





Office of

# INTERNATIONAL **STANDARDS**

Office of Hazardous Materials Safety Pipeline And Hazardous Materials Safety Administration (PHMSA)













### **FORWARD**

"The U.S. has historically been a key contributor in establishing internationally harmonized requirements for the transport of hazardous materials. As one of the original five participating countries in this effort, the U.S. was a principal architect of the system first developed in the early 1950s under the auspices of the Transport and Communications Commission of the United Nations Economic and Social Council (ECOSOC). The framework developed by those "founding fathers" gradually evolved from a series of published recommendations and guidelines into formalized model regulations suitable for adoption within domestic, regional, and international hazardous materials legislation. The foundation for progress then, as it is now, was a spirit of cooperation among many experts from around the world working towards a common safety goal.

More than ever, PHMSA is dedicated to reducing the risk posed by hazardous materials across the entire transportation system and to sharing our vision and experience to help lead a global approach to risk reduction. As globalization strengthens the market power of our trading partners, we work to ensure the highest levels of safety for the public and environment in a world of increasing trade. Our goals are simple and direct – we seek the safest transportation of hazardous materials possible within the U.S. and elsewhere, while insisting on a level playing field that allows U.S. industries to compete in world markets.

We cannot achieve our goals without collaboration and continuous improvement. To that end, our efforts are shaped by extensive coordination with our international partners, other government agencies, stakeholders including the emergency response community and the public. We hold as a core value that this level of coordination and transparency allows us to maintain an active voice and be among the world leaders in the various international standard-setting bodies in which we participate. In this plan, we define a set of international safety priorities which will be the focus of our U.S. and international decision-making for the next several years. Keeping the American public safe and supporting U.S. interests globally requires leadership, vigilance, and a culture of teamwork, collaboration and continuous improvement. While we work to represent U.S. interests we understand and respect that our efforts affect people throughout the world and that we need to work with our international partners to enhance safety for all citizens."

Theodore L. Willke, Ph.D.
 Associate Administrator for Hazardous Materials Safety
 Pipeline and Hazardous Materials Safety Administration

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The transportation and use of hazardous materials underpin the American economy and our way of life. We use oil and natural gas to heat and cool homes and businesses, produce electricity, transport virtually all of the commercial products we use, travel for work and recreation, and provide raw material for plastics, fibers, paints, and many other materials and products. We depend on a variety of chemicals to clean our water, fertilize crops, create medicines, and manufacture all manner of consumer and commercial products. These materials pose inherent risks to the public, the environment, and property, but are essential to our quality of life, making their safe, secure, and reliable transportation a matter of significant national interest.

July 1, 2008 marked the 100th anniversary of the Hazardous Materials Transport Safety Program now administered by the United States Department of Transportation's (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). Nearly everything about the program has changed over its first century, reflecting significant evolution in technology, industry, scientific understanding, and public expectations. In 1908, Congress acted to protect railroad passengers and property from dynamite and other explosives shipments. Today's program covers thousands of materials and articles shipped by all modes of transportation, targeting a much more comprehensive set of risks.





Of all the intervening changes, the globalization of hazardous materials markets and transportation has posed the greatest challenges, calling for new activities and approaches to protect the safety and security of the American public while promoting a level playing field for U.S. industry.

PHMSA's first International Strategic Plan outlines the program's mission, challenges, and objectives, explains how we intend to meet our objectives, and invites active stakeholder participation in our activities and processes. This plan builds on PHMSA's Strategic Plan, which we published in August 2007. Reflecting the values we pledged there, publication of an International Strategic Plan enhances the transparency of agency action and promotes broader public dialogue and participation in our international activities.

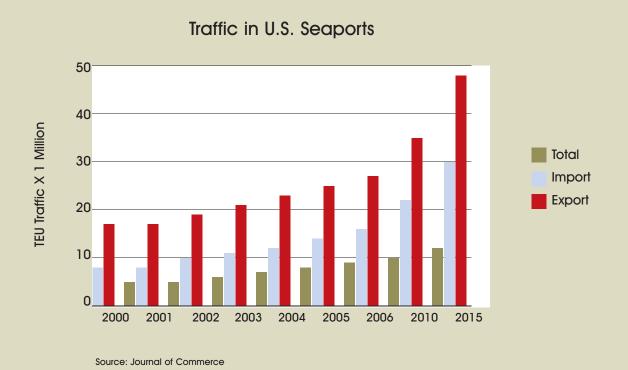




### I. A WORLD MARKET

The pace of growth in international freight transportation has been staggering. Since 1993 the total number of freight containers in worldwide maritime traffic has tripled, and forecasters predict this traffic will continue to grow. Figures from the Journal of Commerce project an increase of over 40% in the next three years, with the increase exceeding 80% by 2015 — to an annual total of nearly 50 million containers through U.S. ports alone. At today's rate of growth the worldwide total is expected to be as high as one half of one billion by 2015.

Over the last 50 years, our hazardous material safety program has been influenced in a substantial and steadily increasing manner by our role in international standard-setting. The external influences will only increase in the coming years as economically-emerging countries such as China and India continue to produce and transport hazardous materials throughout the world. Current projections indicate that the economies of China and India

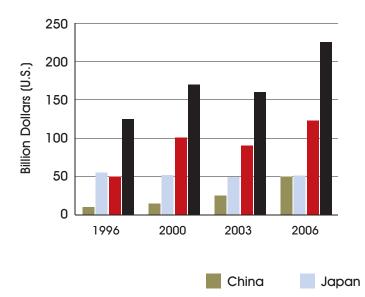




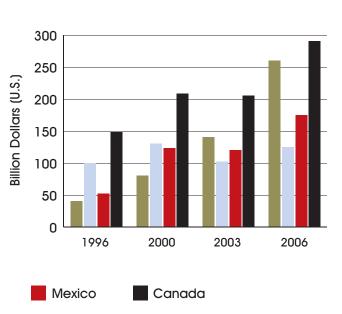
will surpass the U.S. by 2035 and 2050, respectively. The increasing globalization of markets and supply chains will most certainly shape the future direction of our program, which will inevitably include assisting developing economies in regulatory development to ensure the safety of hazardous materials movements around the globe. To address this evolving world market for hazardous materials, PHMSA focuses resources on promoting safety improvements, maintaining global competitiveness for U.S. interests, and enforcing compliance with all U.S. government guidelines for coordination on international issues.

Continued progress requires improved collaboration with our trading partners as well as a recognition of the forces that drive technological and international regulatory changes. How we adapt our focus and evolve our priorities will determine the ability of our program to achieve future success at the level that our stakeholders demand and that we demand of ourselves.





### U.S. General Imports

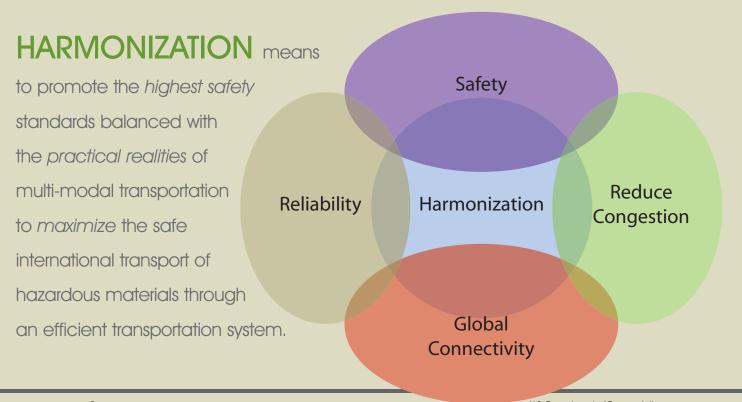


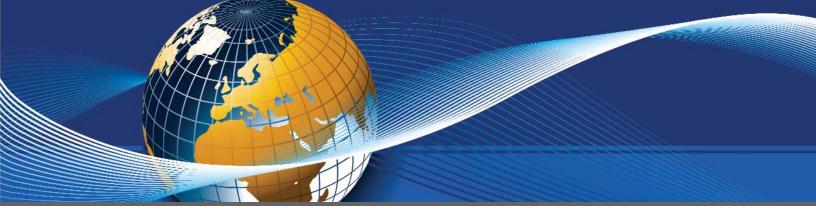
Sources: Data on this site have been compiled from tariff and trade data from the U.S. Department of Commerce and the U.S. International Trade Commission



