

# PHMSA

# National Packaging Strategy

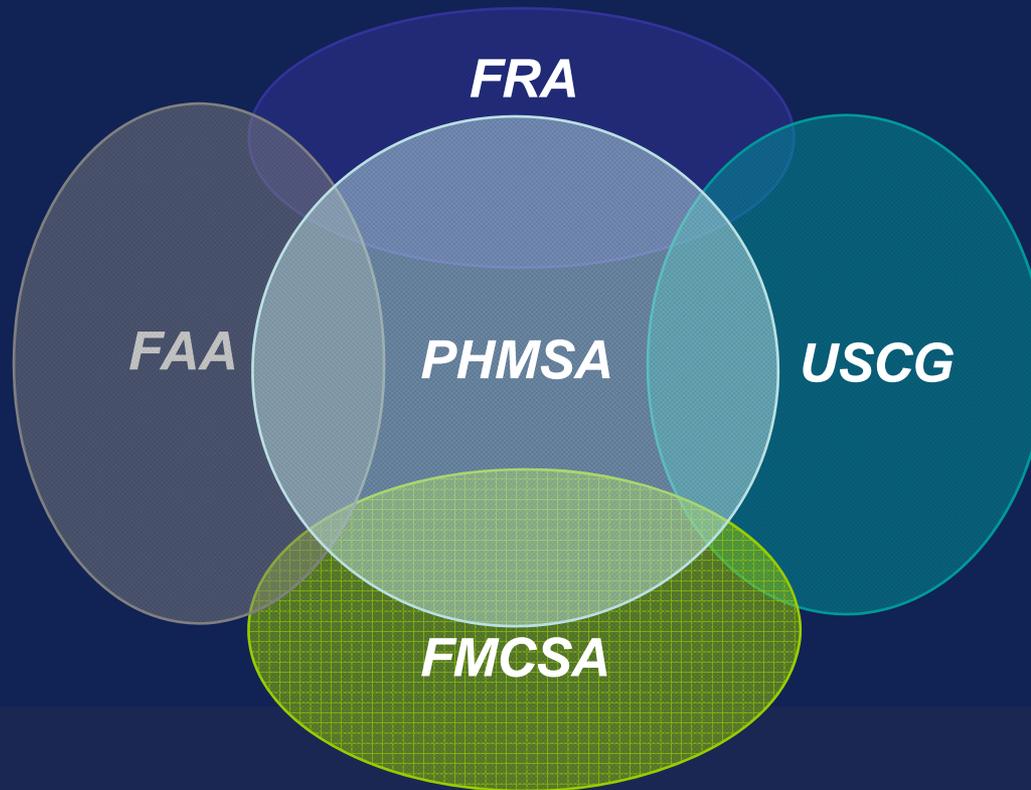
*Institute of Packaging Professionals  
Chemical Packaging Committee  
October 7, 2008*

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# PHMSA's Scope

PHMSA shares HMR jurisdictional enforcement authority with its modal partners



# Packaging is our Specialty

- **PHMSA primarily focuses enforcement and oversight on -**
  - **Non-bulk Packaging**
  - **Intermediate Bulk Packaging**
  - **Inter-modal Portable Tanks**
  - **Compressed Gas Cylinders (portables and tubes)**
  - **Special Permit Packaging (varying types & sizes)**
  - **Competent Authority Approvals**
- **PHMSA possesses unique and specialized pkg experience**
- **Packaging is a fundamental component of all inspections**
- **All PHMSA investigators are involved in HM packaging**



# Packaging Types



550 Gallon Rigid Plastic IBC



Compressed Gas Tube Trailer



275 Gallon Composite IBC



5 Gallon Jerrican



Poison Pack SP9168



55 Gallon Plastic Drum



275 and 330 Gallon Portable Tanks



Firefighter SCBA



Air-certified Paint Can Shipper



55 Gallon Steel Drum



# Why Packaging?

**“Packaging is the most important element in the hazardous materials safety system”**

**Keeping the hazmat contained in the package, significantly reduces the risk of the material and severity of an incident.**



# Mission

**To ensure and promote the safety and performance of the hazardous materials packaging system, including:**

- Manufacture, requalification, recondition, maintenance, and use of hazardous materials packaging;
- And to determine the adequacy and clarity of the regulations for which HM packaging is based.

***Successful execution of this mission will reduce incidents and mitigate risks attributed to the unsafe and or non-complying manufacture, maintenance and use of hazardous materials packaging.***



# Fundamental Methods

- **OHME will utilize risk based approaches outlined in its National Business Strategy**
- **OHME will introduce new and innovative methods to work with industry to promote safety and reliability of the packaging system and reduce incidents and accidents**



United States Department of Transportation  
Pipeline and Hazardous Materials Safety Administration  
Office of Hazardous Materials Enforcement



National Packaging Strategic Plan  
August 2008

Overview

Although PHMSA possesses jurisdictional enforcement authority over all modal hazardous materials transportation activities under the hazardous materials regulations (HMR), PHMSA primarily focuses its enforcement and oversight on non-bulk, intermediate bulk, compressed gas cylinder, and special permit packaging. Including HM shippers and some carriers, PHMSA's exclusive jurisdictional area on packaging is and has historically been assigned thru an inter-agency agreement amongst the Department's modal administrations. Sharing enforcement and oversight with its modal partners on HM shippers, PHMSA also possesses a unique and specialized expertise in HM packaging. Utilizing risk based approaches and its

National Business Strategy, PHMSA's Office of Hazardous Materials Enforcement (OHME)

# National Packaging Strategic Plan

Mission

The mission of the Office of Hazardous Materials Enforcement (OHME), Packaging Program, is to ensure and improve the performance of the hazardous materials packaging system including the manufacture, maintenance, use of hazardous materials packaging. In addition, OHME's mission is also to determine the adequacy and clarity of the regulations for which HMR packaging is based. Successful execution of this mission will reduce incidents and mitigate risks attributed to the unsafe and or non-complying manufacture, maintenance and use of hazardous materials packaging.

