets, for shipment of Class 3 and Class 8 solids and Division 5.1 solid materials.	2
9706	Authorizes the manufacture, marking, and sale of non-DOT specification cylinder complying in part with the DOT-3AA specification, for transportation of certain Division 2.1 gases, Division 2.2 gases and Division 6.1 materials.	2
9713 2	Authorizes the manufacture, marking and sale of large, collapsible polyethylene-linked woven polypropylene bulk bags, having a capacity of approximately 2000 pounds each and top and bottom outlets, for shipment of Class 8 solids and Division 8 solid materials.	
9716	Authorize the manufacture, marking and sale of non-DOT specification, fiber reinforced plastic, full composite cylinder for shipment of certain Division 2.1 and Division 2.2 gases.	2
9718	Authorizes the shipment of Division 2.1 and Division 2.2 gases in a non-DOT specification portable tank comparable to DOT Specification 51 portable tanks.	1
9722	Authorizes the manufacture, marking and sale of a DOT Specification 34 drum of 55-gallon capacity, for shipment of hydrogen peroxide solution in water, containing not more than 70% hydrogen peroxide by weight.	2
9723	Authorizes the shipment of "lab-packs" containing cyanides and cyanide mixture with "lab-packs" containing acids and corrosive liquids in the same transport vehicle.	1
9728 2	Authorizes the manufacture, marking and sale of	

NUMBER	PURPOSE	REASON
	non-DOT specification containers described as mechanical displacement meter provers mounted on a truck chassis or trailer.	
9729	Authorizes the shipment of Class 8 materials in stainless steel cylinders complying with all requirements of DOT Specification 4BW except for being fabricated from Type 304L stainless steel.	2
9730	Authorizes the use of super-insulated DOT Specification MC-338 cargo tank for transportation of flammable cryogenic liquid.	2
9735	Authorizes the Dangerous Cargo Manifest on cargo vessels owned and operated by Hapag-Lloyd AG to be retained in a location other than on or near the bridge of the vessel while the vessel is in port.	1
9740	Permit NASA to hydrostatically retest DOT (ICC) 3AA and 3AAX cylinders and certain non-DOT specification cylinders which are in conformance with DOT (ICC) 3AA and 3AAX specifications with exceptions every ten years rather than every five years as specified in 49 CFR 173.34(e).	2
9741	Authorizes the shipment of batteries palletized and shipped as a unit without means of protection from any superimposed weight.	1
9742	Authorizes the shipment of methyl bromide liquid in a non-DOT specification portable tank meeting all the requirements of a DOT Specification 51 with exceptions.	1
9746	Authorizes the use of DOT-3BN cylinders for transportation of hydrogen fluoride, anhydrous.	1
9751	Authorizes the transport of a Division 1.1 explosive device in limited quantities as a Division 1.4 explosive.	3
9758	Authorizes the shipment of certain Division 2.1 gases in a nonrefillable, non-DOT inside container conforming with the DOT-2P except for diameter and	2

NUMBER	PURPOSE	REASON
	capacity.	
9761	Authorizes the manufacture, marking, and sale of non-DOT specification welded stainless steel cylinders patterned after DOT-4DS with exceptions for transportation of Division 2.2 gases.	5
9763	Authorizes the shipment of certain hazardous materials in DOT Specification 3BN cylinders not presently authorized.	1
9768	Authorizes the shipment of rocket ammunition with explosive projectile, Division 1.1 explosive by cargo aircraft only.	2
9769	Authorizes the multi-modal transportation of lab-packs with partial relief from segregation requirements.	1
9771	Authorizes the shipment, for disposal, of unclassified waste scrap explosives, classed as Division 1.4 explosives, packaged in wood, metal or cardboard boxes overpacked in a specially designed steel overpack.	2
9778	Authorizes the shipment of sulfur hexafluoride, classed as a Division 2.2 gas, in non-DOT specification tanks and tubes, used in oil well logging service.	2
9779	Authorizes the manufacture, marking and sale of non-DOT specification portable tanks which are manifolded together within a frame and securely mounted on a truck chassis.	2
9781	Authorizes the use of a non-DOT specification full opening head, steel salvage cylinder for overpacking damaged or leaking chlorine cylinders.	1
9782	Authorizes the shipment of potassium metal in non-DOT specification container.	1
9783	Authorizes the manufacture, marking and sale of	

NUMBER	PURPOSE	REASON
2	large collapsible polyethylene-lined woven polypropylene bulk bags, having a capacity of approximately 2260 pounds each and top and bottom outlets, for shipment of Class 4.1 solids, Division 6.1 solids and Class 8 solids.	
9784	Authorizes the manufacture, marking and sale of DOT Specification 4BA or 4BW cylinders fitted with rubber footrings attached by welding after heat treatment for transportation of propane.	
2		
9789	Authorizes the shipment of a Class 3, flammable liquid, corrosive, n.o.s. in DOT Specification 57 portable tanks.	
2		
9790	Authorizes the manufacture, marking and sale of non-DOT specification welded cylinders conforming with the DOT Specification 4L except that the container is made of Type 316L stainless steel.	
2		
9791	Authorizes the manufacture, marking, and sale of a high strength, non-specification cylinder conforming in part with the DOT-3AA specification for transportation of certain nonflammable, nonliquefied compressed gases.	2
9797	Authorizes the one-time shipment of a Division 2.2 gas in a nonrefillable, non-DOT specification container.	3
9801	Authorizes the retesting of DOT Specification 111A100W2 tank car tanks, over ten years of age, with sulfuric acid in lieu of water.	5
9802	Authorizes the carriage of certain Division 1.1, 1.2, 1.3 and 1.4 explosives that are not permitted for shipment by air, or are in quantities greater than those prescribed for shipment by air.	1
9804	Authorizes the manufacture, marking, and sale of	2

NUMBER	PURPOSE	REASON
	non-DOT specification rotationally molded, polyethylene portable tank enclosed in a steel frame for the shipment of Class 8 materials, Class 3 liquids, or a Division 8 material.	
9806 2	Authorizes the manufacture, marking and sale of large, collapsible polyethylene-lined woven polypropylene bulk bags, having a capacity of approximately 2200 pounds each and top and bottom outlets, for shipment of Class 8 solids and Division 5.1 materials.	
9809	Authorizes the use of a non-DOT specification container described as a mechanical displacement meter prover mounted on a truck, for transportation of Class 3 liquids.	1
9812	Authorizes the shipment of certain hazardous materials in a non-DOT specification portable tank equivalent to a DOT Specification IM-101 except for the material of construction.	2
9816	Authorizes the shipment of hypochlorite solution, more than 7 percent available chlorine by weight, in non-DOT specification cargo tanks.	5
9817 2	Authorizes the manufacture, marking and sale of non-DOT specification limited-life polyethylene portable tank enclosed in a steel jacket for the transportation of certain Class 3 liquids, Class 8 materials, or Division 5.1 materials.	
9819	Authorizes the shipment of Class 3 liquids and Class 8 liquids in non-DOT specification stainless steel portable tanks.	2
9822	Authorizes the shipment of a Division 6.1 liquid (R&D) Samples in packaging conforming to 49 CFR 173.331(b)(1).	1
9823	Authorizes the use of a non-DOT specification, toroidal shape pressure vessel for transportation	1

NUMBER	PURPOSE	REASON
	of helium.	
9825	Authorizes sludge to be classified as Low Specific Activity (LSA) at a specific activity greater than that normally allowed for liquids transported in the specification MC-312 cargo tank.	1
9828	Authorizes the shipment of azinphos methyl, mixture, solid, a Division 6.1 material, in water soluble packets (PVA) inside lined chipboard cartons overpacked in DOT Specification 12B65 fiberboard boxes.	1
9830	Authorizes manufacture, marking and sale of non-DOT specification stainless steel cylinders to transport those materials authorized in DOT Specification 4BA cylinders.	2
9831	Authorizes the manufacture, mark and sale of vacuum insulated non-DOT specification portable tanks for transportation of helium, refrigerated liquid.	2
9832	Authorizes the manufacture, marking, and sale of vacuum insulated non-DOT specification portable tanks, for transportation of certain hazardous materials.	2
9837	Authorizes manufacture, marking and sale of DOT Specification 4B cylinders using the lot number in lieu of the serial number.	2
9840	Authorizes the transport of hydrogen peroxide solution in DOT Specification 34 polyethylene (55-gallon drum) by cargo-aircraft only (a helicopter) between Nikiski, Alaska, and Cook International, Tyonek, Alaska.	2
9843	Authorizes the manufacture, marking and sale of nonrefillable, non-DOT specification, inside metal container for shipment of materials authorized in DOT Specification 2Q cylinders.	2
9846	Authorizes the manufacture, marking, and sale of	2

NUMBER	PURPOSE	REASON
	large, collapsible polyethylene-lined woven polypropylene bulk bags, having a capacity of approximately 2200 pounds each and top and bottom outlets, for shipment of a Class 4.1 solid, Division 5.1 material, and Class 8 solids.	
9847	Authorizes the retesting of DOT Specification 3A and 3AA cylinders by means other than the hydrostatic retest required in 49 CFR 173.34(e).	1
9848	Authorizes shipment of nitrogen, supplied during transportation by a DOT Specification 3AA cylinder with its valve open, to a non-DOT specification container.	2
9849	Authorizes the transportation in commerce of certain Division 1.1, 1.2, 1.3 and 1.4 explosives which are forbidden or exceed quantities authorized for transportation by cargo aircraft only.	1
9851	Authorizes a one-time shipment of insulated dewars containing liquid nitrogen to be transported in the cabin of a passenger-carrying aircraft under special conditions.	4
9856	Authorizes the use of non-DOT specification packaging and patient use of oxygen systems on board a passenger ship.	5
9860	Authorizes the manufacture, marking, and sale of a non-DOT specification stainless steel drum-type container of 55-gallon capacity, conforming to DOT Specification 5B with certain exceptions, for shipment of those materials authorized in a DOT Specification 5B removable head stainless steel drum.	2
9874	Authorizes personnel to observe loading and unloading of cargo tanks by viewing video camera monitors in a control center instead of viewing within 25 feet of the cargo tanks.	2
9880	Authorizes the manufacture, marking and sale of	

NUMBER	PURPOSE	REASON
5	non-DOT specification containers described as hermetically sealed electron tube devices.	
9881	Authorizes the manufacture, marking and sale of	
5	non-DOT specification, metal, single-trip, inside containers, described as hermetically sealed electron tube radiation sensors, for the transportation of argon gas.	
9884	Authorizes the manufacture, marking, and sale of a non-DOT specification insulated cylinder conforming with 49 CFR 178.57 except 178.57-2 and 178.57-8© and with DOT Specification 4L with exceptions.	2
9886	Authorizes the manufacture, marking, and sale of non-DOT specification steel water pump system tank with an outside diameter not exceeding 28 inches and a precharge of compressed air or nitrogen not exceeding 42 psig.	2
9889	Authorizes the manufacture, marking, and sale of a non-DOT specification rotationally molded, linear low density polyethylene portable tank enclosed within a protective steel cage for the shipment of Class 8 liquids, Class 3 liquids, or a Division 5.1 material.	2
9894	Authorizes the manufacture, marking, and sale of non-DOT specification cylinders for transport of certain hazardous materials.	2
9901	Authorizes the shipment of nitric acid, Division 4.1 or Class 8 material, and perchloric acid, Division 5.1 material, in a DOT Specification 12A fiberboard box, with inside glass bottles cushioned and encapsulated by molded polystyrene inserts.	2
9909	Authorizes the manufacture, marking and sale of	
2	non-DOT specification steel cylinder complying in	

NUMBER	PURPOSE	REASON
	part with DOT-3AA specification for transportation of certain Division 2.1 and Division 2.2 gases.	
9912	Authorizes the manufacturing, marking, and sale of a non-DOT specification rotationally molded, cross-linked polyethylene portable tank enclosed in a metal skid and stacking frame for the shipment of Class 8 liquids, Class 3 liquids, an Division 5.1 material, or a Division 1.4 material.	2
9914	Authorizes the transport of certain Division 1.4 materials in DOT Specification MC-306, MC307 and MC-312 cargo tanks; DOT Specification IM-101 and 102 portable tanks and IMO Type 1 and Type 2 portable tanks.	2
9916	Authorizes the shipment of ethylene oxide in 4,760-gallon DOT Specification 51 steel portable tanks with safety relief valves set at 145 psig and a vacuum/perlite insulation system.	2
9923	Authorizes the manufacture, marking, and sale of a non-DOT specification rotationally molded, polyethylene portable tank enclosed in a steel frame, for shipment of Class 8 materials, Class 3 liquids, combustible liquids, or a Division 5.1 material.	2
9926	Authorizes the manufacture, marking, and sale of nonrefillable, non-DOT specification cylinders designed and manufactured in accordance with DOT-39 specification except for material of construction.	2
9929	Authorizes the transport of rocket motors in packaging not authorized in the Department's Hazardous Materials Regulations and having weights exceeding those specified in the regulations.	2
9934	Authorizes the use of non-DOT specification Teflon bottles packed in non-DOT specification fiberboard boxes for transportation of certain Class 8 liquids.	2

NUMBER	PURPOSE	REASON
9940	Authorizes the manufacture, marking, and sale of non-DOT specification, metal, single trip, inside containers, described as hermetically-sealed electron tube devices.	4
9941	Authorizes the transport of rocket motors in a propulsive state with igniters installed.	5
9946	Authorizes the use of a pneumatically-operated valve of a packless design with nonperforated diaphragms backed by an additional gasketed sealing system on cylinders containing a Division 6.1 material.	1
9950	Authorizes the transport of an accumulator charged with a mixture of nitrogen and helium to 6000 psi with an actuating cartridge in the valve.	2
9953	Authorizes the shipment of Class 3 liquids and/or Division 2.12 gases in temperature controlled equipment.	2
9956	Authorizes the shipment of hypochlorite solution in an unlined non-DOT specification cargo tank constructed of titanium.	5
9961	Authorizes the manufacture, marking, and sale of a non-DOT specification container described as mechanical displacement meter provers mounted on a truck chassis or trailer, for transportation of hydrogen products.	5
9964	Authorizes the transport of a rocket motor in a propulsive state, with igniter installed, which exceeds the weight limitation in 49 CFR.	2
9965	Authorizes the marking and shipment of electrical transformers and/or capacitors containing bulk quantities of polychlorinated biphenyl contaminated oil as non-bulk packagings.	2
9969	Authorizes the transport of small amounts of liquids and gases in diffusion tubes overpacked in capped pipe nipples.	2

NUMBER	PURPOSE	REASON
9970	Authorizes the shipment of RDX wet with ethyl acetate or ethyl alcohol in polyethylene bags overpacked in fiber drums.	2
9971	Authorizes the use of DOT Specification 12A fiberboard box, with handholes, for shipment of certain Class 3 liquids and Class 8 materials.	1
9973	Authorizes the transport of explosive projectile with fuzes assembled.	1
9974	Authorizes shipment of packages of a Division 4.1 solid in a privately owned vehicle without a "Flammable solid W" placard on the vehicle.	1
9977	Authorizes the transport of rocket motors in a propulsive state, with igniters installed.	4
9990	Authorizes the transport of detonating fuzes, Division 1.4 explosives, in a packaging not authorized in 49 CFR.	2
9991	Authorizes the use of a non-DOT specification steel, full opening head, salvage cylinder of 4.8-gallon capacity for overpacking damaged or leaking packages of pressurized and nonpressurized hazardous materials.	1
9994	Authorizes the manufacture, marking, and sale of a non-DOT specification stainless steel drum type container of 55-gallon capacity, conforming to DOT Specification 5C with certain exceptions, for shipment of those material authorized in a DOT-5C stainless steel drum.	2

NUMBER	PURPOSE	REASON
9996	Authorizes the manufacture, marking, and sale of large, collapsible polyethylene-lined woven polypropylene bulk bags having a capacity of approximately 2,200 pounds each, and top and bottom outlets, for shipment of Division 4.1 solids, Division 5.1 materials, Division 6.1 solids and Class 8 solids.	2
9997	Authorizes the transport of a kit containing smokeless powder for small arms, percussion caps and nonhazardous articles such as lead balls and bore cleaner, in non-DOT specification fiber boxes.	2
9998	Authorizes the shipment of nitrogen in hydraulic accumulators.	2
10001	Authorizes the transport of argon containing up to 10 percent oxygen as a refrigerated liquid in DOT Specification 4L cylinder.	2
10003	Authorizes the manufacture, marking, and sale of a non-DOT stainless steel drum-type container of 55-gallon capacity, conforming to DOT-5B, with certain exceptions, for shipment of paint and resin solution, a Class 3 liquid and those materials authorized in a DOT-5B removable head drum.	2
10010	Authorizes the manufacture, marking and sale of a non-DOT specification container described as mechanical displacement meter provers mounted on a truck chassis or trailer for transportation of Class 3 liquids and gases.	2
10016	Authorizes the shipment of liquid hazardous materials in a removable head polyethylene drum of five-gallon capacity.	2
10019	Authorizes the manufacture, marking and sale of non-DOT specification fiber reinforced plastic full wrapped composite cylinder for shipment of compressed air, nitrogen and oxygen.	2

NUMBER	PURPOSE	REASON
10020	Authorizes the use of a non-DOT specification roll-on/roll-off container, for transportation of Class 8 solids.	1
10022	Authorizes the use of non-DOT specification full removable head, steel salvage cylinders of approximately 55-gallon capacity for overpacking damaged or leaking packages of pressurized and nonpressurized hazardous materials.	2
10027	Authorizes the use of a non-DOT specification insulated portable tank for transportation of liquefied helium.	2
10028	Authorizes the shipment of dimethyl sulfate in DOT Specification 112A200W tank cars.	2
10031	Authorizes the manufacture, marking, and sale of non-DOT specification, insulated portable tanks for shipment of liquefied helium.	2
10032	Authorizes the shipment of Division 2.1 Division 2.2 gases in non-DOT specification IMO Type 5 steel portable tanks.	2
10043	Authorizes residual amounts of various hazardous materials, Class 3 liquids, Class 8 materials, Division 6.1 materials, Division 5.1 materials, and ORM-A or ORM-B, in inside packaging having a maximum capacity of one-gallon overpacked in outside non-DOT polyethylene bins of 30 cubic-foot capacity.	2
10047	Authorizes the manufacture, marking, and sale of a non-DOT specification cylinder conforming in part with DOT Specification 3AA cylinder, for transportation of certain hazardous materials.	2
10048	Authorizes the use of a DOT Specification 17C metal drum with inside non-DOT specification metal containers for shipment of pyrophoric liquids, Class 3 liquids, and Division 4.1 materials.	2
10049	Authorizes the use of a polyurethane insulated cargo tank conforming with MC-338 built prior to	1