### II. VISION: ENHANCING SAFETY IN A GLOBAL TRANSPORTATION NETWORK

The Office of International Standards is one of seven offices within PHMSA's Office of Hazardous Materials Safety. We are dedicated to improving the safety and security of hazardous material shipments in both international and domestic commerce. Our objective is to establish and maintain a global transportation regulatory system that will promote the safe, secure, and efficient movement of hazardous materials. Establishing harmonized or compatible transport provisions enhances the safety of the U.S. public, strengthens environmental protection, and supports U.S. manufacturing and transport industries. We often use the term "International Harmonization" to describe these efforts. "Harmonization" is a broad concept embracing both the means and ends. In the broadest sense, it relates to nearly every aspect of our regulatory program: identification of risks; development of appropriate safety controls; projecting those provisions forward to the applicable regulatory body; and ensuring regulatory consistency for both domestic and international transport.





OUR MISSION: WHY GLOBAL HARMONIZATION IS IMPORTANT

# THE OFFICE OF INTERNATIONAL STANDARDS MISSION

The mission of PHMSA is to protect people and the environment from the risks inherent in the transportation of hazardous materials — by pipeline and other modes of transportation. We are above all, a safety agency, but in carrying out our mission we also play an important role in improving the performance of hazardous materials transport systems.

The Office of International Standards links PHMSA's overall mission with the growing demand for the global transport of hazardous materials. We promote the adoption of international transportation safety and security standards and regulations consistent with the high standards in the U.S. Hazardous Materials Regulations (HMR), and we promote consistency between international standards and the HMR. Harmonization of international and domestic standards enhances compliance and improves the efficiency of the transportation system by minimizing regulatory burdens and facilitating effective oversight.

This mission is reflected in Section 5120 of Federal Hazardous Material Transportation Law (49 U.S.C. 5101 et seq.), which:

directs DOT to participate in international forums (subject to guidance and direction from the State Department) that establish or recommend mandatory standards and requirements for transporting hazardous materials in international commerce;

authorizes DOT to consult with international authorities to ensure that, to the extent practicable, the regulations under Federal Hazardous Material Transportation Law are consistent with international standards and regulations; and

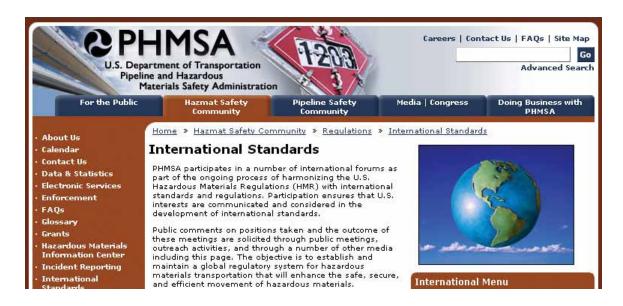
provides that DOT need not adopt an international standard that it deems unnecessary or unsafe, and authorizes DOT to prescribe a more stringent standard that it finds necessary in the public interest.



### International Standard Setting — A Driving Force

PHMSA's Office of International Standards participates in a number of international forums (see Annex 1 for a description of each international organization) to ensure that U.S. interests are communicated and considered in the development of international regulations and standards. Through these efforts, we strive to promote equivalent levels of safety and security based on U.S. priorities.

The results of this international work greatly impact U.S. interests in both domestic and international transportation. The United Nations (UN) Model Regulations on the Transport of Dangerous Goods, for example, provide a basis for development of harmonized regulations for all modes of transport, in order to facilitate trade and the safe, efficient transport of hazardous materials. The UN Model Regulations were first published in 1957 establishing minimum requirements for all modes of hazardous materials transportation. Since then the UN Model Regulations have gained global





acceptance through adoption as the basis for most international, regional, national and modal transportation regulations. The UN Model Regulations:

- Enhance safety, improve enforcement capability, ease training requirements and enhance global trade and economic development.
- Provide economic benefits by eliminating the costs of complying with a multitude of differing national, regional and modal regulations.
- Foster compatibility among modal requirements so that a consignment may be transported by more than one mode without intermediate reclassification, marking, labeling or repackaging.

Central to our mission are the processes we follow to ensure effective and appropriate coordination on all international hazardous material transportation issues. Section IV — *How We Achieve Our Goals* provides a detailed explanation of this coordination process. We solicit input from U.S. industry and government agencies, bringing together stakeholders on all sides of an issue to identify and advance public and private sector solutions. Stakeholder input is obtained through public meetings, informal focus group meetings, outreach activities, our website, interactions with a number of trade associations, and other media.

Ultimately our ability to effectively represent U.S. interests depends on our thorough understanding of the issues — both technical and practical — and effective communication with our international partners and U.S. stakeholders. We work diligently to develop U.S. positions in advance of international sessions, but must be prepared and equipped to reassess or modify our initial positions as necessary to protect U.S. interests. This work is critical to ensure consistency between domestic and international regulations and to prevent undue burden on U.S. exports.



### MISSION OBJECTIVES

M ission objectives that drive our international efforts and priorities include:

- **1. Safety and Security.** First and foremost we are a safety agency. Our primary objective is to establish appropriate and practical measures (both regulatory and non-regulatory) to ensure the safe and secure transport of hazardous materials. Risk assessments and technical evaluations drive our decision making, our priorities, and our actions.
- **2. Global Connectivity.** Transportation operates in a global economy, and the system performs in a safer and more efficient manner when we all work from common regulations and standards. From U.S. passengers on aircraft carrying hazardous materials, to U.S. companies competing in a global marketplace, U.S. interests play a significant role in the international transportation of hazardous materials. We strive to support these interests consistent with the goals of the Department and the Agency.
- **3. Reduced Congestion/Reliability.** As global transportation continues to increase, the infrastructure and modal gateways are being stretched to their capacities. Incompatibilities at modal interfaces and inefficiencies in the transport chain cause additional congestion. Removing these impediments to multi-modal transportation improves system flow, enhances safety, reduces burdens on the regulated community, and improves the opportunity for economic growth.

**4. Environmental Stewardship.** Hazardous materials pose a risk to the environment due to the intrinsic properties of the materials. Our regulatory system is designed to provide adequate containment and handling information for the material while in the transportation system. We also strive to ensure that any release of material can be effectively mitigated to minimize the impact on the environment and public health and safety. In addition to the potential for release of material into the environment, transportation operations consume a great deal of energy and produce associated by-products that exert significant pressure on the environment world-wide.





### III. CHALLENGES AND OPPORTUNITIES

Risk is dynamic and changes over time. The factors which affect how risk is perceived evolve with social, economic, institutional and environmental change. As a result, efforts to reduce risk require consideration of multiple approaches. The hazard characteristics of most hazardous materials are well known. What changes over time are new formulations of products, the development of new designs and applications for articles containing hazardous materials, how these products and articles are handled and transported, and the tolerance of the general public and governments for transportation risk. Public tolerance for risk has greatly changed with advances in technology, education, and exposure, leading to changes in the nature and scope of regulation. A century after it was established to protect railroad passengers and property from unsafe explosives shipments, DOT's hazardous materials safety program now covers thousands of substances and quantities posing far less direct and significant risk. The provisions addressing the safety of hazardous materials transport must be well designed to reduce the likelihood of incidents and minimize the consequences of those that are not prevented.

Many external factors influence the outcomes that we aim to achieve. We can not always control these factors, but we must continuously improve our ability to anticipate them and adapt our strategies to effectively deal with each situation as appropriate. The trends we see domestically are quite often different than what we see outside the U.S., and are likely to change rapidly. The ability to anticipate and change direction quickly is critical to our effective response to these trends. Some of the key challenges and opportunities we must address over the next five years include:

Evolving Nature of Risk. The hazardous materials industry is continuously evolving in the development of the form, shape and function of products, their packaging, their uses, and the urgency and methods by which they plan to deliver products to the customer. Additionally, the transport industry is continuously evolving to adapt to their customer expectations and to improve handling and operational efficiencies. Although hazardous material incidents are relatively rare, the impact of any incident drives the consideration of regulatory amendments to reduce the opportunity for a similar future occurrence. This dynamic environment requires continuous regulatory review and amendments as appropriate to ensure a high level of safety is achieved.



New or Evolving Technologies. We review new technologies to prescribe appropriate safety controls and facilitate the introduction of new products into the market place as appropriate. New technologies pose unique challenges to safety regulators who must develop adequate provisions governing their manufacture, their use, and their safe transportation. Just as a company will invest significant resources in product development to ensure that target goals are met or exceeded, we also invest time and resources in evaluating new technologies and their potential impact on transportation safety. This ensures that the public is well protected from potential risks while facilitating technological innovations that advance safety and promote transportation efficiencies. Our technical experts work closely with modal technical experts, as well as the leading experts in industry, to encourage development of industry consensus standards.

**Performance Based Standards.** For the most part, requirements related to hazardous material transportation have transitioned from prescriptive standards to performance based standards. However, different regional philosophies or legal restrictions continue to apply pressure to impose prescriptive standards in certain instances. We support performance based standards because they state objectives to be achieved and describe methods that can be used to demonstrate achievement or compliance. A performance based standard focuses on desired characteristics of the outcome rather than requirements for the processes to produce it. Introduction of performance standards enable productivity gains and promote technological improvements. Advantages include:

**New Technology** – Performance based standards allow earlier use of new technology. The users of these standards are free to implement new technology as soon as it is demonstrated, without waiting for regulators to modify prescriptive requirements to explicitly permit use of new technology.

**Innovation** – Performance based standards encourage people to find optimum ways to meet performance criteria, which in turn leads to improved safety, efficiency and economic development.

**Barriers to Trade** – Performance based standards permit the use of new or nontraditional methods. This widens the marketplace, no longer limiting the acceptable suppliers to those manufacturers or countries with specific resources.



**Transparency** — Performance based standards that have clearly stated goals and objectives answer the question of what is to be achieved. With prescriptive standards it is not always clear what the intended objective is.

**Efficiency** – The development and maintenance of performance based standards ultimately require less effort. While initially it may be more difficult to establish the objectives, once established they are able to better adapt to changes in technology. Prescriptive standards can be slow to respond to technological changes.

**Political, Economic or Regional Influences.** People perceive risk in ways that are different from quantitative risk assessments. Decisions made by many of the international hazardous material regulatory bodies are made by majority vote. Decisions made by individual countries are driven by many factors which may include a technical risk assessment, but may also include motivations driven by political policies, economic interests, regional philosophies, or differences in public tolerances to risk. Promoting a decision making process based on risk assessments and technical evaluations is critical to ensuring the safest, most efficient transportation system.

Impediments to Multi-Modal Transportation. The transportation system infrastructure is quickly reaching capacity with limited ability to physically expand. Ensuring future system reliability to deliver critical goods is a challenge. Transport system efficiency affects the safe handling, transport, storage in transport, and delivery of hazardous materials. International, regional or modal differences in regulatory requirements introduce impediments. Confusion in the transport system and the delays created expose transport personnel and the general public to greater risk through increased handling and time that the hazardous materials are in the transportation system. In addition, it increases the regulatory and economic burden on the regulated industry with no associated benefit.



### IV. HOW WE ACHIEVE OUR GOALS

mproving safety throughout the transportation network is the premier goal of the Department and PHMSA. To achieve our goals, we will build on our organizational strengths and values. Risk assessment and technical evaluation drive our decision making, our priorities and our actions. We will continue to improve our ability to use data and available technical expertise to focus our decision making on the technical merits of the issue. We recognize that many decisions are not solely ours to make. The global, multi-modal influence on hazardous materials transportation requires effective collaboration and coordination among DOT Operating Administrations, other federal, state and local agencies, our international partners, and our large and varied stakeholder base. Lastly we will continue to improve our emphasis on harmonization to provide for a safer and more efficient movement of hazardous materials throughout the transportation system. We can only achieve success through working together as a much larger enterprise focused on affecting the safety of the transportation system.

### The Strength of Our Program — Collaboration and Transparency

Participation at international meetings is part of a continuous process of harmonizing the U.S. HMR and international standards and regulations. Effective coordination ensures that U.S. interests are communicated and considered in the development of international standards and transport regulations. PHMSA ensures coordination on U.S. positions, taking into account the interests of all the modal administrations and other government agencies. PHMSA's staff provides the technical support and resources to ensure that positions taken are sound and justified based on pertinent data, technical analysis and safety rationale. This single hazardous material safety regulatory agency approach ensures that U.S. positions in international forums reflect a truly multi-modal approach and helps avoid recurrent coordination problems that can negatively impact safety and other U.S. interests.

### **DOT Operating Administrations and other Government Agencies**

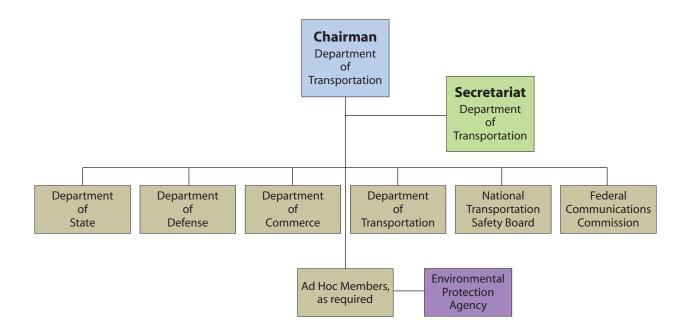
The relationship between PHMSA and the applicable Operating Administration and government agency is not only a mandated process, but a valued partnership to ensure the safe and efficient transport of hazardous materials by a specific mode. PHMSA coordinates with other departments and agencies including the Department of State (DoS), the



Department of Homeland Security (DHS), the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), and the Consumer Product Safety Commission (CPSC). Established interagency working groups coordinate on issues which are discussed in international forums. This coordination ensures that positions taken by PHMSA in international forums are consistent with U.S. interests. We work within the guidelines and procedures directed by the DoS and DOT to determine approved U.S. delegation representation at international meetings.

**Multi-Modal Transport.** PHMSA participates within the Interagency Working Group (IWG) to coordinate U.S. efforts in the development and implementation of issues related to the UN Committee of Experts on the Transport of Dangerous Goods (TDG) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). The IWG consists of representation from the DoS, OSHA, EPA, CPSC, DHS/U.S. Coast Guard and DOT. Participation in the IWG ensures proper U.S. government coordination on both Sub-Committees of the TDG and GHS. Private sector input, including non-governmental organizations, and other governmental inputs not addressed through

### IGIA — Interagency Group on International Aviation





the IWG are obtained through participation in public meetings prior to each UN session and through solicitation for comments from PHMSA's website (www.phmsa.dot.gov).

**Aviation.** Hazardous material issues related to international air transport and our work with the International Civil Aviation Organization (ICAO) are coordinated within the Interagency Group on International Aviation (IGIA). The IGIA was established by U.S. Presidential Executive Order 11382 (1967) to develop U.S. government coordinated recommendations to the Secretary of State on international aviation policy matters affecting two or more agencies. The IGIA Chairman and Secretariat is the responsibility of DOT, with membership from the Departments of State, Defense, and Commerce, the National Transportation Safety Board (NTSB), EPA, and the Federal Communications Commission. Ad Hoc members also participate as required. The IGIA process ensures final U.S. proposals have been properly coordinated with all substantive differences of opinion resolved before transmitting positions to the U.S. Representative at ICAO. We work closely with our Federal Aviation Administration (FAA) partners to ensure U.S. hazardous material standards are effectively incorporated into the ICAO Technical Instructions (TI) through amendments or U.S. variations. PHMSA serves as the Panel Member to the ICAO Dangerous Goods Panel (DGP), while the FAA is the U.S. representative to the Air Navigation Committee. In coordination with the FAA, we hold public meetings prior to each ICAO DGP session.