NUMBER	PURPOSE	REASON
	1984 for transportation of Division 2.1 gases and Division 2.2 gases.	
10064	Authorizes the manufacture, marking and sale of a non-refillable, non-DOT specification cylinder for shipment of Division 2.2 gases.	2
10066	Authorizes the manufacture, marking and sale of a welded, stainless steel, non-DOT specification cylinder for shipment of a Division 2.2 gas.	2
10067	Authorizes the use of non-DOT specification packagings for transportation of anhydrous hydrazine.	4
10081	Authorizes the transport of rocket motors in specially designed non-DOT specification packagings via highway.	4
10082	Authorizes the carriage of certain Division 1.1, 1.2, 1.3 and 1.4 explosives that are not permitted for shipment by air or are in quantities greater than those prescribed for shipment by air.	1
10084	Authorizes the use of non-DOT specification cargo tanks manufactured from glass fiber reinforced plastics (GFRP) for shipment of certain Class 3, Class 8 or Division 6.1 materials or semi solid waste materials.	2
10085	Authorizes the shipment of monochloracetone, inhibited, in a DOT Specification MC-312 cargo tank with no bottom outlets.	2
10089	Authorizes the shipment of potassium metal classed as a Division 4.1 material in steel cylinders conforming with all requirements of DOT Specification BBW, except the material of construction is Type 304, 316 or 347 stainless steel.	2
10090	Authorizes the manufacture, marking, and sale of of a reusable, rotationally molded, polyethylene, wire-frame enclosed portable tank for shipment of Class 8, Class 3 liquids or a Division 5.1 material.	2

NUMBER	PURPOSE	REASON
10094	Authorizes the transportation of ammonium nitrate solution in DOT Specification 111A100W1 lined and insulated tank car tanks.	2
10096	Authorizes the use of non-DOT specification multi-wall, plastic lined paper bags, palletized and shrink wrapped in plastic for shipment of a Division 5.1 material.	2
10097	Authorizes the transport of rocket motors in a propulsive state and with igniters installed in packaging not authorized in 49 CFR 173.92.	2
10101	Authorizes the continued ten-year retest for cylinders conforming in part with 49 CFR 173.34(e)(15).	2
10102	Authorizes the manufacture, marking and sale of a polyethylene, removable head drum not to exceed 20 gallon capacity for overpacking damaged or leaking packages of hazardous materials that have spilled or leaked.	2
10110	Authorizes the use of a non-DOT specification steel, full opening head, "salvage" cylinder for overpacking damaged or leaking packages of pressurized or nonpressurized hazardous materials.	2
10114	Authorizes the predeployment transport of cylinders for passenger use or being returned for maintenance of not more than 12 DOT Specification 3AA cylinders containing oxygen for medical use.	2
10116	Authorizes the transport of a Division 1.4 explosive power devices in DOT Specification 12B packagings instead of the packagings required by 49 CFR 173.102.	2
10127	Authorizes the transport of a rocket motor with igniter installed and in a packaging not authorized by 49 CFR.	4
10130	Authorizes the manufacture, marking and sale of	

NUMBER	PURPOSE	REASON
	collapsible, disposable polyethylene-lined woven polypropylene bulk bags for shipment of a Division 5.1 material, Division 4.1, Class 8, and Division 6.1 solid materials.	
10131	Authorizes the transport of certain hazardous materials in a container conforming with the DOT Specification 2Q except for size, marking and test.	2
10134	Authorizes the use of a non-DOT specification pressure vessel comparable to a DOT 3HT cylinder with certain exceptions.	2
10135	Authorizes the shipment of lithium amide, powdered, in a DOT Specification 56 portable tank.	2
10138	Authorizes the display of placards showing only the generic n.o.s. identification number on a closed transport vehicle loaded with three or more portable tanks containing materials of the same Division or hazard class or materials of different hazard or division classes which are compatible.	2
10141	Authorizes packagings of rhenium metal and alloys containing thenium to be transported as "limited quantity" radioactive materials without prescribed marking requirements and certification statements.	3
10142	Authorizes the manufacture, marking, and sale of non-DOT specification corrugated fiberboard boxes with handholes, with inside glass bottles, for transportation of Class 3 and Class 8 liquids.	2
10143	Authorizes the transport of certain hazardous materials in a container conforming with DOT Specification 2Q exception for size and marking.	2
10146 2	Authorizes the manufacture, marking and sale of super-insulated, non-DOT specification portable tanks for shipment of liquefied helium.	
10147 2	Authorizes the manufacture, marking and sale of	

NUMBER	PURPOSE	REASON
10148	<p>non-DOT Specification, fiber reinforced plastic, full composite cylinders for shipment of certain Division 2.1 and Division 2.2 gases.</p> <p>Authorizes the manufacture, marking and sale of a packaging that does not pass the penetration impact test in 49 CFR 173.387(b)(2)(iii) but provides an equivalent level of safety for shipment of etiologic agents.</p>	2
10149	<p>Authorizes the transport of a flammable cryogenic liquid in a DOT Specification 113A60W-2 specification tank car tank without replacing the outer jacket frangible disc every year as required.</p>	2

NUMBER	PURPOSE	REASON
10151	Authorizes the use of a non-DOT specification full removable head salvage cylinder of 45 gallon capacity for overpacking damaged or leaking packages of pressurized and nonpressurized hazardous materials.	2
10153	Authorizes the use of a collapsible polypropylene-lined woven polypropylene bulk bag having a capacity of approximately 1102.3 pounds, with top and bottom outlets, for shipment of a Division 6.1 solid material.	2
10165	Authorizes the carriage of a small quantity of a Class 3 liquid in two safety lamps on board an aircraft.	2
10169	Authorizes applying the contamination limits allowed in 49 CFR 173.443(d) for closed transport vehicle by highway to be applied to rail shipments in closed transport vehicles.	2
10171	Authorizes the use of a non-DOT specification IMO Type 5 portable tank for shipment of certain compressed gases and a Class 3 liquids.	2
10172	Authorizes the manufacture, marking and sale of a non-DOT specification rotationally molded, cross-linked high density polyethylene portable tank enclosed within a protective wire frame for the shipment of Class 8 liquids, Class 3 liquids or a Division 5.1 material.	2
10174	Authorizes a one-time shipment of metallic sodium in a non-DOT specification tank car tanks conforming with a DOT Specification 105A300.	3
10175	Authorizes the manufacture, marking and sale of non-DOT specification five-gallon capacity removable head polyethylene drums for shipment of Class 8 and Class 3 liquids.	2
10180	Authorizes the manufacture, marking, and sale of DOT Specification 39 cylinders equipped with	5

NUMBER	PURPOSE	REASON
	pressure relief device systems for transportation of Division 2.2 gases.	
10184	Authorizes the shipment of a specific gas mixture in DOT Specification 4B, 4BA or 4BW cylinders retested in accordance with the provisions of 49 CFR 173.34(e)(9) and (e)(10).	4
10193	Authorizes the shipment of liquefied Division 2.1 and Division 2.2 gases and a Class 3 liquid, in non-DOT specification steel portable tanks.	2
10195	Authorizes a 15 year service life for cylinders that are subjected to 5 year internal and external visual inspections when used in dedicated compatible catalyst formulation service.	2
10203	Authorizes transport of 155 mm illuminating projectiles in non-DOT packaging.	2
10204	Authorizes the shipment of small quantities of carbonyl sulfide and hydrogen sulfide in diffusion tubes sealed in a capped pipe and packaged in a fiberboard box.	2
10206	Authorizes the transport of liquid aniline oil and liquid nitrobenzene in certain DOT Specification 112A and 114A tank car tanks which have a dark color band around the center of the tank.	2
10207	Authorizes the transport of a rocket motor with initer installed and in a propulsive state.	2
10211	Authorizes the manufacture, marking and sale of DOT Specification 3AX and 3AAX cylinders with certain dimensional restrictions and that are qualified by means other than the requirements in 49 CFR 178.36-15, 178.36-16(a), 178.37-16, and 178.37-16(a).	2
10227	Authorizes the manufacture, marking, and sale of insulated non-DOT specification cylinders for shipments of liquid oxygen.	2

NUMBER	PURPOSE	REASON
10228	Authorizes the use of a non-DOT specification container described as a mechanical displacement meter prover for the shipment of Class 3 liquids and Division 2.1 gases.	2
10230 2	Authorizes the manufacture, marking and sale of non-DOT specification, injection molded, crosslink thermoset olefin hydrocarbon portable tank for the shipment of Class 8 liquids, Class 3 liquids, or a Division 5.1 material.	
10232	Authorizes the transportation of certain refrigerant gases in a container conforming in part with DOT Specification 2Q.	2
10235	Authorizes the use of tank car tanks conforming to a DOT 105J500W specification, except that the tank and the tank head puncture resistance systems may be manufactured from certain high alloy steels for the use in transportation of a Division 2.3 gas and certain Class 3 liquids.	2
10238	Authorizes the manufacture, marking, and sale of 330-gallon non-DOT specification polyethylene tanks for use in the transportation of various Class 3, Class 8 and Division 5.1 materials.	2
10239	Authorizes the transportation of hydrochloric acid in DOT 111A100W5 tank car tanks equipped with a surge baffle in the safety vent assembly.	2
10242	Authorizes the manufacture, marking and sale of a polyethylene, removable head drum not to exceed 20 gallon capacity for transporting certain solid hazardous materials.	2
10247	Authorizes the transport of small quantities of material which are not authorized under 49 CFR 173.4	4
10251	Authorizes a one-time shipment of a residue of vinyl chloride in DOT Specification 105A200W tank cars without head shields and thermal protection.	5

NUMBER	PURPOSE	REASON
10253	Authorizes the use of a non-DOT specification rotationally molded, cross-linked polyethylene portable tank enclosed within a protective steel frame, for the shipment of certain Class 3 or Class 8 liquids.	5

NUMBER	PURPOSE	REASON
10255	Authorizes the manufacture, marking and sale of a non-DOT specification container conforming with DOT Specification 2Q except for sidewall thickness for Division 2.2 and Division 2.1 gases.	2
10256	Authorizes the manufacture, marking, and sale of a FRP-1 type, non-DOT specification cylinder for shipment of certain hazardous materials.	2
10257	Authorize the shipment of dimethyltin dichloride in a non-DOT specification steel portable tank mounted in an outer steel box.	2
10259	Authorizes the transportation of certain mercaptans and aliphatic mercaptan mixtures in a stainless steel DOT Specification 57 portable tank having a capacity not exceeding 250 gallons.	2
10262	Authorizes the manufacture, marking, and sale of a collapsible polyethylene-lined, woven polypropylene bulk bag having a capacity of approximately 2205 pounds with top and bottom outlets, for shipment of Class 8 solids.	2
10265	Authorizes the manufacture, marking, and sale of a non-DOT specification container described as a mechanical displacement meter prover for shipment of Class 3 liquids and Division 2.1 gases.	2
10266	Authorizes the use of a non-DOT specification container.	2
10267	Authorizes the manufacture, marking, and sale of a non-DOT specification paper-faced expanded polystyrene board box for use in the shipment of nitric acid.	2
10272	Authorizes the use of insulated and lined DOT Specification MC 331 cargo tank motor vehicles to transport aqueous hypochlorous acid solutions of 50% or less concentration.	2
10273	Authorizes the manufacture, marking, and sale of nonreusable, fiberboard bulk boxes having an	2

NUMBER	PURPOSE	REASON
	inside lining of 0.0065-inch minimum thickness polyethylene film.	
10277	Authorizes the manufacture, marking, and sale of non-DOT specification cylinder conforming in part with DOT Specification 4BA.	2
10278	Authorizes the shipment of certain Division 2.1 gases in a nonrefillable, non-DOT specification inside container conforming with the DOT Specification 2P except for diameter and capacity.	2
10279	Authorizes the manufacture, marking, and sale of non-DOT specification steel water pump system tank with an outside diameter not exceeding 26 inches.	2
10285	Authorizes shipment of residual amounts of ammonia in non-DOT specification packagings.	5
10288	Authorizes the transportation of a DOT Specification 105A300W or 112A340W tank car tank with a safety relief device start-to-discharge pressure at 82.5 percent of the tank test pressure.	2
10291	Authorizes the manufacture, marking, and sale of non-DOT specification IMO Type 5 portable tanks for shipment of certain Division 2.1 & 2.2 gases.	2
10292	Authorizes the manufacture, marking, and sale of a non-DOT specification rotationally molded, linear low density polyethylene portable tank for the shipment of Class 8 liquids, Class 3 liquids or a Division 5.1 material.	2
10295	Authorizes the use of a DOT Specification 17C metal drum with inside non-DOT specification metal containers.	2
10297	Authorizes the rebuilding and sale of DOT Specification 4B, 4BA and 4BW cylinders for transportation of compressed gases, Class 3 liquids, Class 8 materials and other hazardous materials..	2

NUMBER	PURPOSE	REASON
10298	Authorizes the shipment of liquid fuels that are Class 3 liquids in non-DOT specification collapsible, rubber containers up to 500 gallon capacity by cargo aircraft within and only remote Alaska locations.	2
10300	Authorizes the use of non-DOT specification cylinders, used in Foam Products Unit System.	4
10303	Authorizes the carriage of small amounts of liquefied petroleum gas aboard small, float equipped, passenger carrying aircraft.	1
10307	Authorizes the use of DOT Specification 111A100W1, W2, W3 and W5 series tank cars, containing certain corrosive materials, with a safety relief device rated at 135 percent of the tank test pressure.	2
10318	Authorizes the manufacture, marking, and sale of a nonreusable, non-DOT specification blow-molded, polyethylene portable tank enclosed in a steel frame for shipment of Class 8 materials, Class 3 liquids, or a Division 5.1 material.	2
10319	Authorizes the manufacture, marking and sale of a non-DOT specification pressure vessel (water pump system tank) for use in the shipment of compressed air and nitrogen.	2
10320	Authorizes the manufacture, marking, and sale of non-DOT specification steel cylinders comparable to DOT Specification 8AL except the steel shell is made to a DOT Specification 4BW for the shipment of acetylene.	2
10321	Authorizes the shipment of a nonliquefied, Division 2.1 gas in DOT Specification 4BA 240, DOT 4BA 260, DOT 4BW 240 and DOT 4BW 260 steel cylinders; 4E 240 and DOT 4E 260 aluminum cylinders.	2
10323	Authorizes the use of a non-DOT specification full-opening head salvage cylinder of 8-gallon capacity for overpacking damaged or leaking	2

NUMBER	PURPOSE	REASON
	packages of pressurized and nonpressurized hazardous materials.	
10325	Authorizes the shipment of a liquefied Division 2.1 gas and Division 2.2 gases in a non-DOT specification IMO Type 5 portable tanks with bottom outlets.	2
10326	Authorizes the manufacture, marking and sale of a non-DOT specification welded pressure vessel comparable to DOT 3HT cylinder with certain exceptions.	2
10327	Authorizes shipment of a refrigeration system consisting of various accumulators and components, containing helium, which is a Division 2.2 gas.	2
10328	Authorizes alternate safety relief valve settings for DOT specification tank cars used for shipment of certain Class e liquids.	2
10330	Authorizes the manufacture, marking, and sale of a non-DOT specification rotationally molded, teflon PFA inner container enclosed in a steel frame, for shipment of Class 8 materials, Class 3 liquids, or Division 5.1 materials.	2
10334	Authorizes the use of a non-DOT specification container for shipment of Class 3 liquids and Division 2.1 gases.	2
10335	Authorizes the shipment of bromotrifluoromethane in DOT Specification 4BA 400 and 4BW 400 cylinders equipped with fusible pressure relief devices.	2
10336	Authorizes the transportation of propellant explosives, solid in packagings larger than those authorized in 49 CFR 173.93.	2
10340	Authorizes the manufacture, marking and sale of a nonreusable non-DOT specification polyethylene portable tank enclosed in a steel jacket, for the shipment of Class 8 liquids, and Class 3 liquids.	2

NUMBER	PURPOSE	REASON
10344	Authorizes the transportation of depleted lithium batteries from U.S. military bases overseas to the United States for disposal.	2
10345	Authorizes the manufacture, mark and sale of non-DOT specification cylinders containing nonflammable gases to be used as self-contained underwater breathing apparatus.	2

NUMBER	PURPOSE	REASON
10346	Authorizes tank car tanks loaded with chlorine to remain attached to transfer connections when the unloading process is discontinued.	2
10351	Authorizes the use of non-vacuum, urethane-foam insulated DOT Specification MC-331 cargo tanks for the shipment of liquid ethylene.	2
10353	Authorizes the manufacture, marking, and sale of collapsible, disposable polyethylene-lined woven, polypropylene bulk bags having a capacity not greater than 2200 pounds each with top and bottom outlets, for shipment of ammonium nitrate-fuel oil mixtures.	2
10358	Authorizes the shipment of compound cleaning, liquids, Class 8, in 5 - gallon plastic bags overpacked in a non-DOT specification fiberboard box.	2
10359	Authorizes the shipment of bromine trifluoride, classed as a Division 5.1 material, in non-DOT specification, nonrefillable cylinders.	2
10365	Authorizes the use of model 30A or 30B cylinders, containing radioactive material, with 21PT-1A and 21PF-1B overpacks without a maximum gross weight limit.	2
10366	Authorizes the manufacture, marking and sale of a non-DOT specification container described as a mechanical displacement meter prover mounted on a twin axle trailer for transportation of Class 3 liquids or Division 2.1 gases.	2
10370	Authorizes the use of a aluminum non-DOT specification cylinder for gas and oil well sampling gases, certain Class 3 liquids, certain liquefied petroleum gases, certain hydrocarbon gases and certain Division 2.2 gases.	2
10372	Authorizes the use of a non-DOT specification stainless steel, full removable head "salvage" cylinder of 78 gallon capacity for overpacking	2