Maritime. As with international aviation, our international maritime efforts are coordinated within the U.S. government through the DoS. The DoS established a Federal Advisory Group called the Shipping Coordinating Committee (SHC) in 1958 under the authority of 22 U.S.C. § 2656. The purpose of the Committee is to address issues related to maritime security, safety of life at sea, and protection of the marine environment, to (a) ascertain the views of interested government departments and agencies and members of the public; and (b) make recommendations to the Secretary of State for the guidance of U.S. delegations to the International Maritime Organization (IMO) Assembly and U.S. representatives at meetings of the IMO Council, committees, subcommittees and other organizations of the IMO. Finalized U.S. positions are coordinated through the SHC. PHMSA has a long-standing synergetic relationship with the USCG on the IMO's Sub-Committee on Dangerous Goods, Solid Cargoes, and Containers (IMO DSC). We currently have an effective Memorandum of Agreement with the USCG developed after its reorganization to the Department of Homeland Security. Additionally, we participate in annual public meetings with the USCG, through the SHC, prior to each IMO DSC meeting.



Land. PHMSA works with the Federal Highway Administration (FHWA), Federal Motor Carrier Safety Administration (FMCSA) and Federal Railroad Administration (FRA) on the North American Free Trade Agreement (NAFTA) Land Transportation Standards Sub-Committee (LTSS), Hazardous Materials Land Transportation Standards Working Group (LTSS Group 5). The NAFTA LTSS Group 5 is responsible for implementing a work program for making compatible the relevant hazardous materials standards within the United States, Canada and Mexico using as their basis the UN Recommendations on the Transport of Dangerous Goods. Group 5 is one of four groups established under the NAFTA LTSS in response to Annex 913.5.a-1 of the NAFTA. In addition to these efforts, PHMSA continues to improve our relationship with FHWA, FMCSA and FRA to address issues related to transport within North America. DOT rulemaking procedures ensure all substantive differences of opinion are resolved before publication of final rules.

U.S. Rulemaking - Administrative Procedure Act. The federal Administrative Procedure Act (APA) of 1946 governs the way in which administrative agencies of the U.S. federal government may propose and establish regulations. PHMSA strictly adheres to all provisions of the APA when considering and proposing amendments, reconciling comments to proposals, and publishing final rules to amend the HMR. To ensure appropriate updates to the HMR are completed in a timely manner, PHMSA maintains a continuous U.S HMR harmonization rulemaking effort under the HM-215 series and other rulemaking series. A rulemaking in the HM-215 series is published every two years in conjunction with the effective date of the ICAO TI and International Maritime Dangerous Goods (IMDG) Code. Other rulemakings (such as those to harmonize U.S. requirements for the transportation of pressure receptacles and infectious substances) are issued as appropriate.

**DOT Intermodal Meetings.** PHMSA hosts a monthly Hazardous Materials Intermodal meeting. The purpose of the meeting is to provide a monthly forum for representatives of DOT's operating administrations and agencies/organizations the Department has partnered or worked with to achieve our mission. Attendees have the opportunity to share information and provide regulatory, modal, and security updates and feedback on ongoing activities. Individuals attending these meetings include representatives of the various administrations of the DOT (i.e., PHMSA, FMCSA, FHWA, FRA, FAA, and Research and Innovative Technology Administration), representatives of the



Transportation Security Administration, the United States Postal Inspection Service, the USCG, and other invited guests.

To improve our dialogue and coordination with the modal administrations, we intend to utilize the Intermodal Meetings to further understanding and collaboration on our international efforts. These meetings provide a unique opportunity to resolve intermodal issues introduced through rulemaking petitions, international position papers or less formal public/private communications.

**Stakeholder Input.** PHMSA strongly supports a process to bring together public and private sector stakeholders on all sides of an issue to identify and advance governmental and private sector solutions. We promote industry partnerships to leverage technical expertise and ensure all affected parties not only have an opportunity to comment on, but are actively solicited for input on issues relevant to international transportation. We are committed to taking full advantage of the strong U.S. industry base to pursue and defend U.S. interests in international regulatory forums.

- In support of this commitment we host, at a minimum, two public meetings each year to solicit stakeholder input on current issues and our work program priorities. These public meetings are announced through the Federal Register in order to ensure an equitable and consistent opportunity for participation by all stakeholders.
- Additionally, we solicit input through our website (www.phmsa.dot.gov). Our website contains meeting schedules, requests for information and input to U.S. positions, and summaries of our positions related to proposals submitted to each international meeting.
- We regularly participate in industry and government conferences and workshops to foster collaboration with the affected industry as we work together to enhance the safe transportation of hazardous materials.



#### V. ESTABLISHING PRIORITIES FOR THE FUTURE

The priorities of the Office of International Standards are shaped by the Strategic Goals of the Department and the Agency. In particular, PHMSA's international program addresses the following fundamental strategic goals:

**Safety** — We work to develop standards and regulations which protect people, their communities, and the environment, focusing especially on preventing high consequence events. Our safety goal contributes directly to helping achieve the Secretary's goal — to enhance public health and safety by working toward the elimination of transportation-related deaths and injuries.

**Global Connectivity** — In setting requirements for moving hazardous materials by all modes of transport, we work to harmonize standards internationally, which supports the Secretary's goal to facilitate an international transportation system that promotes economic growth and development. Common standards promote U.S. safety goals, while improving multi-modal efficiency and reducing complexity, thereby reducing the risk of failure.

Reduced Congestion/Reliability — We help to ensure delivery of critical energy supplies and other materials that support the economy and our way of life, by minimizing disruptions. In doing so, we advance the Secretary's goal to reduce congestion and other impediments to using the Nation's transportation system. A safe system reduces these bottlenecks, and effective response aided by timely and accurate receipt of critical information, minimizes the effect of disruptions.

**Environmental Stewardship** — We strive to maintain a comprehensive hazardous material transportation regulatory program, applying shipment preparation, packaging, and transportation solutions that protect life and the natural and built environment. Safety controls for hazardous materials transport must be well designed to prevent the release of material into the environment and reduce the consequence of releases that do occur. Environmental impacts of transportation also are reduced by improving efficiencies in the system that minimize congestion and reduce the amount of time and handling necessary to move a shipment through the system.

**Organizational Excellence** — The successful implementation of PHMSA's international agenda requires extensive coordination with internal and external stakeholders. This coordination in turn requires a foundation of trust, open communication, and consensus building to develop and meet shared objectives relevant to enhancing safety and reducing transportation impediments. As such, implementation of the plan strongly supports the Organizational Excellence component of the Department's Strategic Plan.



### **Key Safety Initiatives**

PHMSA is committed to advancing the safe transportation of hazardous materials both domestically and internationally. We identify and evaluate safety risks in order to develop or amend standards for transporting hazardous materials. We pursue regulatory and non-regulatory means to enhance safety through improvements to classification, hazard communication, and packaging. We also review and present U.S. positions on amendments proposed by other delegations to ensure high levels of safety are maintained, consistent with U.S. HMR requirements. This is a continuous and dynamic process in response to safety issues, new products or technologies, or enhancements in transportation efficiencies.

- **1. Regulatory Amendments.** Our primary mission is to promote the adoption of international transportation safety and security standards and regulations consistent with the high standards in the U.S. HMR. To this end, we represent the U.S. DOT at various international hazardous material regulatory and standard developing organizations and work to evaluate and prepare amendments to the relevant regulations and standards promulgated by these bodies. Current initiatives include:
- a. Limited Quantity/Consumer Commodity. We will work to establish internationally harmonized requirements for the transport of consumer goods to enhance hazard recognition, handling, and appropriate response measures for these shipments. We will finalize the work in this area at the UN Sub-Committee of Experts on the Transport of Dangerous Goods and the ICAO Dangerous Goods Panel.
- b. Toxic by Inhalation (TIH). We will work within the UN Sub-Committee to present data relevant to materials that meet TIH criteria to ensure the proper level of packaging and hazard communication.
- c. Energy Sources/Battery Safety. We will continue to participate in domestic and international efforts to develop regulatory and non-regulatory measures to enhance the safe transport of energy sources and batteries. PHMSA will lead an international UN Informal Working Group on lithium battery testing and transport provisions. The first Working Group meeting is scheduled in Washington DC.



- **2. Air Transport.** Safety of hazardous materials in air transport is a high priority for the Agency. We work closely with the FAA to ensure U.S. hazardous material standards are effectively incorporated into the ICAO TI through amendments or U.S. variations.
- a. ICAO TI Packing Instructions. We will continue efforts to develop and implement reformatted packing instructions within the ICAO TI. We will evaluate and determine an appropriate means of incorporating the new ICAO TI packing instructions (effective January 1, 2011) into the HMR.
- b. Air Packaging Standards. We continue to work to identify ways to improve the packaging requirements for hazardous materials transported by air in order to reduce the probability, and minimize the effects of, an incident in air transportation.
- **3. Maritime Transport.** We continue to work jointly with the U.S. Coast Guard to address issues critical to maritime safety. We will seek to broaden our dialogue with stakeholders to ensure regulatory requirements are comprehensive and keep pace with new technologies.





a. Enhanced Stowage Requirements. We will work to improve and clarify vessel stowage requirements to reduce the risk to crew of loading certain materials under deck and to simplify stowage provisions to improve efficiency. Recently, an incident involving a release of a cryogenic liquid resulted in three fatalities aboard a vessel. We will work to reduce the opportunity for future incidents by implementing standards in the IMDG Code that are consistent with those of the HMR.

b. Transport of Vehicles. New technologies developed within the automotive industry (hydrogen powered, hybrid electric, natural gas vehicles, etc.) require a comprehensive review of provisions for transporting vehicles by sea. Historically the IMDG Code has not addressed the transport of vehicles. We will lead an effort to ensure appropriate provisions governing the safe transport of vehicles are addressed within the IMDG Code.

- c. Safety of Life at Sea Convention (SOLAS). We will perform a comprehensive review of the SOLAS text relative to the use of the IMDG Code. We will work to ensure that the text is accurate and adequately addresses implementation of the provisions of the IMDG Code, and propose amendments as appropriate.
- **4. Security.** We pursue opportunities to enhance the security of hazardous materials shipments. We continually evaluate the list of High Consequence Dangerous Goods in the UN Model Regulations to ensure security plan and training requirements are appropriate. We also evaluate new technologies with the potential for improving the secure transport of hazardous materials with the view of providing adequate safety provisions in international and domestic regulations.

### **Key Global Connectivity Initiatives**

Regional and national regulations are affected by legislative structures, governmental processes, political motivations, and public perception. Although we represent the U.S. at numerous international regulatory forums that develop international regulations, PHMSA pursues numerous other opportunities to eliminate obstacles to international trade for U.S. industries and partners. We work towards agreements to increase reciprocity for the acceptance of U.S. technical standards, regulations, or approval processes with other countries. We also pursue agreements with individual countries to share technical expertise, enforcement and inspection guidelines, incident data, and other information as a means of enhancing safety and improving efficiency in international transportation.



- **1. Assessing Regulatory Differences.** PHMSA is conducting a comprehensive regulatory assessment comparing the U.S. HMR to those regulations applicable to international transport. We will be evaluating the results of the assessment to determine potential areas of harmonization in both the U.S. HMR and the international regulations and standards.
- a. We will evaluate specific differences related to classification, packaging, marking, labeling, and documentation.
- b. We will evaluate the possibility of harmonizing the packaging sections in the HMR with the format in the UN Model Regulations and ICAO TI. Further harmonization of the types of authorized packagings and the format to communicate those authorizations will enhance compliance through improved understanding and ease training.
- c. We will continue to pursue opportunities to align the U.S. HMR and the international regulations to reduce differences and enhance harmonization.
- **2. International Trading Partners.** Recognizing the continually growing trade in hazardous materials between the U.S. and China, PHMSA is collaborating on a Cooperative Project Arrangement (CPA) between the U.S. DOT and the Ministry of Transport of the People's Republic of China. The goal of this agreement is to enhance technical cooperation, improve cooperation on enforcement and investigative actions, promote outreach and training opportunities, and improve coordination on international regulatory development issues. We expect the Secretary/Minister of each Department to sign the CPA in 2009.



3. North America. PHMSA intends to expand cooperation on regulatory development and transport facilitation issues with our North American partners — Canada and Mexico. We will work to ensure a coordinated strategy on the domestic approach each country takes to its adoption of international standards. In addition, we will identify key differences in land transportation standards and work to minimize such differences to the greatest extent practicable. We will initiate



efforts to establish reciprocal agreements on issues of importance to our stakeholders, such as mutual recognition of UN standard packaging testing laboratories.

**4. Building Consensus.** We will continue to build and enhance relationships with all international representatives that share our safety objectives. This includes an enhanced focus on improving our partnerships with members of the



European Union through our work at the Economic Commission for Europe Joint Meeting of the RID Committee of Experts and the Working Party on the Transport of Dangerous Goods, as well as our partners in South America and Asia. We believe in and will pursue consensus decisions that promote our shared objectives.

### Key Congestion/Reliability Initiatives

Facilitating multi-modal transportation is an initiative that crosses two of the Department's strategic goals — reducing congestion and enhancing global connectivity. Harmonization of hazardous materials regulations enhances safety through improved compliance by both shippers and carriers. Additionally, competitive world trade partners rely on a transportation infrastructure that minimizes obstacles among multiple geographies or between modes of transport within a single geography. We will work within the UN Sub-Committee of Experts on the Transport of Dangerous Goods to develop consistent multi-modal provisions, and with each modal international body and U.S. modal administration to ensure a high standard of safety is maintained throughout the inter-modal transfer of cargo, while minimizing barriers to trade caused by incompatible requirements.

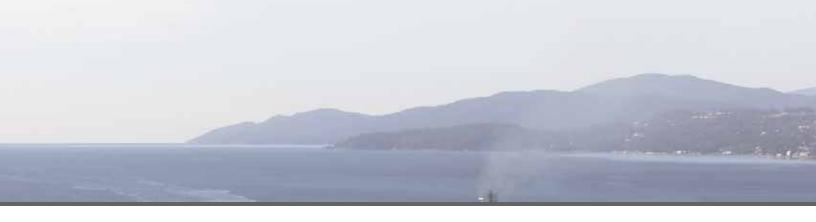
**1. Electronic Information.** PHMSA is exploring prospects for the electronic transfer of information in order to provide better, faster, and more accurate communication of hazard information. Under the current paper-based system, emergency response efforts can be delayed due to a lack of timely and accurate information and poor communication between transportation partners. We are working to determine regulatory guidelines for the use of electronic communication as a compliment, and potentially as an alternative to paper shipping papers. Under a PHMSA initiative titled HM-ACCESS (Hazardous Materials — Automated Cargo Communication for Efficient and Safe Shipments), we



are developing a roadmap that will guide our efforts to promote the adoption of paperless systems both domestically and internationally. Additionally, we are working within the UN Sub-Committee of Experts to develop a baseline of current documentation requirements and consider potential international regulatory amendments that will facilitate the use of electronic documentation within the transportation system.