NUMBER	PURPOSE	REASON
	damaged or leaking packages of pressurized and nonpressurized hazardous materials.	
10374	Authorizes the manufacture, marking, and sale of a non-DOT specification blow molded, polyethylene portable tank enclosed in a steel frame, for the shipment of Class 3 materials, Class 3 liquids, or a Division 5.1 material.	2
10380	Authorizes the manufacture, marking, and sale of non-DOT specification cryogenic portable tanks, for transportation of Division 2.2 gases.	2
10382	Authorizes the shipment of ethyl phosphonothioic dichloride, anhydrous in DOT Specification 105S300W tank car tanks.	2
10389	Authorizes tank car tanks loaded with chlorine to remain attached to transfer connection when the unloading process is discontinued.	2
10392	Authorizes the manufacture, marking, and sale of a non-DOT specification rotationally molded, linear low density polyethylene portable tank, enclosed within a protective metal frame for the shipment of Class 8 liquids, Class 3 liquids or a Division 5.1.	2
10395	Authorizes highway transportation of methane, refrigerated liquid, classed as flammable gas in non-DOT specification cylinders built to 4 L specification.	2
10396	Authorizes the use of a non-DOT specification container described as a mechanical displacement meter prover for the shipment of a Class 3 liquid.	2
10399	Authorizes the shipment of an explosive, rocket ammunition with smoke projectile, reclassified as a Division 1.2 or 1.3 explosive, and packed in accordance with 49 CFR 173.90.	5
10400	Authorizes the shipment of grenades with fuzes installed, in partitioned fiberboard cartons overpacked in wooden boxes and palletized.	2

NUMBER	PURPOSE	REASON
10402	Authorizes the shipment of a non-DOT specification Molecular Sieve Column assemble, containing a nitrogen tetroxide mixture, overpacked in a non-DOT specification plywood box.	5
10407	Authorizes the use of non-DOT specification, stainless steel, radiation detection devices, filled with a Division 2.2, nontoxic gas.	2
10419	Authorizes tank car tanks loaded with chlorine to remain attached to transfer connections when the unloading process is discontinued.	2
10424	Authorizes the shipment of a specific gas mixture in DOT Specification 4BA240 cylinders retested in accordance with the provisions of 49 CFR 173.34(e)(9) and (e)(10).	4
10427	Authorizes the shipment of several types of "Flight-ready" spacecraft each containing one or more hazardous materials in specially designed non-DOT specification transport containers.	5
10428	Authorizes the shipment of propellant transfer carts each containing a hazardous material in specially designed non-DOT specification ground support transport containers.	5
10429	Authorizes the discharge of certain Class 3 and Class 8 liquids from DOT Specification 57 stainless steel portable tanks without removing the tanks from the vehicle on which it is transported.	4
10430	Authorizes the use of a vacuum insulated, non-DOT specification portable tank in a ISO frame for the transportation of certain refrigerated liquids.	2
10433	Authorizes the manufacture, marking and sale of a non-DOT specification welded pressure vessel similar to a DOT Specification 3HT cylinder with certain exceptions for shipment of helium.	2
10436	Authorizes the use of insulated DOT Specification	5

NUMBER	PURPOSE	REASON
	MC-307 cargo tanks for shipment of a certain Division 6.1 material.	
10440	Authorizes the manufacture, marking and sale of a welded austenitic stainless steel non-DOT specification cylinder conforming with DOT-4DS with exceptions for shipment of Division 2.2 gases.	2
10441	Authorizes the transportation by highway of lab pack quantities of cyanides on the same motor vehicle with non-lab packed acidic materials not to exceed 55 gallons per container.	2
10442	Authorizes the shipment of waste materials contaminated with small quantities of explosives in specially authorized packagings for incineration.	2
10453	Authorizes a change in the definition of dispersant and refrigerant gases.	4
10457	Authorizes the use of DOT Specification MC 331 cargo tanks equipped with angle valves, excess flow valves and pressure relief valves not presently authorized in the regulations.	2
10458	Authorizes the use of DOT Specification 111A100W2 tank car tanks loaded with sulfuric acid, a Class 8 material, to remain attached to transfer connections when the unloading process is discontinued.	4
10460	Authorizes the manufacture, marking and sale of DOT approved ANSI 14.1 containers with minor variations.	2
10461	Authorizes the manufacture, marking and sale of vacuum insulated, non-DOT specification portable tank in an ISO frame for the transportation of certain refrigerated liquid.	2
10463	Authorizes the shipment of hypochlorite solution	2

NUMBER	PURPOSE	REASON
10468	<p>in DOT Specification 2E90 1 gallon polyethylene bottles overpacked in a non-DOT specification polyethylene drum with no lid.</p> <p>Authorizes the use of a non-DOT specification rotationally molded, linear low density, high density, or medium density polyethylene portable tank enclosed within a protective wire frame for the shipment of Class 8 liquids, Class 3 liquids or Division 5.1 materials.</p>	5

NUMBER	PURPOSE	REASON
10469	Authorizes the use of DOT Specification 105S300W tank car tanks for the transportation of phosphorus trichloride.	2
10473	Authorizes the manufacture, mark and sale of non-DOT specification polyethylene twin-walled 85 gallon capacity drums to be used as a salvage drum, lab pack container and sole use container for shipment of those hazardous materials authorized in DOT Specification 34 or 35 container.	2
10475	Authorizes the rebuilding and sale of DOT Specification 4B, 4BA and 4BW cylinders for the transportation of propane.	2
10476 2	Authorizes the manufacture, marking and sale of large, non-reusable collapsible polypropylene-lined woven polypropylene bulk bags, having a capacity of up to 2204 pounds each and top and bottom outlets, for shipment of Class 3, Class 8, Division 5.1, Division 1.4, and Division 6.1 materials.	
10480	Authorizes the use of a vacuum insulated, cold mass shielded, non-DOT specification portable tank for transportation of liquefied helium.	2
10481 2	Authorizes the manufacture, marking and sale of vacuum insulated, non-DOT specification portable tank in an ISO frame for the transportation of certain refrigerated liquids.	
10486	Authorizes the transportation of mixtures of Division 2.1 and Division 2.2 gases in DOT Specification MC 330 and MC 331 cargo tanks.	2
10489	Authorizes the transportation of ammunition for cannon with smoke projectile as a Class B explosive .	4
10492	Authorizes tank cars loaded with chlorine to remain attached to transfer connections when the	2

NUMBER	PURPOSE	REASON
	unloading process is discontinued.	
10497	Authorizes the shipment of nitrogen tetroxide in non-DOT specification stainless steel tanks.	5
10501 2	Authorizes the manufacture, marking and sale of large, reusable, pallatized collapsible, lined bulk bags constructed of high strength synthetic fabric having a capacity of approximately 4100 pounds each, equipped with a rigid plastic manhole at the top and a plastic base at the bottom.	
10502	Authorizes the shipment of rocket motors, Division 1.1 explosives (shaped charges) and detonating fuzes in a cargo aircraft.	2
10504	Authorizes the use of a non-DOT specification full removable head salvage cylinder of 33 gallons capacity for overpacking damaged or leaking packages of pressurized and nonpressurized hazardous materials.	2
10507	Authorizes tank cars loaded with chlorine to be remotely monitored and attached to transfer connections during the unloading process.	2
10511	Authorizes the shipment of certain Division 2.2 gases in a non-DOT specification packaging.	2
10513	Authorizes the use of flexible intermediate bulk containers, having a capacity of either 500 or 1000 pounds, overpacked in pallet mounted, fiberboard containers for shipment of a certain solid Division 5.1 material.	2
10514	Authorizes the use of DOT Specification 105A500W tank car tanks loaded with carbon dioxide, refrigerated liquid, to remain attached to transfer connections when the unloading process is discontinued.	2
10517	Authorizes the retesting of DOT Specification 57 portable tanks fabricated of stainless steel at	2

NUMBER	PURPOSE	REASON
	five year intervals.	
10519	Authorizes the use of a non-DOT specification full opening hinged head, steel salvage cylinder with a teflon lining of approximately 101 gallons (382 liters) capacity for overpacking damaged or leaking packages of pressurized and nonpressurized hazardous materials.	2
10529	Authorizes the use of non-DOT specification containers described as hermetically sealed electron tube devices.	2
10535	Authorizes the transportation of zirconium metal, wet with at least 25 percent ethyl alcohol by weight, in non-carbon polyethylene containers overpacked in strong metal cans and wooden boxes.	2
10536	Authorizes the shipment of various kinds of explosive substances and devices with an interim hazard classification to test facilities.	2
10546	Authorizes the use of tank car tanks loaded with chlorine, which is a Division 2.3 gas, to remain standing with unloading connections attached.	2
10551	Authorizes the use of tank car tanks loaded with chlorine, which is a Division 2.3 gas, to remain standing with unloading connections attached.	2
10552	Authorizes the use of tank car tanks loaded with chlorine, which is a Division 2.3 gas, to remain standing with unloading connections attached.	2
10553	Authorizes the use of tank car tanks loaded with chlorine, which is a Division 2.3 gas, to remain standing with the unloading connections attached.	2
10556	Authorizes the transportation of certain hazardous materials to be shipped (non-pressurized) inside	2

NUMBER	PURPOSE	REASON
10562 2	<p>the material hoses, pump chambers (cylinder) and dispensing hoses of Liquid Control's dispensing units.</p> <p>Authorizes the manufacture, marking and sale of large, collapsible polyethylene-lined woven polypropylene bulk bags, having a capacity of approximately 2200 pounds each, a having top and bottom outlets, for shipment of Class 8, Class 3, Division 5.1, and Division 6.1 poison solid materials.</p>	
10563	<p>Authorizes the shipment of certain materials described as flammable liquid, corrosive, n.o.s. in stainless steel DOT Specification 57 portable tanks.</p>	2
10570 2	<p>Authorizes the manufacture, marking and sale of large nonreusable, collapsible polyethylene-lined woven polypropylene bulk bags having a capacity of not over 2205 pounds each, and top and bottom outlets, for shipment of Division 6.1, Class 3, 8 and Division 5.1 solids, and a Division 1.4 materials.</p>	
10573	<p>Authorizes the use of DOT Specification 1005A500W tank car tanks loaded with chlorine and DOT Specification 105A200W tank car tanks loaded with sulfur dioxide to be remotely monitored and attached to transfer connections during the unloading process.</p>	2
10575	<p>Authorizes the use of tank cars loaded with carbon dioxide, refrigerated liquid, to be remotely monitored and attached to transfer connections during the unloading process.</p>	2
10576	<p>Authorizes the use of tank cars loaded with chlorine to be remotely monitored and attached to transfer connections during the unloading process.</p>	2
10588	<p>Authorizes the transportation of uranium hexafluoride in DOT Specification 12B cylinders</p>	3

NUMBER	PURPOSE	REASON
	that have valves that are not brazed in place as normally required by the ANSI N14.1 standard.	
10589	Authorizes the use of an acoustic emission non-destructive testing procedure for evaluating the continuing qualification of tanks that are mounted on or form party of a railroad freight car structure.	2
10590	Authorizes the manufacture, marking and sale of a nonrefillable, non-DOT specification, inside container similar to the DOT Specification 2P with the exception of diameter and capacity for the shipment of Division 2.1 gases.	2
10594	Authorizes the shipment of low level radioactive materials in closed vehicles and bulk containers without detailed analysis of the contents in each closed vehicle or bulk container and with alternative requirements for hazard communication information and packaging.	2
10595	Authorizes the use of tank cars loaded with chlorine to be remotely monitored and attached to transfer connections during the unloading process.	2
10596	Authorizes the use of non-DOT specification trailer mounted containers described as mechanical displacement meter provers for shipment of a Class 3 liquid.	2
10597	Authorizes the shipment of Class 3 liquids and/or Division 2.1 gases in temperature controlled equipment.	2
10598	Authorizes the manufacture, mark and sale of large, collapsible, nonreusable polyethylene-lined, woven polypropylene bulk bags having a capacity of approximately 2,200 pounds each, and top and bottom outlets, for the shipment of Division 4.1, Division 5.1, Division 1.4 and Class 8 solid materials.	2
10599	Authorizes the use of a non-DOT specification container described as a truck mounted mechanical	2

NUMBER	PURPOSE	REASON
	displacement meter prover for shipment of certain Class 3 liquids and Division 2.1 gases.	
10603	Authorizes the manufacture, marking and sale of non-DOT specification cylinders for use in the transportation of compressed gases.	
2		
10610	Authorizes the use of tank cars loaded with chlorine to be remotely monitored and attached to transfer connections during the unloading process.	2
10614	Authorizes the use of vacuum insulated portable tanks for the transportation of liquid oxygen, liquid nitrogen and liquid argon.	4
10618	Authorizes the transportation of a rocket motor in a packaging not authorized and having a weight exceeding that specified in the regulations.	2
10623	Authorizes the shipment of nitrogen, oxygen or argon, refrigerated liquids (cryogenic liquids), in non-DOT specification portable tanks.	2
10631	Authorizes the use of a DOT Specification MC 338 cargo tank for shipment of certain hazardous materials.	2
10637	Authorizes the manufacture, marking and sale of a non-DOT specification fiber reinforced plastic (FRP) hoop wrapped cylinder for transporting Division 2.1 and Division 2.2 gases.	2
10644	Authorizes tank cars, containing hazardous material(s), to remain standing with unloading connections attached when no product is being transferred.	2
10645	Authorizes the manufacture, marking and sale of insulated non-DOT specification cylinder conforming with 49 CFR 178.57 with exception for shipment of certain Division 2.2 gases.	
2		

NUMBER	PURPOSE	REASON
10646	Authorizes the transportation of a Division 2.1 gas in a non-DOT specification cylinder.	2
10647	Authorizes tank cars containing anhydrous ammonia to remain standing with unloading connections attached when no product is being transferred.	2
10648	Authorizes the carriage of Division 1.1,1.2, 1.3 and 1.4 explosives that are not permitted for shipment by air or in quantities greater than those prescribed for shipment by air.	2
10649	Authorizes the use of tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred.	2
10650	Authorizes tank cars, containing Division 2.1 gases, Class 3 liquids, and other regulated materials (ORM-E), to remain standing with unloading connections attached when no product is being transferred.	2
10651 1	To eliminate the periodic retest, reinspection and marking requirements for DOT Specification 4BW cylinders authorized for the transportation of Class 3 liquids.	
10656	Authorizes state radiation control officials to approve, on a case-by-case basis, shipments of metal containing unknown amounts of unidentified radionuclides in transport vehicles without regard to specification packaging, marking, labeling, placarding, and certain shipping paper requirements.	2
10658	Authorizes the transportation of certain Division 1.1, 1.2, 1.3 and 1.4 explosives which are forbidden or exceed quantities authorized for transportation by cargo aircraft only.	1
10660	Authorizes the transportation of packages of hazardous materials that are labeled only for the	2

NUMBER	PURPOSE	REASON
	primary radioactive material hazard class even though the small amount of materials contained in the package also meet the definition of a secondary hazard.	
10666	Authorizes the transportation of jet perforating guns, charged, with devices attached which have been described as detonators by DOT.	2
10668	Authorizes the shipment of gasoline, a Class 3 liquid, in non-DOT specification cargo tanks comparable to DOT Specification MC 306, not to exceed 450 gallons capacity.	2
10672	Authorizes the manufacture, marking and sale of specially-designed composite type packaging for shipment liquid and solid hazardous materials required to bear the POISON, KEEP AWAY FROM FOOD, FLAMMABLE LIQUID, FLAMMABLE SOLID OR CORROSIVE labels.	2
10677	Authorizes the manufacture, marking and sale of a non-DOT specification container conforming to DOT Specification 2P, except for size, testing requirements and marking, for the transportation of a Division 2.1 material.	2
10679	Authorize the manufacture, marking and sale of non-DOT specification rotationally molded, linear medium density polyethylene portable tank enclosed within a protective steel cage for the shipment of Class 8 liquids, Class 3 liquids, or a Division 5.1.	2
10683	Authorizes the use of a non-DOT specification packaging similar to a DOT Specification 51 portable tank, for transportation in commerce of certain pyrophoric liquids and Class 3 liquids.	2
10684	Authorizes the manufacture, marking and sale of non-DOT specification insulated portable tank for the shipment of nitrogen, refrigerated liquid.	2
10687	Authorizes the manufacture, marking and sale of	

NUMBER	PURPOSE	REASON
2	nonreusable, fiberboard bulk boxes made of triple-wall corrugated fiberboard having an inside lining of 0.0065-inch minimum thickness polyethylene film.	
10688	Authorizes the carriage of gasoline in non-DOT specification polyethylene containers overpacked in plywood boxes in small, passenger-carrying aircraft within the State of Alaska to meet the needs of a passenger.	2
10689	Authorizes the use of tank cars, containing chlorine or sulfur dioxide, to remain standing with unloading connections attached when no product is being transferred.	2
10690	Authorizes the use of tank cars, containing chlorine or sulfur dioxide, to remain standing with unloading connections attached when no product is being transferred.	2
10691	Authorizes the use of tank cars, containing chlorine or sulfur dioxide, to remain standing with unloading connections attached when no product is being transferred.	2
10692	Authorizes the manufacture, marking and sale of a non-DOT specification welded pressure vessel for use in the transportation of a Division 2.1 gas.	2
10693	Authorizes the use of tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred.	2

NUMBER	PURPOSE	REASON
10695	Authorizes the transportation by rail and highway of ethylene oxide packaged in aluminum cartridges within a fiberboard box with a (Division 2.1) label instead of both poison gas (Division 2..3) and flammable gas labels.	2
10697	Authorizes the transportation of certain flammable compressed gas mixtures in DOT Specification 3AAX steel cylinders.	5
10698 2	Authorizes the manufacture, marking and sale of non-DOT specification cylinder which complies in part with DOT Specification 4B for the shipment of dichlorodifluoromethane.	
10700	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred.	2
10705	Authorizes the transportation of packages containing acrolein, inhibited, Division 6.1., to be exempted from the segregation requirements, when shipped via highway.	2
10706	Authorizes the shipment of a Class 3 liquid in a non-DOT specification cylindrical steel packaging with a removable end which is bolted on for closure.	5
10709	Authorizes the shipment of certain mixtures of Class 3 and Class 8 liquids in stainless steel DOT Specification 57 portable tanks.	5
10710	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred.	2
10714	Authorizes the use of DOT Specification 3AAX and DOT Specification 3T cylinders forming part of a tube module for shipment of liquefied Division 2.2 gases.	2
10717	Authorizes a modified periodic test schedule for	2