- **2. Mutual Recognition.** We will continue our efforts to improve global recognition for U.S. issued approvals and U.S. authorized packagings such as pressure receptacles and portable tanks. PHMSA is evaluating our Special Permits and Approvals process to better define process flow and requirements to our customers, both domestic and international, in order to promote confidence in the U.S. system and reduce opportunities for non-acceptance.
- **3. Impediments to Multi-Modal Transportation.** Impediments to multi-modal transport of hazardous materials exist because of discrepancies in information and time lags associated with the physical transfer of information between transportation partners. To overcome these impediments we continually work to address differences in requirements related to packaging, hazard communication, and emergency response information. In relation to modal specific shipping paper requirements, PHMSA is currently working with industry organizations and other federal agencies to better harmonize hazardous material shipping paper information for multi-modal shipments.





### **Key Environmental Initiatives**

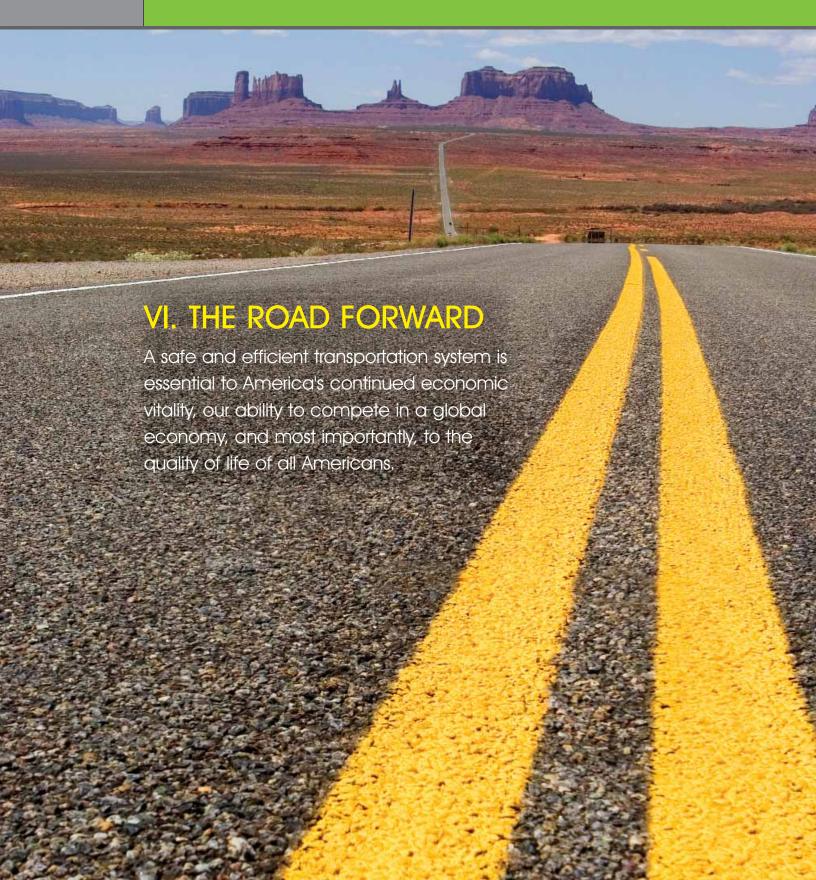
PHMSA's focus on prevention and mitigation of hazardous materials releases in transportation gives the agency a key role in protecting the natural environment. Improving efficiencies and reducing congestion help to relieve some of the stress placed on the environment by a growing volume of transportation. More directly, the development and enforcement of packaging provisions minimize both the likelihood of hazardous materials incidents and the magnitude of releases that do occur. In addition, appropriate hazard communication facilitates prompt and efficient incident response, including containment of released materials.

- 1. Marine Pollutants. We work to ensure that the provisions of the IMDG Code directly support the International Convention for the Prevention of Pollution From Ships, 1973, as modified by the Protocol of 1978 (MARPOL). Specifically, we work jointly with the U.S. Coast Guard to ensure that the provisions of the IMDG Code support the MARPOL's stated objective to "preserve the marine environment through the complete elimination of pollution by oil and other harmful substances and the minimization of accidental discharge of such substances."
- **2. Environmentally Hazardous Substances.** We will continue to work on implementing the criteria developed under the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Practical implementation of these criteria will provide more accurate identification of materials deemed hazardous to the aquatic environment.





THE ROAD FORWARD





We recognize that our international work contributes to America's prosperity by enhancing the safe handling and transportation of critical hazardous materials and enabling access to foreign markets. As we look to the future of hazardous materials transport safety, the United States has much to offer and much to gain through PHMSA's active participation and leadership in the development of international transportation standards. Drawing on a century of experience, highly-qualified technical expertise, and strong stakeholder participation, PHMSA will promote the high standards of safety, security, and environmental protection proven effective under our regulatory program. Working closely with our stakeholders, PHMSA will direct its international efforts to address key challenges to the safety and efficiency of the global transport system.

Improving integrity of the system and reduce system risk — Our primary goal is to establish appropriate and practical measures (both regulatory and non-regulatory) to promote the safe and secure transport of hazardous materials. We will use data and technical expertise as the basis for safety decisions, seeking cost-beneficial solutions that will reduce risk to the public.

Engage, lead, and help strengthen the capabilities of others who share in achieving our safety and efficiency goals — The global, multi-modal influence on hazardous materials transportation requires effective collaboration and coordination among DOT safety administrations, other federal, state and local agencies, our international partners, and our large and varied stakeholder base. We will strengthen cooperation with international partners that share our safety objectives to bring attention to safety issues and build consensus-based solutions.

#### Anticipate future needs for transporting critical hazardous material products —

Transportation risk is dynamic, requiring continuous evaluation and adjustment of risk controls. Advancements in technology (e.g. biofuels, fuel cells, etc.) and market-driven changes in the global transportation system pose significant challenges for risk control. PHMSA will be vigilant in addressing these challenges in order to keep pace and promote continuous improvement in safety performance. Our ability to anticipate technological advancements and promote the use of performance-based regulations is critical to our success in ensuring the regulations facilitate, rather than impede, the development of new technologies.

In addressing these and other challenges, PHMSA's Office of International Standards is committed to leading efforts with all parties involved in hazardous material transport, in order to reduce risk, enhance safety and improve system performance.



### Participation in International Forums

### The international forums in which PHMSA participates include the following:



# United Nations Sub-Committee of Experts on the Transport of Dangerous Goods (UN SCOE TDG)

- The UN SCOE TDG meets twice each year on a biennial schedule to develop amendments to the UN Recommendations on the Transport of Dangerous Goods (UN Model Regulations). For example, the work of UN SCOE TDG for the 2007-2008 biennium will culminate in amendments to the UN Model Regulations that will be published in 2009 and incorporated into domestic and international regulations in 2011.
- The UN Model Regulations form the basis for the development of harmonized hazardous material regulations for all modes of transport and have gained global acceptance through adoption as the basis for most international, regional, national and model transportation regulations.



# United Nations Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals (UN SCOE GHS)

- The UN SCOE GHS meets twice a year on a biennial schedule in conjunction with the UN SCOE TDG.
- The UN SCOE GHS provides common, consistent criteria for classifying chemicals and developing compatible labeling and safety data sheets. The Globally Harmonized System is intended to enhance public health and environmental protection, while reducing barriers to trade.
- The work of the UN SCOE GHS has a direct impact on a number of U.S. regulations, including the HMR and regulations administered by the Environmental Protection Agency (EPA), the Consumer Product Safety Commission (CPSC) and the Occupational Safety and Health Administration (OSHA).



#### International Civil Aviation Organization's Dangerous Goods Panel (ICAO DGP)

- The ICAO DGP works on a biennial basis that is staggered one year after the UN SCOE TDG cycle. For example, the ICAO DGP is currently in its 2008-2009 biennium and will consider amendments adopted by the UN SCOE TDG during its 2007-2008 biennium.
- The work of the ICAO DGP this biennium will be reflected in the 2011-2012 ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air (TI).
- Virtually all shipments of hazardous materials transported internationally by air, and most U.S. domestic air shipments, are transported in accordance with the ICAO TI. The HMR authorize the use of the ICAO TI under certain conditions and limitations.