NUMBER	PURPOSE	REASON
	certain DOT Specification 111A60W2 and 111A100W2 tank cars for shipment of sulfuric acid.	
10724	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred.	2
10725 2	Authorizes the manufacture, marking and sale of large, collapsible non-DOT specification non-reusable, flexible bulk bags having a capacity not over 2,200 pounds for shipment of Class 8 solids, Division 5.1 materials, Division 4.1 solids and Division 6.1 solid materials.	
10732	Authorizes the use of a non-DOT specification container described as a mechanical displacement meter prover tank for the shipment of certain Division 2.1 gases.	2
10733 2	Authorizes the manufacture, marking and sale of accumulators, containing a limited quantity of compressed gases, which deviate from the required test parameters.	
10735	Authorizes tank cars, containing chlorine, to remain standing with unloading connection attached when not product is being transferred.	2
10738 2	Authorizes the manufacture, marking and sale of non-DOT specification rotationally molded, crosslinkable high density, polyethylene portable tank with a plastic base, for shipment of Class 8 materials, Class 3 liquids, or a Division 5.1 material.	
10739	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred.	2
10741	Authorizes the use of a non-DOT specification cylinder comparable to a 3AX cylinder for use	2

NUMBER	PURPOSE	REASON
10747	transporting compressed natural gas. Authorizes the transportation of Class 3 liquids in a non-DOT specification cargo tank, described as 1200 gallon volumetric prover tank, mounted on a trailer.	2

NUMBER	PURPOSE	REASON
10751	Authorizes the transportation of certain Division 1.1D explosives together in the same motor vehicle with certain bulk combustible liquids and /or bulk Division 5.1 materials, subject to the packaging, safety control.	2
10753	Authorizes transportation of aluminum phosphide, Division 4.1 material, in private owned pest control vehicles without placards.	2
10755	Authorizes manufacture, marking and sale of specially designed combination packaging for shipment of hazardous materials required to bear the POISON, KEEP AWAY FROM FOOD, FLAMMABLE LIQUID, FLAMMABLE SOLID OR CORROSIVE labels.	2
10756	Authorizes the manufacture, marking and sale of a vacuum insulated, non-DOT specification portable tank in an ISO frame for the transportation of certain refrigerated liquids.	2
10758	Authorizes the transportation of limited quantities of sodium borohydride, UN 1421 in a sealed watertight aluminum pouch.	3
10762	Authorizes the manufacture, marking and sale of non-DOT specification cylinder which meets that requirements of a DOT Specification 39 cylinder with certain exceptions for the transportation of chlorodifluoromethane.	2
10763	Authorizes the transportation in commerce of certain Division 1.1, 1.2, 1.3 and 1.4 explosives which are forbidden or exceed quantities authorized for transportation by cargo aircraft only.	1
10764	Authorizes the use of a non-DOT specification rotationally molded, linear low density polyethylene portable tank for the shipment of Class 8 liquids, Class 3 liquids, or a Division 5.1 material.	2
10765	Authorizes the manufacture, marking and sale of	

NUMBER	PURPOSE	REASON
2	non-DOT specification container described as a mechanical displacement meter prover for shipment of Class 3 liquids and Division 2.1 gases.	
10767	Authorizes tank cars, containing carbon dioxide, refrigerated liquid, to remain standing with unloading connections attached when no product is being transferred.	2
10771	Authorizes the manufacture, mark and sell of non-DOT specification cargo tanks with front head manway mounted on flat-bed truck for use in transporting carbon dioxide, refrigerated liquid.	2
10772 2	Authorizes the manufacture, marking and sale of cargo tank motor vehicles which comply with DOT Specification MC 338 except that each tank has a sump location which does not meet the requirement of 49 CFR 178-338-4(c).	
10773	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred.	2
10775	Authorizes the manufacture, marking and sale of a non-DOT specification rotationally molded, linear low density polyethylene portable tank, enclosed within a protective metal frame for the shipment of Class 7 liquids, Class 3l liquids or a Division 5.1.	2
10776 2	Authorizes the manufacture, marking and sale of non-DOT specification cylinders made in conformance with DOT Specification 3E with exceptions, for shipment of Division 2.1 and Division 2.2 gases.	
10777 2	Authorizes the manufacture, marking and sale of non-DOT specification removable head salvage cylinder of 45 gallon capacity for overpacking damaged or leaking packages of pressurized and	

NUMBER	PURPOSE	REASON
	non-pressurized hazardous materials.	
10784	Authorizes the shipment of oxygen in DOT Specification 3AA2015 cylinders in the passenger compartment of commercial aircraft.	4
10785	Authorizes the manufacture, marking and sale of non-DOT specification containers (radiation detection chamber) in certain non-contacting measurement systems.	
5		
10787	Authorizes the carriage of Division 1.1, 1.2, 1.3 and 1.4 explosives that are not permitted for shipment by air, or are in quantities greater than those prescribed for shipment by air.	1
10788	Authorizes the manufacture, marking and sale of a non-DOT specification nonrefillable, steel inside cylinder, for the transportation of Division 2.2 gases.	2
10789	Authorizes the use of a non-DOT specification full opening head, steel salvage cylinder for overpacking certain damaged or leaking gas cylinders.	2
10790	Authorizes the carriage of certain Division 1.1, 1.2, 1.3 and 1.4 explosives that are not permitted for shipment by air, or are in quantities greater than those prescribed by air.	1
10791	Authorizes the manufacture, marking and sale of a corrugated fiberboard box for use as the outer packaging for lab pack applications in accordance with 49 CFR 173.12(b).	2
10795	Authorizes the loading of tank cars coupled in a series with the bottom discharge outlet caps in place on all cars except the first and last, the setting of the hand brake and the blocking of a wheel in both directions on the first and last cars of a series of coupled tank cars prior to unloading.	2

NUMBER	PURPOSE	REASON
10797 2	Authorizes the manufacture, marking and sale of accumulators which deviate from the required test parameters of 49 CFR 173.306(f).	
10798	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred.	2
10800	Authorizes the transportation of certain Division 1.1, 1.2, 1.3 and 1.4 explosives which are forbidden or exceed quantities authorized for transportation by cargo aircraft only.	1
10801	Authorizes tank cars, containing carbon dioxide, refrigerated liquid, to remain standing with unloading connections attached when no product is being transferred.	2
10802	Authorizes the transportation of carbon monoxide and gas mixtures containing carbon monoxide in DOT 3AL cylinders charged to a pressure of 3,000 psig or less.	2
10803	Authorizes the use of motor vehicles, equipped with specific diesel-operated heating equipment, engaged in the transportation of certain Class 3 liquids or gases.	2
10809 2	Authorizes the manufacture, marking and sale of nonreusable, fiberboard bulk boxes having an inside lining of 0.007-inch minimum thickness polyethylene film for shipment of various Class 8 and Division 6.1 solid materials.	
10810	Authorizes the transport of cyclotrimethylenetrinitramine (RDX), cyclotetramethylenetrinitramine (HMX) and mixtures thereof wet with 10% by mass of water and 5% by mass of alcohol.	2
10814	Authorizes the manufacture, marking and sale of a industrial X-ray instrumentation for the	5

NUMBER	PURPOSE	REASON
	transportation of nonliquefied sulfur hexafluoride.	
10818	Authorizes the use of non-DOT specification roll-off steel shuttles as outer packagings for the transportation of regulated medical waste in dual packagings.	2
10821	Authorizes the use of non-DOT specification steel roll-off containers as outer packagings for the transportation of regulated medical waste in dual packagings.	2
10823 2	Authorizes the manufacture, marking and sale of non-DOT specification fiber reinforced plastic (FRP) full composite (FC) cylinders for the transportation of certain compressed gases.	
10826	Authorizes the use of BFI MWS-150 molded polyethylene containers as outer packagings for the transportation of regulated medical waste in dual packagings.	2
10827	Authorizes the manufacture, marking and sale of a quad-wall fiberboard box with a fitted barrier liner for use as the outer packaging for lab pack applications.	2
10829	Authorizes the transportation of Class 3 liquids in a non-specification packaging described as a trailer mounted mechanical displacement meter prover.	2
10832	Authorizes the transportation for disposal of unapproved waste explosive materials used in passive restraint systems.	1
10833	Authorizes the use of non-DOT specification steel roll-off containers as outer packagings for the transportation of regulated medical waste in dual packagings.	2
10835	Authorizes the transportation of Class 3 liquids	2

NUMBER	PURPOSE	REASON
10837 2	<p>in three non-DOT specification cargo tanks, described as 1100 gallon calibration tanks, mounted on a truck body.</p> <p>Authorizes the manufacture, marking and sale of molded fiberglass modules as outer packagings (roll-on/roll-off modules) for the transportation of regulated medical waste in dual packagings.</p>	2
10838	<p>Authorizes the manufacture, marking and sale of a reusable, polyethylene portable tank enclosed in a metal frame, for the use in the transportation of certain hazardous materials.</p>	2
10839	<p>Authorizes the transportation of certain Division 1.1, 1.2, 1.3 and 1.4 explosives which are forbidden or exceed quantities authorized for transportation by cargo aircraft only.</p>	1

NUMBER	PURPOSE	REASON
10840	Authorizes the manufacture, marking and sale of a non-DOT specification full opening head, steel salvage cylinder for overpacking damaged or leaking sulfur dioxide cylinders.	2
10847	Authorizes the manufacture, marking and sale of composite hooped wrapped aluminum cylinders for use in transporting various gases, Division 2.1 as flammable and Division 2.2	2
10848	Authorizes the manufacture, marking and sale of a combination packaging consisting of a polypropylene inner canister further packed in an outer packaging.	2
10850	Authorizes the transportation of certain cylinders subjected to a complete external visual inspection in lieu of the periodic hydrostatic retest.	2
10857	Authorizes the shipment of certain compressed gas in a non-DOT specification container.	2
10858	Authorizes tank cars, containing certain hazardous materials, to remain standing with unloading connections attached when no product is being transferred, provided that a minimal level of monitoring is maintained.	2
10860	Authorizes the transportation of rockets, with bursting charge, Division 1.1E by cargo aircraft only which is forbidden by the Hazardous Materials Regulations.	1
10864	Authorizes the manufacture, marking and sale of large, collapsible nonreusable polyethylene-lined woven polypropylene bulk bags having a capacity not to exceed 2208 pounds for 6.5 oz. polypropylene material and 2583 pounds for 8 oz. polypropylene material and top and bottom outlets, for shipment o	2
10865	Authorizes the rebuilding, selling, of low pressure, DOT specification 4B, 4BA and 4BW steel	2

NUMBER	PURPOSE	REASON
	cylinders for transporting compressed gases, Class 3 liquids, and Class 8 materials.	
10867	Authorizes the manufacture, mark and sell of non-DOT specification welded titanium cylinder having 35 cubic inches maximum water capacity and 3,200 psig maximum service pressure for use in transporting nitrogen, with 5% trace of helium gas, a Division 2.2 gas.	2
10869	Authorizes the transportation of certain compressed gases in non-DOT specification steel cylinders.	2
10870	Authorizes domestic transportation by rail and highway of ethylene oxide packaged in glass ampules within a fiberboard box with a flammable gas (Division 2.1) label instead of both poison gas (Division 2.3) and flammable gas labels.	4
10874	Authorizes the use of the MedX aluminum exchange cart as the outer packaging for the transportation of regulated medical waste in dual packagings.	2
10878	Authorizes the manufacture, marking and sale of non-DOT specification fiberglass reinforced plastic (FRP) cargo tanks, for transportation of certain Class 8 liquids.	2
10880	Authorizes the use of reusable, flexible Intermediate Bulk Container (IBC) type 12H3 or 13H4 conforming to Subpart N and O of Part 178 with replaced liners having a capacity not over 1000kg (2206 pounds) and top and bottom outlets, for shipment of ammonium nitrate-fuel oil mixture ANFO.	2
10882	Authorizes the manufacture, marking and sale of heating equipment for the transportation of certain Class 3 liquids or Division 2.1 gases.	2
10883	Authorizes the manufacture, marking and sale of	

NUMBER	PURPOSE	REASON
2	high density polyethylene injection molded bins as outer packagings for the transportation of regulated medical waste in dual packagings.	
10885	Authorizes the transportation of certain Class 1.1 explosives which exceed the quantity limitations or are forbidden for transportation by air.	5
10886	Authorizes the use of a specially designed UN1A1W packaging for the shipment of materials poisonous by inhalation and other hazardous materials which fall in Packing Groups I, II, and III.	5
10887	Authorizes the shipment of dinitrogen tetroxide in specially designed DOT Specification 51 portable tanks.	1
10888	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred.	2
10890	Authorizes the transportation of a DOT Specification MC-331 cargo tank with a defective safety relief valve for the transportation of residual amount of chlorine.	4
10892	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred.	2
10896	Authorizes the transportation of magnesium hydride mixtures, Division 4.3, Packing Group III, in non-DOT specification packagings. In addition, the motor vehicles used under the terms of the exemption are not required to be placarded with DANGEROUS WHEN WET.	2
10897	Authorizes the transportation of a water reactive material in special packaging without being labeled or marked with the proper shipping name.	5
10898	Authorizes the transportation of a Division 2.2 material	2

NUMBER	PURPOSE	REASON
	(nitrogen) in diaphragm and bladder type accumulators.	
10899	Authorizes the manufacture, marking and sale of a combination packaging consisting of a glass carboy enclosed in an expanded polystyrene packaging, further packed in a corrugated fiberboard box for shipment of nitric acid.	2
10900	Authorizes the transportation of certain Division 1.1, 1.2, 1.3 and 1.4 explosives which are forbidden or exceed quantities authorized for transportation by cargo aircraft only.	1
10903	Authorizes shipment of certain regulated medical waste contained in plastic bags overpacked in various size polyethylene carts not to exceed 269 gallon capacity.	2
10904	Authorizes the use of a classification test method for the determination of skin corrosivity as an alternative to a procedure specified in the Hazardous Materials Regulations.	1
10905 2	Authorizes the manufacture, marking and sale of non-DOT specification fiber reinforced plastic (FRP) full composite (FC) cylinders for the transportation in commerce of certain compressed gases.	
10907	Authorizes the manufacture, marking and sale of a single UN 1H1 plastic drum for the shipment of phosphorus oxychloride under specified conditions.	2
10911	Authorizes the manufacture, marking and sale of a non-DOT specification shipping container (pallet reefer) containing four DOT Specification 3AL cylinders from which a controlled flow of gas is released during transportation.	2
10913	Authorizes the use of a non-DOT specification rotationally molded, linear low density polyethylene portable tank enclosed within a protective steel cage for the shipment of	2

NUMBER	PURPOSE	REASON
	corrosive liquids, flammable liquids, or an oxidizer.	
10914	Authorizes the manufacture, marking and sale of a non-DOT specification pressure vessel comparable to a DOT-3HT cylinder for the transportation of compressed helium subject to the limitations and special requirements specified.	2
10916	Authorizes a DOT Specification 57 portable tank with a non-metallic discharge valve and secondary closure, for transportation of certain hazardous materials.	2
10917	Authorizes the transportation of cells and batteries containing sodium (liquid or solid) and which may contain sulfur (liquid or solid).	2
10918	Authorizes the manufacture, marking and sale of a reusable, rotationally molded, linear high density polyethylene, portable tank enclosed in a plastic frame for use in the transportation of certain corrosive liquids, flammable liquids or oxidizers.	2
10920	Authorizes the transportation in commerce of certain Division 1.1, 1.2, 1.3 and 1.4 explosives which are forbidden or exceed quantities authorized for transportation by cargo aircraft only.	2
10921	Authorizes the transport of limited quantities of solutions containing ethyl alcohol, in strong, outside packagings for beverages, foods, cosmetics and medicines and their concentrates.	3
10922	Authorizes the use of certain DOT Specification 3A or 3AA specification cylinders in the transportation of certain compressed gases.	2
10923	Authorizes the transportation of reconditioned refrigeration units under the provision of 49 CFR 173.306(e) used to transport new refrigeration units. The refrigeration units may not contain more than 150 pounds of Freon 22.	1

NUMBER	PURPOSE	REASON
10925	Authorizes the transportation of dimethylhydrazine, Class 3 material and nitrogen tetroxide Division 6.1 materials in 55 gallon DOT specification containers aboard cargo only aircraft.	1
10926 1	Authorizes the manufacture, marking and sale of non-DOT specification radiation monitors without a safety relief device for the transportation of argon, compressed.	
10927	Authorizes tank car loading when equipped with an auxiliary bottom outlet valve and the temporary application of valve installed on the interior heater coils.	1
10928	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred.	2
10929	Authorizes tank cars, containing various classes of hazardous materials to remain standing with unloading connection attached when no product is being transferred, provided that a minimal level of monitoring is maintained.	1
10933	Authorizes the transportation of labpack quantities of hazardous materials with other containerized hazardous materials with partial relief from certain segregation requirements.	1
10938	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred.	2
10944	Authorizes the manufacture, marking and sale of a non-DOT specification pressure vessel for transportation of compressed gases, n.o.s., containing bromotrifluoromethane.	2
10949	Authorizes the transportation of lab pack quantities of cyanides on the same motor vehicle with non-lab packed acidic materials not to exceed	1

NUMBER	PURPOSE	REASON
	55 gallons per packaging.	
10950	Authorizes the transportation of anhydrous ammonia in MC 330, 331 and non-DOT specification cargo tanks mounted on specially designed trucks.	2
10951	Authorizes the transportation of a Division 2.3, Hazard Zone C material, in certain DOT Specification 105A600W and 105S600W tank cars equipped with a pressure control device in addition to the required safety relief valve.	1
10954	Authorizes the manufacture, mark and sale of flexible intermediate bulk containers to be used in transporting various classes of hazardous materials.	2
10957	Authorizes the unloading of tank cars, coupled in a series, with the setting of the hand brake and blocking of a wheel in both directions on the first and last cars of a series of coupled tank cars and any other cars as required by the grade of the track.	1
10962	Authorizes the transportation of materials which require the DANGEROUS WHEN WET label in motor vehicles which are not placarded DANGEROUS WHEN WET, subject to the limitation and special requirements.	2
10963	Authorizes the manufacture, marking and sale of a non-DOT specification salvage cylinder for overpacking damaged or leaking cylinders of pressurized and non-pressurized hazardous materials.	2
10964	Authorizes the manufacture, marking and sale of a non-DOT specification pressure vessel for the transportation of compressed gas, n.o.s. containing bromotrifluoromethane.	2
10965	Authorizes the transportation of various Division 5.1 products in ten pound or less plastic bottles overpacked with strong outside containers.	1