# International Maritime Organization's Sub-Committee on Dangerous Goods, Solid Cargoes and Containers (IMO DSC)

- Similar to the ICAO DGP, the IMO DSC works on a biennial basis that is staggered one year after the UN SCOE TDG cycle. For example, the IMO DSC is currently working on the 2008-2009 biennium which includes amendments to the UNSCOE TDG's 2007-2008 biennium. The work of the IMO DSC from 2008-2009 will be reflected in the IMDG Code Amendment 35-10 which provides for voluntary implementation on January 1, 2011 and mandatory entry into force on January 1, 2012.
- The IMO DSC is responsible for amendments to the International Maritime Dangerous Goods (IMDG) Code.





- Virtually all hazardous material shipments transported internationally by vessel are transported in accordance
  with the IMDG Code. Implementation of the Code is mandatory in conjunction with governments' obligations
  under the International Convention for the Safety of Life at Sea (SOLAS) and the International Convention for the
  Prevention of Pollution from Ships (MARPOL).
- The HMR authorize domestic use of the IMDG Code under certain conditions and limitations when at least one segment of transport moves by sea.



## International Atomic Energy Agency Transport Safety Standards Committee (IAEA TRANSSC)

- TRANSSC is a standing body of experts in the transport of radioactive material. TRANSSC advises the IAEA on the overall program for the development, review and revision of standards relating to the safety of transport of radioactive material. While the development of transport standards is its primary role, TRANSSC also has an obligation to coordinate its activities with other IAEA safety standards committees (radiation safety, nuclear safety and waste safety) to ensure transport safety issues are addressed appropriately.
- TRANSSC meets twice a year and operates a biennial review process in conjunction with the UN SCOE TDG.
- The IAEA Safety Standards form the basis for the development of harmonized radioactive material regulations for all modes of transport and have gained global acceptance through adoption as the basis for most international, regional, national and modal transport regulations.



#### Joint Meeting of the ADR/RID/ADN

- The Joint Meeting also meets twice a year on a biennial basis similar to the ICAO and IMO.
- The Joint Meeting is responsible for establishing hazardous materials safety and security requirements for surface (road, rail, and vessel) transport within the Economic Commission for Europe's 55 member countries.
- The results of this meeting directly affect work being done at the UN Sub-Committee of Experts on the Transport of Dangerous Goods.



## North American Free Trade Agreement Land Transportation Standards Sub-Committee (NAFTA LTSS)

- The Hazardous Materials Land Transportation Standards Working Group, Group 5 of the NAFTA LTSS, meets once a year and includes representatives from Mexico and Canada.
- The Working Group is responsible for implementing a work program for ensuring compatible hazardous materials standards within the United States, Canada and Mexico using as their basis the UN Model Regulations.
- Group 5 is established under the NAFTA LTSS in response to Annex 913.5.a-1 of the NAFTA.



### Office of International Standards Priorities 2008 – 2013

| CALENDAR YEAR 2008  | CALENDAR YEAR 2009  | CALENDAR YEAR 2010 – 2013   |
|---|---|---|
| Finalize amendments for the 16th Revised     Edition of the UN Model Regulations.   | Finalize amendments for the 2011-2012     ICAO TI and the Amendment 35-10 of the IMDG Code.   | Develop potential amendments to the U.S. HMR     to harmonize with the international provisions for     limited quantities and consumer commodities.  |
| Publish final rule HM-224D/HM-215J titled     "Revision to Requirements for the Transportation     of Batteries and Battery-Powered Devices; and     Harmonization with the United Nations     Recommendations, International Maritime     Dangerous Goods Code, and International Civil     Aviation Organization's Technical Instructions." | Develop a proposal to amend the ICAO TI to address the UN Model Regulations transport provisions for limited quantities and consumer commodities.   | 2. Evaluate and develop options to amend the HMR packaging paragraphs to incorporate the new (effective January 2011) packing instructions of the ICAO TI and the potential to further harmonize with the packing instructions of the UN Model Regulations. |
| <ol> <li>Finalize specific amendments to the UN Model<br/>Regulations related to harmonized provisions<br/>for hazardous materials packed in limited<br/>quantities and consumer commodities.</li> </ol>  | 3. Finalize the Cooperative Project Arrangement with the Ministry of Transport of the People's Republic of China. Begin efforts to accomplish the major elements from the Action Plan.  | 3. Evaluate the results of HM-231A "Hazardous<br>Materials: Combination Packages Containing<br>Liquids Intended for Transport by Aircraft"<br>rulemaking effort and determine potential<br>amendments to the ICAO TI as appropriate.                        |
| <ol> <li>Finalize specific amendments to the UN Model<br/>Regulations to ensure appropriate packaging<br/>and portable tank provisions for materials that<br/>meet the criteria of toxic by inhalation.</li> </ol>  | <ol> <li>Implement the HM-ACCESS roadmap and<br/>propose appropriate regulatory amendments<br/>to reduce impediments in multi-modal<br/>transportation.</li> </ol>  | <ol> <li>Finalize agreements with Canada and Mexico<br/>to improve pre-rulemaking coordination on<br/>potential amendments related to each coun-<br/>try's regulations. Develop improved reciprocity<br/>of approvals or approval processes.</li> </ol>     |
| <ol> <li>Publish the HM-ACCESS roadmap document<br/>and work within the UN Sub-Committee to<br/>amendment the UN Model Regulations to<br/>include provisions for the expanded use of<br/>electronic documentation.</li> </ol>   | <ol> <li>Develop an action plan to accomplish<br/>recommendations resulting from the<br/>regulatory assessment and begin to<br/>propose specific amendments.</li> </ol>   | Develop agreements with other competent<br>authorities to increase mutual recognition of<br>pressure receptacles and other approvals.   |
| <ol> <li>Finalize the regulatory assessment that will<br/>serve as the primary tool for identifying<br/>additional areas of potential harmonization<br/>of the U.S. HMR and international regulations<br/>and standards.</li> </ol>   | <ol> <li>Evaluate the provisions in the ICAO TI and<br/>IMDG Code related to competent authority<br/>approvals and exemptions and propose<br/>regulatory amendments to reduce barriers<br/>for U.S. authorizations.</li> </ol>  | Harmonize the provisions of the IAEA     Regulations for the Safe Transport of     Radioactive Materials TS-R-1 with the UN     Model Regulations.  |
| 7. Host a UN Sub-Committee of Experts on the Transport of Dangerous Goods Informal Working Group to address lithium battery safety. The first meeting will address the testing provisions applicable to battery design types.   | 7. Finalize an amendment to SOLAS to improve consistency related to the documentation requirements of the IMDG Code. Develop specific amendments to the Code to clarify these requirements and remove impediments to multi-modal transport caused by inconsistent documentation requirements. |   |
| Lead a UN Sub-Committee of Experts on the Transport of Dangerous Goods correspondence group to evaluate and improve the regulatory text for determining the proper shipping description for mixtures and solutions.   |   |   |