NUMBER	PURPOSE	REASON
10966	Authorizes the transportation by helicopter of a Class 3 material, a combustible liquid, and a Class 8 material in non-DOT specification rotationally molded, cross-linked polyethylene portable tanks.	2
10967	Authorizes the continued use for transportation of a limited number of DOT Specification 5P drums for the shipment of ethylene oxide, subject to the conditions and limitations.	2
10968	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred.	2
10969	Authorizes the manufacture, marking and sale non-DOT specification full open head, steel salvage cylinders for overpacking damaged or leaking chlorine cylinders.	2
10970 2	Authorizes the manufacture, marking and sale of non-DOT specification fiber reinforced plastic (FRP) full composite (FC) cylinders for the transportation of certain compressed gases.	
10974	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred.	2
10975	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred.	2
10977	Authorizes the manufacture, marking and sale of a specially designed combination packaging for transportation of limited quantities of hazardous materials which are required to be labeled poison, KEEP AWAY FROM FOOD, flammable liquid flammable solid, corrosive, oxidizer or DANGEROUS WHEN WET label	2
10979	Authorizes the transportation of DOT Specification 57 portable tanks of hydrogen peroxide,	1

NUMBER	PURPOSE	REASON
	concentrations not exceeding 52%, Division 5.1 material, in less that truckload quantities.	
10982	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred.	2
10983	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred.	2
10984	Authorizes the transportation of specially designed UN 1A1 steel drums for the shipment of dichlorosilane.	2
10985	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred, provided that a minimal level of monitoring is maintained.	1
10986	Authorizes ultrasonic retesting of DOT-Specification 3A cylinders for shipment of liquefied and non-liquefied compressed gases, and mixtures of two or more gases classed as Division 2.1, 2.2 and 2.3 material.	1

NUMBER	PURPOSE	REASON
10987	Authorizes the use of a non-DOT full opening head, steel salvage cylinder as an overpack for the transportation of damaged or leaking cylinders containing gases and mixtures of gases.	2
10989	Authorizes the transport of electrolyte acid, or battery fluid alkaline, Class 8, included with storage batteries and filling kits overpacked in sealed steel drums when shipments are made by, for or to the Department of Defense.	1
10990	Authorizes an alternative maintenance program for DOT-Specification 4DA and 4DS hermetically sealed cylinders charged with bromotrifluoromethane, compressed, Division 2.2 used as components on aircraft fire suppression systems.	1
10993	Authorizes the transportation of certain liquid fuels in non-DOT specification portable rubber containers of up to 500 gallon capacity by helicopter within and to only remote areas of the United States.	2
10995	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred.	2
10996	Authorizes the transportation of certain rocket motors and rocket motor reloading kits as Articles, explosive, n.o.s., Division 1.4C when shipped in quantities and packagings authorized by the exemption.	1
11000	Authorizes the transportation of a Division 2.1 material in DOT Specification 112J340W.	5
11003	Authorizes the manufacture, marking and sale of a DOT Specification 4L cylinder to be used for the transportation of methane, refrigerated liquid, Division 2.1.	2
11005	Authorizes the manufacture, marking and sale of non-DOT specification fiber reinforced plastic	2

NUMBER	PURPOSE	REASON
	(FRP) full composite (FC) aluminum cylinders for the transportation of certain compressed gases.	
11011	Authorizes the one-time shipment of a Division 2.2 liquefied compressed gas in a non-DOT specification ASME Code "U" stamped portable tank.	5
11020	Authorizes chlorine filled tank cars to remain attached during unloading without the physical presence of an unloader.	2
11021	Authorizes the transportation of bulk shipments of methane, refrigerated liquid, in DOT Specification 113C120W tank cars.	2
11024	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred.	2
11025	Authorizes the manufacture, mark and sell of a non-DOT specification welded stainless steel cylinder having 200 cubic inches maximum water capacity and 3800 psi maximum service pressure for transporting various Division 2.2 gases.	2
11029	Authorizes shipment of propellant explosives in water, classed as Division 1.3, in DOT MC-307, DOT-407, MC312 or DOT 412 cargo tanks having a minimum design pressure of 25 psig.	1
11031	Authorizes the manufacture, marking and sale of non-DOT specification bulk packagings to be used for the transportation of certain Class 9 resins.	2
11032	Authorizes the manufacture, marking and sale of a non-DOT specification packaging for the transportation of compressed oxygen.	2
11033	Authorizes the transportation of certain compressed gas mixtures (stack gas) in DOT Specification 3AAX cylinders mounted as a tube trailer.	1

NUMBER	PURPOSE	REASON
11037	Authorizes the transportation of certain pesticides containing maneb stabilized against self-heating which, when transported in non-bulk packagings, are not subject to the requirements of 49 CFR Parts 171 to 180.	2
11041	Authorizes the transportation of a Class 9 material (aqueous solution containing not more than 12% ammonium perchlorate, 0.5% nitroguanidine and 50 ppm of RDX in cargo tanks.	5
11043	Authorizes the transportation of materials classed as Division 2.3 on the same transport vehicle with materials classed as Class 3, Class 4, Class 5, & Class 8.	1
11044	Authorizes the transportation of a certain organic phosphate compound (2.2 dichlorovinyl dimethyl phosphate), in DOT Specification 4B240 cylinders with up to 11.35 kg (25 pounds) of product which exceeds the quantity authorized by the regulations.	1
11045	Authorizes chlorine filled tank cars to remain connected during unloading without the physical presence of an unloader.	1
11050	Authorizes the unloading of tank cars containing asphalt cement, classed as Class 9, without the physical presence of an unloader.	1
11054	Authorizes the manufacture, mark and sell of non-DOT specification cylinders conforming to 3A specification for use in shipment of various hazardous materials classed in Class 3, Division 2.1 and 2.3.	2
11055	Authorizes the transportation of specifically identified hazardous materials that meet criteria for Division 6.1, PG I, Hazard Zone A in combination packages and provides relief from certain labeling and segregation requirements.	1
11057	Authorizes the manufacture, marking, and sale of welded non-DOT specification nonrefillable stainless steel cylinders conforming to	2

NUMBER	PURPOSE	REASON
	DOT-Specification 39 for use in transporting nitrogen, compressed, classed as Division 2.2.	
11058	Authorizes the transportation of dilute nitric acid in combination packagings consisting of plastic bottles packed in plastic bags, further packed with vermiculite in a UN 4G corrugated fiberboard box.	2
11059	Authorizes the transportation of certain DOT 107A tank car tanks that are retested by means of an acoustic emission method in lieu of the hydrostatic retest required in 49 CFR 173.31(d)(2). The authorized tanks are used exclusively for the transportation of compressed helium, Division 2.2 material.	1
11060 1	Authorizes the manufacture, marking and sale of cargo tank motor vehicles meeting DOT Specification 406, except for the use of aluminum alloys 6005A-T6, 5083 and 6061 as materials of construction, for the transportation of certain Class 3 liquids.	
11063 5	Authorizes the offering, acceptance, and transportation of hazardous materials by aircraft and by motor vehicle and rail freight incident to transportation by aircraft, when the hazardous materials are certified on a shipping paper by a specific shipper's certification.	
11070	Authorizes the shipment of anhydrous ammonia, classed as Division 2.2, in non-DOT specification cylinders described as part of a closed loop thermal control system for space program.	2
11072	Authorizes the transportation of explosive materials containing white phosphorus of Division 1, Compatibility Group H stored in shipborne steel barges instead of stored in steel portable magazines or freight containers.	4

NUMBER	PURPOSE	REASON
11073	Authorizes the transportation of chlorosulfonic acid in DOT Class 112S tank cars constructed of ASTM 204-70, Type 304L stainless steel, and equipped with full head shields.	5
11074	Authorizes tank cars, containing dicyclopentadiene, to remain standing with unloading connections attached when no product is being transferred, provided that a minimal level of monitoring is maintained.	1

NUMBER	PURPOSE	REASON
11075	Authorizes relief from certain shipping paper, marking, placarding, and other requirements involving full trains of closed gondola cars containing soils and debris having low concentrations of naturally occurring radioactive material.	1
11077	Authorizes the transportation of Class 6.1 and Class 8 materials, in a limited number of UN1A1 and DOT 42B drums which do not meet all requirements of 49 CFR 173.226 and 173.227.	3
11078	Authorizes the transport of batteries, wet, filled with alkali, electric storage, classed as Class 8, in specially designed packaging meeting UN 1H2 Packing Group III requirements.	2
11080	Authorizes the use of a modified Canadian Explosive Transportation compartment container instead of the IME compartment container, for transportation of certain explosives in the same motor vehicle.	2
11082	To authorize an alternative mechanical type test method to determine corrosivity and specific packaging group.	1
11086	Authorizes the use of reusable, collapsible woven polypropylene bulk bags with replaceable liners having a capacity not over 1000 kg (2206 pounds) and top and bottom outlets, for transportation of p-dichlorobenzene.	2
11088	Authorizes the transportation of certain Division 6.1 and Division 1.4G materials in specially designed packaging without requiring poison labels, when marked with the word "Irritant", and packaged in packaging meeting Packing Group I performance standards.	2
11090	Authorizes the manufacture, marking and sale of a portable reopening device which incorporated a DOT Specification 3AA cylinder containing ethylene, Division 2.1 .	2

NUMBER

PURPOSE

REASON

NUMBER	PURPOSE	REASON
11093	Authorizes those Canadian based employees of CP Rail, who are engaged in infrequent and limited transportation of hazardous materials into the United States, to be trained and receive recurrent training every three years in accordance with Part 9 of the Transportation of Dangerous Goods Regulations.	1
11099	Authorizes acoustic emission retesting of DOT-Specification 3A and 3AA compressed gas cylinders (trailer tubes).	1
11103	Authorizes the transportation of a GOES Satellite assembly containing non-DOT specification spherical containers pressurized with certain Division 2.2 materials.	2
11105	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when not product is being transferred.	1
11107	Authorizes the transportation of certain Division 1.4 explosive devices which have not been examined and approved to be shipped as Division 1.1 devices under certain conditions.	1
11109	Authorizes the transportation of certain Division 1.5 explosive substances in freight containers 7.4 m (24 feet) in length in amounts up to the rated weight capacities of the containers which exceed the weight limits authorized by 49 CFR 176.170(b).	1
11110	Authorizes the transportation of certain hazardous materials in an inaccessible location aboard an aircraft in quantities exceeding those authorized by 175.75(a)(2).	1
11111	Authorizes the transport of hydrogen bromide, anhydrous, classed as Division 2.3, Hazard Zone C material shipped in MC-330 tank with a minimum design pressure of 375 psig.	1

NUMBER	PURPOSE	REASON
11115	To authorize a one-time shipment of a Nordion International Gammacell 220 High Dose Rate Irradiator in a foreign approved Type B(U) package, classed as radioactive material, special form, n.o.s., Cobalt-60, Class 7 consisting of a cylindrical steel-encased lead radiation shield with thick plywood overpack.	3
11117	Authorizes tank cars, containing various hazardous materials, to remain standing with unloading connection attached when no product is being transferred, provided that a minimal level of monitoring, is maintained.	1
11119	Authorizes the transportation of certain organic peroxides, as limited quantities/commodities when the inside containers do not exceed 125 ml for liquids and 500 g for solids.	5
11121	Authorizes the transportation of certain hazardous materials on board cargo vessels operated under the U. S. Marine Corps Maritime Prepositioning Force (MPF) program and Military Sealift Command charter utilizing alternative stowage and segregation provision to those specified in 49 CFR Part 176.	4
11125	Authorizes the transportation of a Class 8 material meeting the definition of a poison inhalation material, in certain DOT Specification 105S300W tank cars with a safety relief device rated at 2 percent of the tank test pressure.	5
11131	Authorizes transport of LPG propane gas cylinders on passenger ferries.	1
11132	Authorizes the transport of Division 4.1, Flammable solid, in a specially designed composite type packaging in quantities not to exceed 55 pounds.	2
11135	Authorizes the one-time shipment of a DOT Specification 111A100W1 rail car, containing methyl alcohol residue, Class 3.	4

NUMBER

PURPOSE

REASON

NUMBER	PURPOSE	REASON
11136	Authorizes the transportation of Fireworks, Division 1.3G, UN0335 by cargo aircraft only, which is otherwise forbidden by the regulations.	1
11139	Authorizes the transportation in Alaska aboard cargo aircraft, of Explosives, blasting, type E, Division 1.5D which are described in 49 CFR Section 175.320 as Blasting agent, n.o.s.	5
11141 2	Authorizes the manufacture, marking and sale of non-DOT specification fiberglass containers as an outer packagings for the transportation of regulated medical waste in dual packagings.	
11143	Authorizes the transportation in commerce of certain Class 3 materials in DOT Specification 111A100W1 tank cars equipped with 1/2" thick full head shields and restencled to DOT 111S100W3.	1
11147	Authorizes the transportation of aircraft safety equipment which utilizes non-DOT specification cylinders containing certain compressed gases, Division 2.2.	5
11150	Authorizes the transportation of liquefied petroleum gas in DOT specification cylinders, secured to transport vehicles on passenger ferry vessels	5
11152	Authorizes the transportation of certain Division 1.4G explosives (Snappers and Pull-string trick noise makers) as not subject to 49 CFR Parts 171-180.	5
11156	Authorizes the transportation of Division 1.5D ammonium nitrate-fuel oil mixture and Division 5.1 ammonium nitrate in non-DOT specification multi-wall plastic-lined paper bags.	2
11159	Authorizes the manufacture, marking and sale of a reusable, polyethylene portable tank enclosed in a metal-frame for use in the transportation of Class 3 and 8 or a Division 5.1 material.	2
11162	Authorizes the shipment of a Class 8 material	5

NUMBER	PURPOSE	REASON
	meeting the definition of a poison inhalation material, in certain DOT Specification 111A60W7 tank cars.	
11163	Authorizes the transport of hydrogen, compressed, Division 2.1, otherwise forbidden on passenger aircraft, portable monitoring system.	1
11167	Authorizes manufacture, marking and sale a non-DOT specification 250 gallon capacity packaging system consisting of an inner and outer cylindrical metal container meeting group I packaging criteria for shipment of all packing group I materials, solids and liquids.	2
11168	Authorizes the transportation of limited quantities of 1-methyl-3-nitro-1-nitrosoguanidine (MNNG) and 1-ethyl-3-nitro-1-nitrosoguanidine (ENNG) in prescribed packaging as a Division 4.1 material.	1
11169	Authorizes the transportation of certain liquids, classed as Division 6.1 and Class 8 which are poisonous by inhalation, packaged in a UN6PA1 composite packaging in an outer wooden box.	1
11171	Authorizes the use of reusable, flexible Intermediate Bulk Containers (IBC) type 13H3 or 13H4 conforming to Subpart N and O of Part 178 with replaceable liners having a capacity not over 1000 kg (2206 pounds) and top and bottom outlets, for shipment of polystyrene beads.	1
11172	Authorizes the transportation of non-DOT specification (spherically shaped) cylinders, comparable to DOT specification 3A, used in a deep submergence rescue system designed to remove crew members trapped in a disabled submarine, to store air, nitrogen, and oxygen in non-liquefied form.	2
11173	Authorizes the transportation of certain hazardous materials in stainless steel cylinders conforming in part with the DOT-4BW specification.	4

NUMBER	PURPOSE	REASON
11175	Authorizes the transportation of a Class 8 material, meeting the definition of a material poisonous by inhalation, in certain DOT Specification 111A60W7 tank cars.	5

NUMBER	PURPOSE	REASON
11176	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred,	1
11178	Authorizes the transportation of bromine, Class 8, Hazard Zone A in a non-DOT specification portable tank constructed of 1/4 inch thick mild steel with 1/4 inch lead lining.	2
11179	Authorizes the transportation of empty, uncleaned non-DOT specification reusable plastic drums equipped with venting device, comparable to UN 1H1, containing sulfuric acid, Class 8.	2
11180	Authorizes the transportation of metal tubing which contain hazardous materials assigned to Division 4.3, Packaging Group III, or Division 6.1, Packaging Group III, respectively, and exempts them from the packaging, marking, labeling, and placarding requirements of the HMR.	1
11184	Authorizes the transportation of certain Class 3 materials in DOT Specification 105J300W tank cars with a safety relief device rated at 25 percent of the tank test pressure.	1
11185	Authorizes transportation of regulated medical waste in non-DOT specification bulk packaging. The exemption authorizes the use of Meese Model 72P poly-trux carts as re-usable outer packagings for the highway transportation of regulated medical waste in triple packaging type containers.	1
11186	Authorizes the manufacture, mark and sell of a cryogenic portable tank of SA-240 316L construction, comparable to MC-338, equipped with safety relief valve with 250 psig for use in transporting hazardous materials classed in Division 2.1 and 2.2.	2
11189	Authorizes the transportation of certain air bag inflators and modules and seat-belt pretensioners and modules classed as Class 9.	1

NUMBER	PURPOSE	REASON
11190	Authorizes the transportation of 1G fiber drums as outer packaging for use in transporting various classes of explosives.	1
11191	Authorizes the transportation of various hazardous materials in quantities greater than those authorized by cargo aircraft.	1
11192	Authorizes the manufacture, mark and sell of non-DOT Specification collapsible, nonreusable, flexible bulk bags for use in transporting various classes of solid hazardous material.	2
11196	Authorizes the transportation of various classes of hazardous material in steel portable tanks similar to Specification 51 equipped with fittings at the end or on top in one location.	2
11197	Authorizes restricted quantities of hazardous materials that are authorized for exceptions in 172.101 Column 8a to be transported without shipping papers and markings.	1
11199	Authorizes the transportation of very small quantities of a Division 4.3 material, sodium metal dispersions - UN1391, in specially designed packagings to be shipped under the provision of 173.4.	2
11200	Authorizes the transportation in commerce of methylhydrazine in DOT Specification 110A500W multi-unit tank car tanks which are not fitted with a pressure relief device.	1
11201	Authorizes the transportation in commerce of a DOT Specification 105A500X tank car, containing a Division 2.3 material, meeting all DOT requirements except that the tank car has a defective safety relief valve which has been equipped with a chlorine "C" kit.	4
11202	Authorizes the intra-plant transportation cross public street, of various classes of hazardous materials in quantities not to exceed 55 gallons to be transported as non-regulated.	1

NUMBER	PURPOSE	REASON
11203	Authorizes the one-time shipment of "flight-ready" spacecraft components, each containing one or more of certain hazardous materials in specially designed non-DOT specification transport containers.	3
11204 1	Authorizes tank cars to remain connected during unloading of hydrochloric acid, Class 8.	
11205	Authorizes the shipment of 38 DOT Specification 105A500W tank cars, containing a Division 2.3 material, meeting all DOT requirements except that the tank cars are overloaded.	3
11206	Authorizes the transportation of detonating cord, Class 1, in plastic bags as alternative inner packaging overpacked as specified in CFR.	2
11207	Authorizes the transportation of certain Class 3 liquids in packaging with a capacity not greater than 5 gallons on service vehicles.	1
11209	Authorizes the transportation of liquefied petroleum gas (LPG) in non-DOT specification cargo tank motor vehicles exclusively for agricultural purposes when operated by a private carrier.	2
11210	Authorizes the manufacture, mark and sell of a specially designed packaging incorporating an inner receptacle, which is thinner than required, for shipment of approximately 16.11 grams of a Division 5.1 material as essentially non regulated.	2
11211 2	Authorizes the manufacture, marking and sale of non-DOT specification portable tanks comparable to DOT Specification 51 except for the location of the openings to be used for the transportation of certain compressed gases.	
11212	Authorizes chlorine filled tank cars to remain connected during unloading without the physical presence of an unloader.	1

NUMBER	PURPOSE	REASON
11214	Authorizes the transportation of a DOT Specification 105A500W tank car, containing a Division 2.3 material, meeting all DOT requirement except that the tank car has a defective safety relief valve which is equipped with a chlorine "C" kit.	4

NUMBER	PURPOSE	REASON
11215	Authorizes the transportation in commerce of certain hazardous materials, contained in a pegasus XL three stage winged solid fuel rocket in captive carry launch (CCL) configuration secured beneath a McDonnell Douglas L-1011 (L-1011) aircraft.	1
11216	Authorizes the transportation in commerce of a DOT Specification 105A500W tank car, containing a Division 2.3 material, meeting all DOT requirements except that the tank car has two defective liquid education valves and a chlorine "C" kit attached.	4
11217	Authorizes the one-time transportation, in commerce, of methylhydrazine, a Division 6.1 material, contained in four UN1A1 drums which do not meet all requirements of 49 CFR 173.26 subject to the conditions and limitations specified.	3
11220	Authorizes the refilling and reuse of certain packagings, which have not been subjected to the leakproofness test in accordance with 49 CFR 173.28(b)(2).	1
11221	Authorizes the bulk transportation of Propane, Division 2.1, in DOT-51 Specification portable fuel tanks in quantities greater than those presently authorized by cargo air.	1
11223	Authorizes the transportation of a DOT Specification 105A500W tank car, containing a Division 2.3 material, meeting all DOT requirements except that the tank car has a defective liquid education valve which is equipped with a chlorine "C" kit.	4
11224	Authorizes the transportation of a DOT Specification 105S400W tank car, containing a Division 2.3 material, meeting all DOT requirements except that the tank car is not equipped on the "A" end with a coupler vertical restraint system and has a damaged head shield and tank head.	4

NUMBER

PURPOSE

REASON

NUMBER	PURPOSE	REASON
11225	Authorizes the transportation in commerce of a DOT Specification 111A100W1 tank car, containing a residual amount of a Class 3 material, meeting all DOT requirements except that the tank car has defective interior heater coils.	4
11226	Authorizes rail cars containing ethylene oxide, Division 2.3 to remain connected during unloading without the physical presence of an unloader.	1
11227	Authorizes the transportation of certain cartridges, power devices (UN 0276) 1.4C in specially designed vehicles and offshore tool pallets.	1
11228 2	Authorizes transportation of a specially designed packaging configuration containing sulfur hexafluoride, Division 2.2.	
11230	Authorizes the transportation of certain Division 1.1B and 1.4B non-electric detonator assemblies without packagings in the same motor vehicle with Division 1.1D, 1.5D explosives and Division 5.1 oxidizers when those detonator assemblies are placed within the partitioned IME container or compartment	1
11231	Authorizes the one-time transportation in commerce of a DOT Specification 105A600W tank car, containing a Division 2.3 material, poisonous by inhalation, meeting all DOT requirements except the internal product pressure is greater than 90 psig.	3
11233	Authorizes the transportation of unloaded combat vehicles containing certain Class 1 materials.	4
11234	Authorizes the transportation in commerce of methylhydrazine in DOT Specification 110A500W multi-tank car tanks which are not fitted with a pressure relief device.	5
11235	Authorizes the transportation in commerce of a DOT Specification 111A100W1 tank car, containing a Class 3 material, meeting all DOT requirements	4

NUMBER	PURPOSE	REASON
	except that the tank car has a 1/4" fracture extending approximately 5 feet across the bottom 1/3 of the "A" end tank head.	
11239	Authorizes the transportation of certain liquefied flammable and non-flammable refrigerant gases, Division 2.1 and 2.2, in non-DOT specification steel portable tanks equipped openings in the shell which are not grouped together.	2
11240	Authorizes a one-time shipment of out-of-test DOT-specification 111A100W1 rail car, containing corrosive liquid, n.o.s., Class 8.	4
11241	Authorizes the transportation of certain class 3 materials, in greater than 263,000 pounds but not greater than 270,000 pounds, in DOT Specification 105J300W tank cars authorized under DOT-E 11184.	2
11242	Authorizes the interfacility transportation of Division 1 explosives packaged in strong wooden boxes and shipped as non-regulated in private owned enclosed vehicles.	1
11244	Authorizes manufacture, marking and sale of non-DOT specification titanium alloy cylinders for transportation of air, refrigerated liquid.	2
11245	Authorizes the transportation of a DOT Specification 111A100W1 tank car, containing a residue of a class 8 material, which does not fully comply with all DOT requirements.	4
11246	Authorizes the transportation of a DOT Specification 111A100W1 tank car, containing a class 8 material, meeting all DOT requirements except that the tank car is not equipped with a coupler vertical restraint system on the "A" end.	4
11247	Authorizes the transportation in commerce of a DOT Specification 111A100W1 tank car, containing a class 8 material, meeting all DOT requirements except that the tank car has defective interior heater coils.	4

NUMBER	PURPOSE	REASON
11248	Authorizes the manufacture, mark and sale of specially designed combination type packaging for transporting certain hazardous materials without required labeling and placarding in limited quantities.	2
11251	Authorizes the transportation of Division 5.2 organic peroxide solid or liquid material in 4H2 combination packaging plastic boxes.	1
11252	Authorizes the transportation of certain hazardous materials, in certain non-DOT specification metal aerosol containers.	2
11253	Authorizes continued use of certain DOT Specification cargo tanks which are not insulated as required for shipment of Sulfur Dioxide, liquefied, Division 2.3.	1
11254	Authorizes the transportation of certain jet perforating guns, charged, secured on specially designed offshore down-hole tool pallets, with total explosive contents not to exceed 200 pounds per pallet which exceeds the 20 pound limitation of the regulations.	1
11255	Authorizes manufacture, marking and sale of various gas pressurized shock absorbers, struts and cartridges to be relieved from required test peranators and offered as consumer commodity, ORM-D when contained in a specific packaging configuration.	1
11256	Authorizes tank cars, containing chloropicrin and methyl bromide, to remain standing with unloading connections attached when no product is being transferred, provided that a minimal level of monitoring is maintained.	1
11257	Authorizes the manufacture, marking and sale of non-DOT specification salvage cylinders for overpacking damaged or leaking packages of pressurized and non-pressurized hazardous	1

NUMBER	PURPOSE	REASON
11258	materials for transportation. Authorizes the shipment of a DOT Specification 105A500W tank car, containing a division 2.3 material, meeting all DOT requirements except that the tank car has a defective vapor line valve and chlorine "C" kit attached.	4

NUMBER	PURPOSE	REASON
11260	Authorizes the transportation of certain low pressure airbag switches containing limited quantities of argon, compressed.	1
11262	Authorizes the manufacture, marking and sale of a non-DOT specification cylinder comparable to DOT Specification 4L to be used for the transportation of oxygen.	1
11263	Authorizes the transportation of solid coal tar pitch compounds, Class 9, in open-top and closed-top sift-proof metal cans in amounts that exceeds reportable quantities.	1
11264	Authorizes one-time transport of a Gammacell 220 high dose rate research irradiator containing not more than 250 TBq (6800 Ci) of Cobalt-60 or solid metal contained in special form capsules from Princeton, NJ to University Park, PA	1
11265	Authorizes the shipment of ethylene oxide contained in aluminum canisters overpacked in fiberboard boxes to carry a Division 2.1 label instead of a Division 2.3 label.	1
11266	Authorizes the transportation of certain radioactive materials in a 20-WC overpack that has an alternative inner packaging.	1
11267	Authorizes the transportation of a Topaz II unit which contains Division 4.3 and 4.1 solid substances together in a specially designed metal container.	1
11269	Authorizes the transportation in commerce of a DOT Specification 111A100W1 tank car, containing a residual amount of a Class 3 material, meeting all DOT requirements except that the tank car has defective interior heater coils.	4
11270	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred.	1

NUMBER

PURPOSE

REASON

NUMBER	PURPOSE	REASON
11271	Authorizes the transportation of germanium tetrachloride in packagings consisting of an inner glass bottle with a maximum capacity of 10 liters, cushioned within a steel drum, which is further cushioned and overpacked in a second steel drum.	2
11272	Authorizes the transportation in commerce of a DOT Specification 111A100W1 tank car, containing a residue of a Class 3 material, which does not fully comply with all DOT requirements.	4
11273	Authorizes the transportation of certain Division 1.1, 1.2, 1.3 and 1.4 explosives which are forbidden or exceed quantities authorized for transportation by cargo aircraft only.	1
11274	Authorizes the transportation of personally-owned fire extinguisher bottle in private owned vehicles shipped under military or civilian permanent change of station orders aboard cargo vessel.	1
11275 1	Authorizes the manufacture, marking and sale of three designs of non-DOT specification portable tanks, mounted in ISO frames, to be used for the transportation of certain Division 2.1. and 2.2 gases.	
11277	Authorizes the manufacture, marking and sell of large, non-reusable, collapsible, woven polypropylene bulk bags (coated w/ polyethylene film), incorporating four top lifting straps of woven polyester or polypropylene webbing with a minimum breaking strength of 6000 lbs.	2
11278	Authorizes the transportation of regulated medical waste in the non-DOT specification dual packaging.	1
11279	Authorizes the one-time transportation in commerce of six (6) DOT Specification 4AA480 cylinders containing 150 pounds of anhydrous ammonia, liquefied, Division 2.2, which exceeds the quantity limitations authorized for shipment by cargo aircraft only.	5
11280	Authorizes the transportation of class DOT 111A	5

NUMBER	PURPOSE	REASON
	tank cars with a shell thickness below the regulatory minimum for shipment of certain hazardous materials.	
11281	Authorizes the transportation of Class 8 and Division 6.1, PIH material in uninsulated MC 312, 330, 331 and DOT 412 cargo tanks and DOT 51 portable tanks of stainless steel construction.	1
11282	Authorizes the transportation of compressed air in non-DOT specification cylinders.	2
11283	Authorizes the transportation of flameless heating/thawing devices containing not more than 24 grams of water reactive hazardous materials in each device as a Consumer Commodity, ORM-D.	1
11285	Authorizes the transportation of solutions of a organic peroxide type F in UN31A metal Intermediate Bulk Containers, IBCS.	2
11286	Authorizes the transportation of small quantities of hazardous materials under the exceptions provided 49 CFR 173.4 when packaged according to the limitation and special requirements.	1
11287	To provide for alternative testing criteria for gas spring devices containing small quantities of compressed, nonflammable nitrogen gas pressurized from 250 psi to 2175 psi at 70 degree F.	1
11288	Authorizes the manufacture, marking and sale of non-DOT specification non-refillable metal aerosol container filled with propellant gas and an inner commodity pouch that is empty or contains a non-hazardous material.	2
11289	Authorizes the manufacture, marking and sale of DOT Specification 39 cylinders which deviate from the visual inspection requirements.	1
11290	Authorizes the transportation of a DOT	4

NUMBER

PURPOSE

REASON

Specification 105A500W tank car, containing a Division 2.3 material, meeting all DOT requirements except that the tank car has a defective safety relief valve which has been equipped with a chlorine "C" kit attached.

NUMBER	PURPOSE	REASON
11291	Authorizes the transportation of DOT Specification 111A100W1 tank cars, containing sulfur, a class 9 material, which does not fully comply with all DOT requirements.	4
11292	Authorizes the one-time transportation in commerce of three (3) DOT Specification IM 101 portable tanks, each containing a residual amount of chloropivaloyl chloride, which do not comply with special packaging provisions required for the shipment of a Division 6.1, PIH.	3
11293	Authorizes the shipment of a DOT Specification 106A500X multi-unit tank car tank (ton tank), containing a division 2.3 material, meeting all DOT requirements except that the ton tank has a defective unloading valve and a Chlorine Institute "B" kit attached.	4
11294	Authorizes the transportation of certain lab pack quantities of hazardous materials with other materials in lab packs, which partial relief from certain segregation requirements.	1
11295	Authorizes the transportation in commerce of a DOT Specification 111A100W1 tank car, containing a residue of a Class 8 material, which does not fully comply with all DOT requirements.	5
11296	Authorizes the transportation in commerce of certain waste aerosol cans containing flammable gas propellants, including isobutane and propane, overpacked in removable head DOT Specification 17H for UN1A2 steel drum, or disposal.	5
11297	Authorizes the transportation of Reebok "instapump" inflators equipped with CO2 cartridges, classed in Division 2.2, which are presently forbidden either in the passenger cabin of the aircraft, or the cargo compartment.	1
11298	Authorizes tank cars, containing certain hazardous materials, to remain standing with unloading connections attached when no product is being	1

NUMBER	PURPOSE	REASON
	transferred, provided that a minimal level of monitoring is maintained.	
11299 2	Authorizes the manufacture, marking and sale of non-DOT specification insulated cylinders for the transportation of refrigerated liquids.	
11303	Authorizes the transportation in commerce of a DOT Specification 112T340 tank car, containing a Division 2.1 material, meeting all DOT requirements except that the tank car is not equipped with a complete thermal insulation system due to accident.	1
11304	Authorizes the transportation of gasoline in UN standard packagings with a capacity not greater than 5 gallons which have not been leak tested prior to reuse in accordance with 49 CFR 173.28(b)(2).	1
11305	Authorizes the one-time transportation in commerce of a freight container loaded with 67 DOT Specification 1A1 steel drums which are improperly marked ORM-A, NA2783 instead of the required marking of organophosphorus pesticides, liquid, toxic, n.o.s., UN3018.	3
11306	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred, provided that a minimal level of monitoring is maintained.	1
11308	Authorizes the transportation in commerce of a DOT Specification 111A100W1 tank car, containing a residual amount of a Class 3 material, meeting all DOT requirements except that the tank car has defective interior heater coils.	3
11309	Authorizes the shipment of an AAR Specification 211A100W1 tank car, containing a Class 3 material, having a non-reclosing safety relief device.	4

NUMBER	PURPOSE	REASON
11310	Authorizes the transportation of a DOT Specification 111A100W1 tank car, containing a residual amount of a Class 3 material, meeting all DOT requirements except that the tank car has a plugged hole in the tank car tank.	4
11313 2	Authorizes the manufacture, marking and sale of non-DOT specification IMO Type 5 portable tanks to be used for the transportation of Division 2.1 and Division 2.2 materials.	
11314	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred, provided that a minimal level of monitoring is maintained.	1
11316	Authorizes the transportation of certain cartridges, power device classed as Division 1.4S and airbag inflators or airbag modules classed as Division 4.1 or Class 9 in prescribed packaging.	1
11317	Authorizes the one-time transportation in commerce of certain non-DOT specification metal drums containing Class 8 materials.	5
11318	Authorizes the continued transportation of certain uninsulated DOT Specification 51 portable tanks that are currently authorized for titanium tetrachloride.	1
11319	Authorizes the transportation of dimethylaminoethyl acrylate in certain DOT Specification IM 101 portable tanks.	1
11320	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred, provided that a minimal level of monitoring is maintained.	1
11321	Authorizes the transportation of uninsulated DOT specification cargo tanks and portable tanks	1

NUMBER

PURPOSE

REASON

containing titanium tetrachloride which is
poisonous by inhalation.

11323

2

Authorizes the manufacture, marking and sale of
non-DOT specification cylinders for the
transportation of hazardous materials authorized
in DOT Specification 39 cylinders.