### Specific Work Plan Items by Strategic Initiatives

| WORK PLAN ITEM  | RELEVANT<br>INTERNATIONAL<br>FORUM(S)<br>(if applicable) | TIMEFRAME<br>SHORT: 1 YEAR<br>MEDIUM: 2-3 YEARS<br>LONG: 4 OR MORE YEARS |
|---|--|--|
| SAFETY  |  |  |
| Finalize internationally harmonized provisions for the transport of materials packaged in limited quantities/consumer commodities.  | UN   | Short  |
| <ul> <li>Toxic by Inhalation (TIH) Materials</li> <li>Collect data to ensure we have the necessary classification data to amend entries for liquid materials that meet TIH criteria.</li> <li>Amend requirements for transport of TIH liquids in portable tanks to require higher integrity tanks consistent with the requirements of the HMR.</li> <li>Amend as appropriate the non-bulk packaging requirements for materials meeting TIH criteria.</li> </ul> | UN   | Short  |
| Amend the cylinder filling ratio limit (lower) for Methyl Fluoride  | UN   | Short  |
| Assess the need to amend the requirements for orientation labels as they apply to small tubes and containers that are hermetically sealed.  | UN   | Short  |
| Participate in domestic and international efforts to review the requirements for the transport of lithium batteries. Lead a UN Working Group to evaluate the effectiveness and necessary amendments to the design type testing and transport provisions for lithium batteries.  | UN/ICAO  | Short  |
| Review requirements of the UN Model Regulations and ICAO TI with respect to electric storage batteries and battery powered devices. Evaluate the requirements of the HMR to identify whether any amendments to the international regulations are necessary.   | UN/ICAO  | Short  |
| Develop appropriate amendments to address the proper classification of oxygen cylinders containing a small actuating cartridge used as Passenger Service Units.   | UN/ICAO  | Short  |
| Work to finalize requirements for fuel cell technology within international and domestic regulations.   | UN/ICAO  | Short  |
| Amend the IMDG Code to prohibit under deck storage for refrigerated, liquefied gases.   | IMO  | Short  |
| Work to facilitate the use of new technologies such as tracking devices employing lithium batteries affixed to multimodal freight containers and ensure appropriate safety provisions.  | IMO  | Short  |
| Review and amend as necessary portable tank filling level requirements for liquefied gases (i.e. T50).  | UN   | Medium   |
| Lead a UN Correspondence Group to review and develop appropriate regulatory text to address assignment of the proper description for mixtures and solutions.  | UN   | Medium   |
| Pursue the development of enhanced classification and testing requirements for small quantities of explosives (including those contained in articles or used in pharmaceutical research and development).   | UN   | Medium   |



### Specific Work Plan Items by Strategic Initiatives

| WORK PLAN ITEM   | RELEVANT<br>INTERNATIONAL<br>FORUM(S)<br>(if applicable) | TIMEFRAME<br>SHORT: 1 YEAR<br>MEDIUM: 2-3 YEARS<br>LONG: 4 OR MORE YEARS |
|--|--|--|
| Work to establish requirements for welded cylinders and pressure drums within the UN Model Regulations. Coordinate with other international standards setting bodies such as the International Organization for Standardization (ISO) as necessary.  | UN   | Medium   |
| In collaboration with our international partners, assess the need to amend TIH labels and placards in international regulations consistent with those required by the HMR.   | UN   | Medium   |
| <ul> <li>Chronic toxicity criteria for substances hazardous to the aquatic environment</li> <li>Participate in development of new criteria that are technically correct and practical.</li> <li>Work with industry and governmental stakeholders to prepare comments and positions on proposals submitted to the Organization for Economic Co-operation and Development (OECD) on the new criteria, and on those submitted to the UN Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals.</li> <li>Ensure that criteria are developed in a form that can be implemented by IMO.</li> </ul> | UN   | Medium   |
| Continue efforts to develop and implement reformatted packing instructions within the ICAO TI.   | ICAO   | Medium   |
| Work with the ICAO Dangerous Goods Panel to determine appropriate amendments to address UN changes to the provisions for materials packaged in limited quantities/consumer commodities.  | ICAO   | Medium   |
| Harmonize the provisions of the IMDG Code with those of the U.S. HMR for Vehicles and Engines.   | IMO  | Medium   |
| Amend SOLAS to replace detailed provisions for documentation of hazardous material shipments with a reference to the documentation requirements of the IMDG Code to ensure consistency of the requirements within the SOLAS Convention and the Code.   | IMO  | Medium   |
| Review the IMDG Code for opportunities to streamline or simplify the documentation requirements as appropriate for specific applications within the Code.  | IMO  | Medium   |
| GLOBAL CONNECTIVITY  |  |  |
| Publish HM-215J to align the U.S. HMR with updates to the UN Model Regulations, ICAO TI, and IMDG Code.  | HMR  | Short  |
| Perform a comprehensive assessment comparing the U.S. HMR to those regulations applicable to international transport. Identify differences between international and domestic hazardous materials regulations, and prioritize proposed amendments.   | HMR  | Short  |
| Finalize a memorandum of agreement with the Ministry of Transport of the People's Republic of China and begin to implement a plan of action.   |  | Short  |

| WORK PLAN ITEM  | RELEVANT<br>INTERNATIONAL<br>FORUM(S)<br>(if applicable) | TIMEFRAME<br>SHORT: 1 YEAR<br>MEDIUM: 2-3 YEARS<br>LONG: 4 OR MORE YEARS |
|---|--|--|
| Evaluate the list of High Consequence Dangerous Goods in the UN Model Regulations to ensure security plan and training requirements are appropriate.  | UN   | Medium   |
| Harmonize the provisions of the IAEA TS-R-1 with the UN Model Regulations.  | UN   | Medium   |
| Develop a process for advance review of potential rulemakings with our North American partners. Obtain similar commitments from Mexico and Canada.  | NAFTA/SPP  | Medium   |
| Identify high priority items to assist Mexico in implementing requirements based on decisions taken by the UN. Examples include the new Organic Peroxide label, GHS-based classification changes, and recognition of new proper shipping names adopted by the UN.   | NAFTA/SPP  | Medium   |
| CONGESTION/RELIABILITY  |  |  |
| Complete the HM-ACCESS roadmap outlining PHMSA's direction to address the capability of electronic documentation to enhance safety and improve transport efficiency.  |  | Short  |
| Provide ICAO with a description of the U.S. approval process, including application requirements, technical review, coordination, and general process flow.   | ICAO   | Short  |
| Work with PHMSA's Office of Standards to assess the current provisions applicable to the transport of Combustible Liquids, determining appropriate HMR requirements and international amendments as necessary.  | HMR/UN   | Medium   |
| Evaluate provisions for the use of electronic documentation within domestic and international regulations. Investigate ways to enhance the ability of shippers and carriers to use electronic documentation to enhance hazard communication and emergency response. If necessary propose amendments further facilitating the use of electronic documentation without compromising transport safety and security.  | UN   | Medium   |
| Work with stakeholders to minimize unnecessary operational impediments to the multi-modal transportation of hazardous materials. Evaluate whether amendments to documentation requirements could reduce shipment delays and reduce corresponding congestion at ports and other intermodal facilities. Identify obstacles and impediments to the efficient multi-modal transport of hazardous materials, focusing on the inter-modal interface, consistent enforcement practices and improving the communication of information to emergency responders. |  | Medium   |
| Evaluate appropriate regulatory amendments related to the issuance of approvals.  | UN/ICAO/IMO  | Medium   |
| Update the ICAO TI Supplement utilized by Competent Authorities to assist in evaluating and issuing approvals.  | ICAO   | Medium   |



### Specific Work Plan Items by Strategic Initiatives

| WORK PLAN ITEM   | RELEVANT<br>INTERNATIONAL<br>FORUM(S)<br>(if applicable) | TIMEFRAME<br>SHORT: 1 YEAR<br>MEDIUM: 2-3 YEARS<br>LONG: 4 OR MORE YEARS |
|--|--|--|
| Continue to work with other competent authorities towards mutual recognition of pressure receptacles.  | UN   | Long   |
| Public Meetings  - Host at least two public meetings each year prior to meetings of the UN Sub-Committee of Experts on the Transport of Dangerous Goods.  - Host additional public meetings as required. |  | Continual  |
| Participate in conferences and workshops which bring together industry and government stakeholders to identify appropriate regulatory actions which enhance safety and facilitate trade.                 |  | Continual  |
| Advance the capability to collect, analyze, and apply risk-based data for our own and our stakeholders' safety decisions.  |  | Continual  |