NUMBER	PURPOSE	REASON
11324	Authorizes the rebuilding and selling of DOT Specification 4B, 4BA, 4BW and 4E cylinders for transportation of certain hazardous materials.	1
11326 2	Authorizes the manufacture, marking and sale of non-DOT specification, FRP-1 type, cylinders to be used for the transportation of certain Division 2.1 & 2.2 gases.	
11327	Authorizes the transportation of regulated medical waste in non-DOT specification dual packaging.	1
11328	Authorizes the transportation of an alternative stacking arrangement for cylindrical shaped bags of Explosive, Blasting Type E,1.5D, UN 0332, packed in 5H3 Bags which otherwise is not authorized by the regulations.	1
11329	Authorizes the transportation of an aluminum phosphide based fumigant/insecticide. The aluminum phosphide pesticide must be shipped in a limited number of specially designed containers transported by private motor vehicle.	1
11331 2	Authorizes the manufacture, marking and sale of non-DOT specification portable tanks comparable to DOT Specification 51, except for the location of the openings to be used for the transportation of certain Division 2.1 and 2.2 gases.	
11333	Authorizes the one-time transportation of three (3) DOT Specification 5C drums containing a Division 6.1 material.	3
11334	Authorizes the one-time transportation of a Division 1.1D explosive by cargo aircraft only, which is forbidden by the H MR.	5
11335	Authorizes the use of nondestructive testing techniques, in lieu of a hydrostatic test, to qualify repairs of DOT Specification tank car tanks.	1
11336	Authorizes the transportation of a DOT	4

NUMBER	PURPOSE	REASON
	Specification 111A100W3 tank car, containing a residual amount of a Class 8 material, meeting all DOT requirements except that the tank car has defective bottom outlet valve.	
11337	Authorizes the transportation of vanadium pentoxide in non-DOT specification cylindrically shaped non-specification portable tank.	2
11340	Authorizes tank cars, containing fuel oil, to remain standing with unloading connections attached when no products is being transferred, provided that a minimal level of monitoring is maintained.	1
11342	Authorizes the transportation of an aluminum phosphide based fumigant/insecticide. The aluminum phosphide mixture, must be shipped in a limited number of specially designed containers transported by private motor vehicle.	1
11343	Authorizes the transportation of a DOT Specification 111A100W1 tank car, containing a residual amount of a Class 3 material, meeting all Dot requirements except that the tank car has defective interior heater coils.	4
11344	Authorizes tank cars, containing acetic acid, glacial, to remain standing with unloading connections attached when no product is being transferred, provided that a minimal level of monitoring is maintained.	1
11345	Authorizes the manufacture, marking and sale of non-DOT specification, fiber reinforced plastic (FRP) full composite (FC) cylinder to be used for the transportation of certain Division 2.1 and Division 2.2 gases for use in transporting various gases classed in Division 2.1 and 2.2.	2
11346	Authorizes transportation of certain Division 1.1D and 1.4D charge jet perforating guns with Division 1.1B or 1.4B electric detonators affixed.	1

NUMBER	PURPOSE	REASON
11347	Authorizes the manufacture, mark, and sell of DOT Specification 21PF-1B overpacks, with minor variations in the mechanical features and chemical composition of the insulation material, for shipment of Uranium hexafluoride fissile (containing mor	2
11348	Authorizes the transportation of ammonium perchlorate (solid), classed as Division 4.1 under the proper shipping name oxidizing substances, solid, n.o.s., UN1479, which contain rhenium.	1
11349	Authorizes the transportation of a DOT Specification 111A100W1 tank car, containing a residual amount of a Class 8 material, meeting all DOT requirements except that the tank car has defective interior heater coils.	4
11350	Authorizes the transportation of a DOT Specification 111A100W1 tank car, containing residual amount of a Class 3 material, meeting all DOT requirements except that the tank car has defective interior heater coils.	4
11351	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred, provided that a minimal level of monitoring is maintained.	1
11352	Authorizes the transportation of certain hazardous materials across a public road, from one part a plant to another.	1
11353	Authorizes the transportation of uninsulated DOT Specification cargo tanks containing a Division 6.1 material which is poisonous by inhalation.	1
11354	Authorizes the transportation of a residual amount of a combustible liquid, n.o.s., in a DOT Specification 111A100W1 tank car, with defective interior heater coils, which will remain capped to prevent leakage while in transportation.	4

NUMBER	PURPOSE	REASON
11355	Authorizes the transportation of the liquefied petroleum gas (LPG), in DOT Specification MC-331 cargo tank motor vehicles manufactured from quenched and tempered steel which are coated on the inside with a cross linked epoxy-phenolic compound.	1

NUMBER	PURPOSE	REASON
11356	Authorizes the reassignment of certain high viscosity flammable liquids from Packing Group II to Packing Group III for packaging with a capacity greater than 30L.	1
11359	Authorizes the transportation of small quantities (30 grams or less) of sodium dithionite (Division 4.2 - PG II) in accordance with 49 CFR Section 173.4.	1
11360	Authorizes the transportation of certain non-DOT specification pressure vessels containing compressed hydrogen, which are a component part of a nickel-hydrogen battery.	2
11361	Authorizes tank cars, containing styrene monomer inhibited, to remain standing with unloading connections attached when no product is being transferred, provided that a minimal level of monitoring is maintained.	1
11364	Authorizes the transportation of certain X-ray systems containing sulfur hexafluoride.	2
11366	Authorizes the transportation of certain Division 1.1, 1.2, 1.3 and 1.4 explosives which are forbidden or exceed quantities authorized for transportation by cargo aircraft only.	1
11367	Authorizes the one-time transportation of a specially designed pressure vessel containing sodium.	5
11368	Authorizes the shipment of a DOT Specification 111A100W1 tank car, containing a Class 3 material, meeting all DOT requirements except that the tank cars are suspected to have been overloaded.	4
11369	Authorizes the use of petroleum oil for the hydrostatic test of certain DOT Specification 111A100W1 tank cars.	1
11370	Authorizes the shipment of a DOT Specification 111A100W1 tank car, containing a residue of a	4

NUMBER	PURPOSE	REASON
	Class 3 material, which does not fully comply with all DOT requirements.	
11371	Authorizes the transportation of certain non-DOT specification cargo tanks containing liquefied oxygen on board passengers ferry vessels which are carrying more than 25 passengers, from New London, CT to Orient Point, Long Island, New York.	1
11372	Authorizes the transportation of certain fire extinguishers which are marked using an alternate retest marking method.	1
11373	Authorizes the transportation of a Division 4.1 (self-heating) material on the same transport vehicle with Class 8 (corrosive) liquids when the materials are separated.	1
11374	Authorizes the transportation of nitric acid of up to 72% concentration in combination packagings with teflon inner packagings.	2
11378	Authorizes the transportation of certain hazardous materials in non-DOT specification stainless steel cylinders comparable to DOT Specification 4BW.	2
11379	Authorizes the manufacture, mark and sale of non-DOT, cylinders (pressure vessels) for use as components of automobile vehicle safety systems. These pressure vessels may be charged with non-toxic, non-liquefied gases, or mixtures thereof and are authorized for transportation in commerce.	2
11380	Authorizes the transportation of certain compressed hydrocarbon gases in non-DOT specification cylinders.	2
11381	Authorizes the manufacture, marking and sale of DOT Specification 20PF-1, 20PF-2 and 20PF-3 overpacks manufactured in variance with the specification in 49 CFR 178.356, for transportation in commerce when containing uranium	2

NUMBER	PURPOSE	REASON
	hexafluoride, fissile in Type A cylinders.	
11382 2	Authorizes the manufacture, marking and sale of non-DOT specification fiber reinforced plastic (FRP) hoop wrapped cylinders to be used for transportation of certain compressed gases.	
11383	Authorizes the transportation of certain hazardous materials in non-DOT specification stainless steel cylinders comparable to DOT Specification 4BW.	2
11384	Authorizes the transportation of certain non-DOT specification pressure vessels containing compressed hydrogen, which are a component part of a nickel-hydrogen battery.	2
11385	Authorizes the transportation of certain Division 1.1, 1.2, 1.3 and 1.4 explosives which are forbidden or exceed quantities authorized for transportation by cargo aircraft only.	1
11386	Authorizes the transportation of certain liquefied petroleum gases and acetylene, contained in DOT Specification cylinders, on board passenger ferry vessels, which are carrying more than 25 passengers.	1
11387	Authorizes the transportation of a DOT Specification 111A110W1 tank car, containing a residual amount of a Class 8 material, meeting all DOT requirements except that the tank car has defective interior heater coils.	4
11388	Authorizes the transportation of DOT Specification 57 portable tanks made of stainless steel, containing certain dual hazard liquids.	1
11390	Authorizes the transportation of Division 1.1, 1.2, and 1.3 explosives which are forbidden or exceed quantities authorized for transportation by cargo aircraft only.	1
11403	Authorizes the transportation of detonators,	1

NUMBER	PURPOSE	REASON
	non-electric, Division 1.1B explosive, which is forbidden for transportation by cargo aircraft only.	
11404 4	Authorizes the one-time transportation of a DOT Specification 106A500X tank car tank, containing chlorine Division 2.3, with a leaking unloading valve, which has been equipped with an emergency "B" kit to prevent further leakage.	
11405	Authorizes the use of alternative temperatures for determining if a material meets the definition of 4.2, Packaging Group III when shipped in non-bulk and intermediate bulk quantities.	1
11406	Authorizes shipments of waste or recycled materials, destined for landfill, incineration or other disposal, to be transported despite the unexpected detected presence of RAM provided the conditions of the exemption are met.	1
11407	Authorizes the transportation in commerce of non-DOT specification cylinders to be used in underwater breathing apparatus, containing various Division 2.2.	2
11410	Authorizes the one-time shipment of a DOT-106A500X tank car tank, containing Chlorine, Division 2.3, with two leaking unloading valve, which has been equipped with an emergency "B" kit to prevent further leakage.	4
11412	Authorizes the transportation of certain approved Division 1.3G fireworks devices that may, when packaged, marked and offered for transportation and transported fully in accordance with the conditions of this exemption, be classed as Division 1.4G fireworks.	1
11414 2	Authorizes the manufacture, marking and sale of DOT Specification 3AAX cylinders that are manifolded and assembled in an ISO container frame	

NUMBER	PURPOSE	REASON
	for the transportation of perfluoromethyl vinyl ether, a Division 2.1 material.	
11416	Authorizes the transportation of uranium hexafluoride, Class 7, in DOT authorized Model 1S and 2S cylinders that are designed, fabricated, inspected, and tested in accordance with ANSI N14.1 standards but, because of their size, are not marked with the AMSE 7 code.	2
11417	Authorizes the manufacture, mark and sale of a vacuum jacketed non-DOT specification container, containing liquid oxygen, for transportation as ambulance equipment.	2
11418 4	Authorizes the one-time transportation of a DOT Specification 105A300W tank car, containing a residual amount of methylamine, anhydrous, meeting all DOT requirements except that the tank car has a defective liquid unloading valve, secured with two additional valves and a plug to prevent leakage.	
11419 4	Authorizes the one-time transportation of a DOT Specification 111A110W tank car, containing a residual amount of a Class 3 material, meeting all DOT requirements except that the tank car has a defective interior heater coils, which will be secured to prevent leakage while in transportation.	
11420 4	Authorizes the one-time transportation of a DOT Specification MC-331 cargo tank, containing chlorine, Division 2.3, with a defective vapor valve, which has been equipped with an emergency "C" kit to prevent further leakage.	
11425	Authorizes the loading and unloading of cargo tanks containing liquid elevated temperature material (dimethyl terephthalate), with an attendant present at all times, but not within 25	1

NUMBER	PURPOSE	REASON
	feet, as required in 49 CFR.	
11429	Authorizes the transportation of the toluene diisocyanate, Division 6.1, in UN 1A1 drums on which the hazard label is not in compliance with the regulations due to the color of the label.	3
11430	Authorizes the manufacture, mark and sale of certain shock absorbers and struts, containing a nonflammable gas, for transportation as accumulators.	1
11432	Authorizes transportation of certain Division 1.4 igniters mix-packed with certain Division 1.4 detonators and shipped on the same motor vehicle, cargo vessel or cargo aircraft with Division 1 explosive jet perforating guns, detonating cords, commercial shaped charges or power devices cartridges.	1
11433 1	Authorizes the manufacture, marking and sale of accumulators which deviate from the required test parameters.	
11434	Authorizes tank cars, containing certain hazardous to remain standing with unloading connections attached when no product is being transferred, provided that a minimal level of monitoring, as specified in the exemption is maintained., without the physical presence of an unloader.	1
11436 1	Authorizes the manufacture, marking and sale of non-DOT specification bulk packaging for use in the transportation of regulated medical waste.	
11437 4	Authorizes the one-time transportation of a DOT Specification 111A100W1 tank car, containing a residue of a class 3 material, which does not fully comply with all DOT requirements.	
11438	Authorizes the transportation of certain	1

NUMBER	PURPOSE	REASON
	automotive seat-belt pretensioners or seat-belt modules as Class 9 articles that have not yet been examined, classed and approved in accordance with Section 173.56.	
11439	Authorizes the one-time shipment of an X-Ray Timing Explorer (XTE) satellite which contains propane, a Division 2.2 material, in non-DOT specification containers.	3
11440	Authorizes the transportation of trimethylacetyl chloride, in polyethylene drums or composite packagings which are not individually overpacked in accordance with Section 173.227(b).	1
11441 1	Authorizes the manufacture, marking and sale of certain refrigerating machine containing nonflammable, nonpoisonous liquefied refrigerant gas to be transported in commerce.	
11445	Authorizes the one-time transportation by private vehicle, of certain approved and unapproved Division 1.1D and 1.5D Type E blasting explosives packaged in Specification 5H3 plastic bags.	4
11446	Authorizes the one-time transportation of sulphuric acid, fuming, greater than or equal to 30 percent free sulphur trioxide, in damaged non-DOT specification lined steel drums which are overpacked in a twin-walled 85 gallon polyethylene drum.	4
11447	Authorizes the transportation of certain quantities of metal catalyst, classed as Division 4.2, in non-DOT specification packaging that exceed the maximum net quantity allowed per package.	2
11448	Authorizes the transportation of certain materials poisonous by inhalation, Hazard Zone B, in stainless steel drums which are not individually overpacked in accordance with 49 CFR 173.227(b).	2

NUMBER	PURPOSE	REASON
11449	Authorizes tank cars, containing chlorine to remain standing with unloading connections attached when no product is being transferred, provided that a minimal level of monitoring, as specified in the exemption is maintained.	1
11452	Authorizes the transportation of certain non-DOT specification cylinders containing certain Division 2.2 materials.	2
11454	Authorizes domestic transportation by cargo vessel and cargo-only aircraft of limited quantities of "smokeless powder for small arms" (100 pounds or less) classed as Division 4.1.	1
11455	Authorizes the transportation of hazardous materials that exceed 25 kg net weight limit (75 kg net weight of non-flammable compressed gases) in an inaccessible cargo compartment on a chartered aircraft when responding to or returning from an emergency or disaster situation.	1
11456 4	Authorizes the one-time transportation of a DOT Specification 105A500W tank car, PPGX 1938, containing a residue of a Division 2.3 material. The tank car does not fully comply with all DOT requirements.	
11457	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no product is being transferred, provided that a minimal level of monitoring, as specified in the exemption is maintained without the physical presence of an unloader.	1
11460 1	Authorizes the one-time transportation of certain uninsulated DOT Specification 331 cargo tank containing trifluorochloroethylene, a Division 2.3 material.	
11461	Authorizes the transportation of two DOT Specification 111A100W1 tank cars, containing	4

NUMBER	PURPOSE	REASON
	residual amounts of Class 8 material, meeting all DOT requirements except that the tank cars have defective interior heater coil.	
11462	Authorizes the transportation of two DOT Specification 111A100W3 tank cars, containing residual amounts of Class 3 material, meeting all DOT requirements except that the tank cars have defective interior heater coils.	4
11463	Authorizes the shipment of a DOT Specification 105A500W tank car, containing a Division 2.3 material meeting all DOT requirements except that the tank car is not equipped with a complete thermal protection system due to an accident.	4
11468	Authorizes the one-time transportation of residual sodium metal contained in the piping of a test assembly, overpacked in a reinforced plywood box.	3
11473	Authorizes the transportation of a Division 4.2 material in DOT Specification 114A340W tank cars equipped with skid protection in place of a protective housing and equipped with a safety relief device having a start-to-discharge pressure of 82.5 percent of the tank test pressure.	1
11478	Authorizes the shipment of two DOT-Specification 111A100W2 tank cars, containing a Class 8 material, poisonous by inhalation, meeting all DOT requirements except that the tank car is suspected of being overloaded.	4
11479	Authorizes the shipment of DOT-Specification 112S340W tank cars, containing a Division 2.2 material, meeting all DOT requirements except that the tank car has a defective "B"-end liquid valve with unloading attachments attached.	4
11481	Authorizes the manufacture, marking and sale of certain shock absorbers and struts, containing a flammable gas, for transportation as accumulators.	

2

NUMBER	PURPOSE	REASON
11484	Authorizes tank cars, containing ammonia, anhydrous, liquefied or ammonia solutions, to remain standing with unloading connections attached when no products is being transferred, provided that a minimal level of monitoring, as specified in the exemption is maintained.	1
11485	Authorizes tank cars, containing various classes of hazardous materials, to remain standing with unloading connections attached when no product is being transferred, provided that a minimal level of monitoring is maintained.	1
11486	Authorizes the transportation of glass ampules containing certain Division 2.3 materials for disposal in a non-DOT specification packaging known as a single round container.	2
11489	Authorizes the transportation by private carriage, of certain unapproved or unidentified items as approved, air bag inflators or air bag modules or seat belt pretensioners or seat belt modules as Division 1.4C explosives articles.	1
11490	Authorizes the one-time transportation of methylhydrazined, Class 8 material, in DOT Specification 110A500W multi-unit tank car tanks which are not fitted with a pressure relief device and Class 8 in DOT-specification 110A500W multi-unit tank cars not equipped with pressure relief devices.	5

NUMBER	PURPOSE	REASON
11493	Authorizes the transportation of a Division 2.1 material in a nonrefillable, non-DOT specification inside containers conforming with the DOT Specification 2P except for size, testing requirements, marking and maximum charging pressure.	2
11494 2	Authorizes the manufacture, marking and sale of non-DOT specification cylinders (pressure vessels) for use as components of automotive vehicle safety systems for use in transporting compressed gases.	
11495	Authorizes the transportation of DOT Specification 105A500W tank car, containing a residual amount of a Division 2.3 material, meeting all DOT requirements except that the tank car has a defective safety relief valve which is equipped with a solid cap to prevent emission of chlorine vapors.	4
11496	Authorizes the transportation of a DOT Specification 111A100W2 tank car has a defective safety relief device which is equipped with a solid cap to prevent emission of corrosive vapors.	4
11497 4	Authorizes the one-time transportation of a DOT Specification 111A100W1 tank car, containing a residual amount of a Class 8 material, meeting all DOT requirements except that the tank car has a defective top operated bottom outlet valve.	
11498 4	Authorizes the one-time transportation of a DOT Specification 111A100W1 tank car, containing a residual amount of a Class 8 material, meeting all DOT requirements except that the tank car has a defective top operated bottom outlet valve.	
11499 2	Authorizes the manufacture, marking and sale of cargo tank motor vehicles conforming to DOT Specification 406, except for head material for	

NUMBER	PURPOSE	REASON
	shipment of certain Class 3 liquids.	
11500	Authorizes the transportation of a DOT Specification 112J340W tank car, containing a partial load of a Class 2.3 material (Canadian corrosive gas).	4
11502	Authorizes the transportation by highway, of hazardous materials prepared in accordance with 49 CFR 171.11 and the ICAO Technical Instructions, regardless of whether any part of the transportation is by aircraft.	1
11504	Authorizes the transportation of certain Class 8 and Division 2.2 materials separated, in train, from an occupied locomotive by a locomotive with batteries disconnected and in tow.	1
11506 2	Authorizes the manufacture, marking and sale of non-DOT specification cylinders (pressure vessels) for use as components of automobile vehicle safety systems. The pressure vessel may be charged with non-toxic, non-liquefied gases, or mixtures thereof.	
11507	Authorizes the transportation of helium in a non-DOT specification packaging made of zirconium.	2
11509	Authorizes the continued intrastate transportation of certain Class 3 liquids in non-DOT specification cargo tanks whose designs have been approved by the California State Fire Marshall and we replaced in service prior to April 1, 1984.	1
11510	Authorizes the transportation of certain DOT specification cylinders containing propane, a Division 2.1 gas, which is forbidden for shipment aboard passenger carrying aircraft.	1
11512	Authorizes the transportation of approximately 150 pounds of black powder, Division 1.1D, by cargo aircraft only.	1

NUMBER	PURPOSE	REASON
11514	Authorizes the transportation of certain rocket motors, Division 1.3C, incorporated in a spacecraft without DOT Specification packaging.	1
11515	Authorizes the transportation of aluminum processing by-products, Division 4.3, contained in an open top trailer covered with a canvas tarpaulin.	2

NUMBER	PURPOSE	REASON
11516	Authorizes the transportation of certain DOT Specification 2Q containers containing difluoroethane or tetrafluoroethane dimethylether mixtures.	1
11517	Authorizes the transportation of Class 3 and Class 8 materials in multiple non-DOT specification portable tanks manifolded together within a frame and securely mounted on a truck chassis.	2
11521	Authorizes tank cars, containing chlorine, to remain standing with unloading connections attached when no products is being transferred, provided that a minimal level of monitoring is maintained.	1
11524	Authorizes the transportation of non-bulk packages that have hazard warning labels on a different surface of the package from the proper shipping name marking.	5
11525 4	Authorizes the one-time transportation of a DOT Specification 3A cylinder containing approximately 100 pounds of Chlorine, a Division 2.3 gas, The cylinder has a small leak which is contained by a emergency "B" kit to prevent further leakage.	
11534	Authorizes the transportation of containers that display subsidiary labels with a hazard class number in the lower corner of the label.	4
11535	Authorizes the transportation of certain cylinders that either do not have a periodic retest marking or the marking is out-of-date.	4
11536 2	Authorizes the transportation of a spacecraft in a special sealed packaging (shipping container). The spacecraft contains Division 2.2 gases and Class 8 corrosive liquids in non-DOT specification packagings and limited quantities of Division 1.4S explosives secured within the spacecraft.	

NUMBER	PURPOSE	REASON
11549 2	Authorizes the manufacture, marking and sale of cargo tank motor vehicles conforming to DOT 406 Specification, for head and baffle design, for use in transportation of certain hazardous materials.	
11550	Authorizes the transportation of a DOT 111A100W1 tank car, containing a residual amount of a Class 3 material, meeting all DOT requirements except that the tank car has defective interior heater coils, a Class 3 material, with the heater coil inlet and outlet pipes capped.	4
11552 3	Authorizes the one-time transportation of certain DOT specification 2P and non-specification containers, containing a butane mixture, which exceed the maximum charging pressure permitted for liquefied petroleum gases.	
11553	Authorizes the continued transportation of sulfur dioxide in certain uninsulated DOT Specification MC-331 cargo tanks.	1
11562	Authorizes the transportation of benzyl chloride in phenolic lined UN1A1 drums.	2
11569	Authorizes the shipment of a DOT Specification 112S340W tank cars, containing a Division 2.2 material, meeting all DOT requirements except that the tank car is leaking from the manway nozzle gaskets.	5
11571	Authorizes the transportation of a wetted explosives classed as Division 4.1 in certain insulated DOT Specification MC307, MC312, MC407 and MC412 cargo tanks.	1
11574	Authorizes the transportation of approximately 2,000 DOT UN 4G fiberboard boxes which have been inadvertently marked UN 4G/Y5/5/95 instead of UN 4G/75/S/95, for shipment of fireworks Division 1.4G.	5
11587	Authorizes the transportation of a DOT Specification 111A100W1 tank car, containing a	4

NUMBER	PURPOSE	REASON
	Class 9 material, meeting all DOT requirements except that the tank car is overweight.	
11588	Authorizes the offering and transportation of certain cultures and stocks of infectious substances, when described and packaged as regulated medical waste under the provisions of 49 CFR 173.134 and 173.197 subject to the HMR packaging standards of 49 CFR 173.197.	1
11590	Authorizes the transportation of a DOT Specification 105A500W tank car, containing a Division 2.3 material, meeting all DOT requirements except that the tank car has a defective safety relief valve which is equipped with a chlorine "C" kit.	4
11594	Authorizes the one-time transportation of a solid carbamate pesticide in fiber drums marked and tested to packing group II not meeting the appropriate UN performance standard,	3
11603	Authorizes the transportation of a DOT Specification 112J340W tank car, containing a Division 2.2 material, meeting all DOT requirements except that the tank car has a defective thermometer well.	4
11605	Authorizes the transportation of four DOT Specification 111A100W1 tank cars, containing a Class 3 material, meeting all DOT requirements except that the tank cars have unapproved fittings.	3
11608	Authorizes the transportation in commerce of a DOT Specification 111A100W1 tank car (TRLX 2684), containing a residual amount of tripropylene, Class 3, meeting all DOT requirements except that the tank car has defective heater coil.	4
11610	Authorizes the one-time transportation of a DOT Specification 112A340W tank car, ACFX 19959, containing a Class 2.1 material, meeting all DOT	

4

NUMBER

PURPOSE

REASON

requirements except that the tank car is not equipped with the required tank head puncture protection and the required thermal protection system.

APPENDIX C
U.S. COAST GUARD BULK ACTIVITIES
1994-1995

UNITED STATES COAST GUARD BULK ACTIVITIES

Overview This appendix provides a summary of USCG's activities as they pertain to bulk shipments of hazardous materials by vessel and at waterfront facilities. Although there is some discussion of other activities, the primary focus of this appendix is directed at bulk liquid hazardous chemicals and gases and bulk solid hazardous cargoes.

In addition to enforcing the HMR, the USCG issues and administers regulations applicable to waterfront facilities, and the transportation of bulk hazardous materials by vessel, under authority of 46 U.S.C. § 3703 *et seq.* and 33 U.S.C. § 1221 *et seq.* These regulations are contained in the Shipping Regulations, Title 46 CFR, Subchapters "D"-Tank Vessels, "I"-Cargo and Miscellaneous Vessels, "N"-Dangerous Cargoes, and "O"-Certain Bulk Dangerous Cargoes; and in the Navigation and Navigable Waters Regulations, 33 CFR, Subchapter "L" and Subchapter "O".

Regulation Development

Classification of Chemicals

During 1994 and 1995 the Coast Guard issued several Final Rules which covered the classification of new chemicals proposed for transportation in bulk by tankship and tank barge. These regulations address both safety and environmental concerns by establishing the minimum carriage requirements (i.e. vessel design and equipment as well as operating requirements) which must be met to transport the cargoes. These actions assure consistency with the international requirements contained in the IMO Bulk Chemical Codes which also pertain to carriage of hazardous chemicals in bulk. In all, nearly 300 chemicals were classified or reclassified in these rulemakings. The rulemakings involve changes to Title 46 CFR Parts 30, 40, 98, 150, 151 and 153 and Title 33 CFR Part 151. The specific actions completed include dockets CGD 92-100 and 92-100a on 04/11/94, dockets CGD 94-900 and 94-901 on 08/31/94 and dockets CGD 94-902, 95-900 and 95-901 on 06/29/95.

Waterfront facilities handling liquefied hazardous gas

This rulemaking amended the existing requirements for waterfront facilities which handle liquefied hazardous gases by adding new requirements into Title 33 CFR Part 127. The rule addressed deficiencies in the existing regulations by incorporating provisions similar to the provisions already in existence for liquefied natural gas which poses hazardous similar to those for the liquefied hazardous gases covered by the rulemaking. The new regulations were issued under docket CGD 88-049 on 08/03/95 for entry into force on January 30, 1996.

Facilities transferring oil or hazardous materials in bulk

On February 23, 1995, the Coast Guard issued a Notice of Proposed Rulemaking to update and clarify the regulations in Title 33 CFR Parts 154 and 156. The intent of the proposal is to provide regulations which are more effective in providing a high level of safety and environmental protection by enhancing industry's ability to comply and improving Coast Guard oversight and enforcement.

Explosives classification and handling

On August 5, 1994, the Coast Guard amended regulations in Title 33 CFR and Title 46 CFR with respect to terminology for classification of explosive (Class 1) materials. These changes were made to assure consistency with the terminology contained in Title 49 CFR Subchapter C.

Other Significant Activities

Vapor Control Systems

The USCG, in 1990, first implemented Vapor Control System (VCS) requirements to ensure the safe recovery or destruction of gasoline, benzene and crude oil vapors, or Volatile Organic Compounds (VOC) generated during the loading of a tank vessel. Prior to that time, these vapors were permitted to be emitted into the atmosphere. The need for USCG requirements stems from the EPA and state environmental requirements that prohibit the emission of certain VOC's into the atmosphere during vessel cargo loading. This was the case in Texas and Louisiana where vapor control became necessary for hundreds of chemicals that had not been previously addressed by the USCG regulations. While working closely with the marine and chemical industries, the USCG developed new VCS regulations, created a staggered VCS implementation schedule for chemical tank vessels, and worked with manufacturers to develop detonation arresters that could be used with the more flammable cargoes. As the number of facilities requiring VCS capability increases, the USCG continues to assist third-party facility VCS certifying entities, facility operators, and vessel operators in the implementation of the USCG requirements. To date, there are twenty-one authorized third-party certifying entities for facility vapor control systems. In 1994, the Coast Guard responded to 54 inquiries regarding interpretations and clarifications of the VCS regulations. In 1995, the Coast Guard responded to 65 such requests. Many of these responses addressed additional safety concerns for the increasing number of facilities which transfer cargoes other than crude oil, gasoline and benzene. In 1994, the Coast Guard conducted their first review of the VCS certifying entity certification program. During this year, the Coast Guard completed an oversight review of four certifying entities to ensure that the VCS safety standards are being applied uniformly during the certification process. In 1995, oversight review was conducted on an additional five certifying entities.

Bulk Chemical Classification

USCG is responsible for the evaluation and classification of new chemicals and petroleum products proposed for domestic bulk shipment by tank ship or barge. USCG reviews the chemical, physical, flammability, marine pollution, and health characteristics of the commodities to develop appropriate shipping requirements. The requirements outline specifications, such as vessel hull type, tank venting and gauging, and fire protection to ensure safe shipping practices. Approximately 151 new products were evaluated in 1994 and approximately 107 new products were evaluated in 1995. Most of these products were included in the regulatory updates discussed elsewhere in the appendix. In addition to domestic classifications, USCG performs interim evaluations of pollution and safety hazards of new chemical cargoes proposed for international transport by tank ship. Based on the evaluations, formal submissions are prepared for review at meetings of the International Maritime Organization (IMO) Subcommittee on Bulk Chemicals where USCG plays an active and influential role. USCG's work on interim evaluations is well recognized by classification societies and other national maritime administrations. The evaluations are used world-wide with a minimum of further technical review.

Bulk Solid Hazardous Materials Special Permits

USCG develops and administers shipping regulations to ensure that bulk solid hazardous materials are shipped safely and that the environment is protected. A listing of the materials most commonly transported in bulk solid form is contained in a table of permitted cargoes along with carriage

requirements. The table is located in 46 CFR Part 148. In order to facilitate commerce, USCG evaluates, issues, and renews special permits to allow industry to transport materials which are not listed. In 1994 and 1995, 29 new permits were issued, and 24 outstanding permits were renewed.

Chemical Transportation Advisory Committee

This Committee provides advice and consultation to the Coast Guard with respect to the bulk transportation of hazardous materials by water. Most of the Committee's work is accomplished by various subcommittees which are created according to specific taskings from the Coast Guard.

In June 1994, the 46 CFR Part 151 Subcommittee recommended substantial changes to the regulations for barges carrying bulk liquid hazardous material cargoes. These recommendations will be used by the Coast Guard in the development of a rulemaking project to start in 1996. The Hazardous Substances Response Plan Subcommittee was created in January 1995 to assist and advise the Coast Guard in developing regulations requiring chemical spill response plans for tank vessels and waterfront facilities. This subcommittee will provide assistance to the Coast Guard in determining response resource availability, assessment of response methods, and criteria for response planning. In June 1995, the Vapor Control Systems Subcommittee presented their recommendations on the technical and safety issues associated with the use of vapor control systems at tank barge cleaning facilities. These recommendations will form the basis for the development of new guidelines which will be disseminated by a Coast Guard Navigation and Vessel Inspection Circular.

International Activities

In addition to USCG activities described in Section V of this report, USCG represents the U.S. at working sessions of several other IMO Committees and Subcommittees which play primary roles concerning the bulk transportation of hazardous materials. These include the Maritime Safety Committee (MSC), the Marine Environment Protection Committee (MEPC), and, in particular, two technical subcommittees, the Subcommittee on Bulk Chemicals (BCH) and the Subcommittee on Containers and Cargoes (BC). In 1994 and 1995, activities of particular interest at meetings of the technical subcommittees included the following:

Subcommittee on Bulk Chemicals

At the 24th Session of the BCH Subcommittee, the following topics were addressed:

Evaluation of Liquid Chemicals Transported in Bulk

A working group, which was chaired by the USCG, considered ongoing work and new proposals:

- M In 1994, the group discussed the revision of Annex II of the International Convention for the Prevention of Pollution from Ships, 1973 and the Protocol of 1978 (MARPOL 73/78). The subcommittee is actively attempting to simplify the now complicated language and procedures of the Annex. This simplification includes a very hard look at reducing the current five pollution categories to three or two. The discussions taken during this session were preliminary and were continued through both an intersessional correspondence group, as well as an intersessional meeting of this working group in 1995.
- M The group also completed a draft MSC Circular that addresses precautions to be taken during the loading of cargoes containing benzene. This draft circular embodies much of the current U.S. requirements in 46 CFR 197 regarding required monitoring and respiratory equipment designed

to protect the marine worker from exposure to low levels of benzene.

Air Pollution from Ships

- M In 1994, the subcommittee produced a draft Annex VI to MARPOL 73/78 addressing the prevention of air pollution from ships for consideration by the Marine Environment Protection Committee (MEPC) at its 37th session. Two drafting groups were formed to further develop the draft annex. One drafting group, chaired by the U.S., discussed the guidelines and procedures for establishing special areas. The second group focused on the technical aspects for limiting nitrogen oxide (NOX) emissions from diesel engines. Both of the drafting groups were successful in achieving their goals. The group on special areas succeeded in finalizing the criteria for the designation of a special area, as well as providing modifying language for regulation 13 (sulfur oxides) and regulation 17 (fuel oil quality) of the draft annex. The nitrogen oxide group developed guidelines for the implementation of NOX limits for diesel engines, guidelines for diesel engine test, survey and certification and guidelines on equivalent methods to reduce on board NOX emissions. The subcommittee forwarded the revised text of the draft annex along with the criteria for designation of a special area to the MEPC for consideration at its 37th session.

Review of the OPRC

In 1994, a working group chaired by the U.S. was re-convened to further consider the expansion of the International Convention on Oil Pollution Preparedness, Response and Cooperation 1990 (OPRC) to include hazardous and noxious substances. The working group developed a new regulation 16 for Annex II which would require vessels carrying noxious liquid substances (NLS) to prepare pollution response plans and also prepared draft guidelines that could be used to prepare pollution response plans for both oil and NLS. The subcommittee agreed to review the new regulation 16 and the draft guidelines intersessionally and to consider them again at the next session of the subcommittee, scheduled for 1996, for approval and forwarding to the MEPC for adoption.

Subcommittee on Containers and Cargoes

At its 33rd session, held in 1994 and its 34th session, held in 1995, the IMO Subcommittee on Containers and Cargoes addressed the following issues related to hazardous materials transport:

- M Proposals for making certain provisions of the Code of Safe Practice for Cargo Stowage and Securing (CSS Code) mandatory were considered by the Subcommittee. This initiative intended to prevent the loss of hazardous cargo was largely the result of proposals originally developed by the United States in response to the SANTA CLARA I casualty. The subcommittee agreed to proposals to make certain portions of the CSS Code mandatory and prepared draft amendments to the International Convention for the Safety of Life at Sea (SOLAS Convention) which were subsequently adopted by the MSC.

- M The Subcommittee reviewed the IMO *Code of Safe Practice for Solid Bulk Cargoes* to identify those of its provisions which could be made mandatory through adoption in the SOLAS Convention. Draft amendments to SOLAS Chapter VI regarding the loading and trimming of bulk cargoes were approved. In addition, the Subcommittee approved a draft MSC Circular on a check-off list for the exchange of information between a ship and a terminal before a bulk solid cargo transfer operation begins. These initiatives will improve bulk solid hazardous material transport from an operational perspective.

Training and Education

In support of its hazardous material and safety-related programs, USCG offers its personnel a two-year program of graduate study leading to a Master of Science degree in Chemical Engineering, Environmental Management, or Industrial Hygiene. Candidates are generally selected based upon their field experience in merchant marine inspection, port safety, or environmental response. Upon graduation, these individuals are considered for a variety of specialized positions dealing with marine transportation or hazardous materials. Each year, approximately four officers complete this training.

USCG also has a Port Safety Industry Training (PSIT) Program. Each year, up to six officers work with industries in port areas for a six-month period. Trainees have the opportunity to deal with hazardous materials issues, as well as other topics, through their training and interaction with industry. Following the six-month PSIT program, these officers are typically assigned to field units in the PSIT area.