Objectives

OHME will build capabilities and ensure packaging oversight uniformity and consistency by continuing to execute its national enforcement training program for its own investigative personnel.

OHME will identify trends and patterns of safety related packaging problems through extensive evaluation of available data and prioritize those areas and activities posing the greatest risk. Continually pursuing additional relevant data sources, OHME will focus its enforcement and oversight resources on those packaging activities posing the greatest transportation risk.



# All activities are determined using a data-driven risk based strategy

## Priority Assessment Categories

**DARK RED – Maximum Priority**

**RED – High Priority**

**ORANGE – Medium Priority**

**YELLOW – Priority**

All HM Enforcement activities are prioritized in categories.

General Activities :

- Inspections
- Investigations
- Training
- Outreach
- Education

***Higher posing risk = Higher priority of activity***



# Objectives

- Ensure packaging oversight uniformity and consistency
- Aggressively target and eliminate egregious non-compliance activities posing serious safety risks.
- Seek to improve consistency and develop uniform protocols.
- Foster and support more effective quality control programs with mfrs.
- Continue focus on high risk, high consequence packaging through collection and evaluation of data and intelligence.
- Use data to identify trends and patterns of safety related packaging problems and prioritize those areas posing the greatest risk.
- Consider alternative validation processes in the verification and oversight of packaging integrity and performance certification



# U.S. Performance Packaging System

- **Based on self-certification and testing.**
  - U.S. packaging manufacturers may test and certify their own designs, or use outside party, including PHMSA's approved list of 41 Third Party Testing Labs (all are private companies).
  - U.S. requires periodic retesting every 12 to 24 months. (No other country requires periodic retesting)
- ***The US system of self-certification is one of a kind***
- ***All other nations test and certify designs at state-run labs***



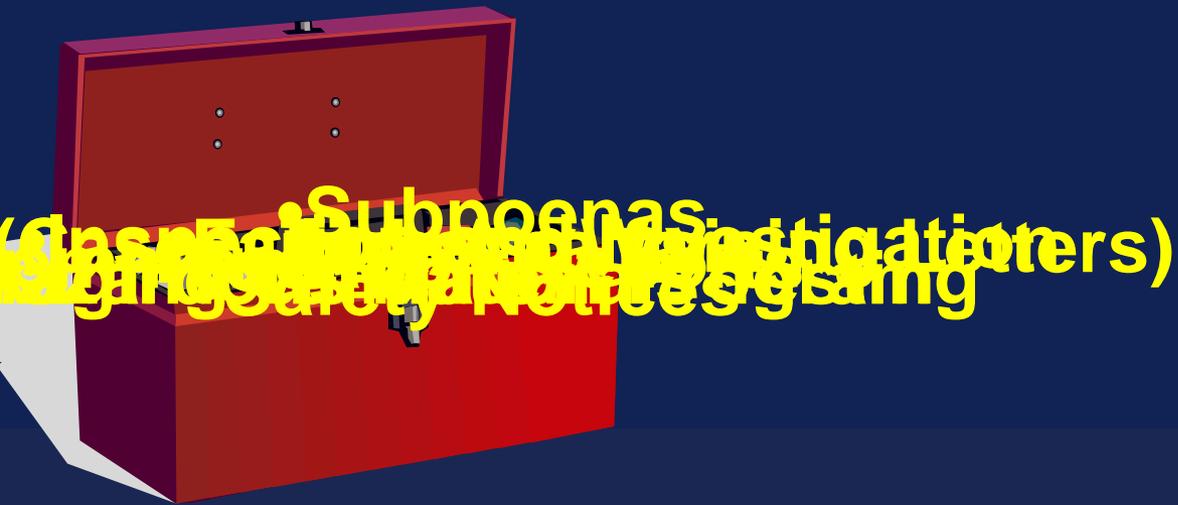
# U.S. Performance Packaging System

**PHMSA verifies packaging certification and performance through inspection and validation testing**

*No other country verifies performance certifications by sampling designs after certification and production*



# Tools



# Performance Packaging Validation Program

**PHMSA validates designs and certifications of in-service packaging with manufacturers, Third Party Labs, & Self Certifiers using one of three methods-**

- 1) Manufacturer demonstrated testing  
(witnessed by PHMSA)
- 2) Third Party or Certifier demonstrated testing  
(witnessed by PHMSA)
- 3) Independent testing by PHMSA
  - At LOGSA (Tobyhanna, PA) for POP Packaging



# Performance Packaging Oversight and Validation

PHMSA inspects manufacturer, and

Manufacturer offered opportunity to test for PHMSA representatives

NOTES:

- Final action greatly depends on testing outcomes
- Testing is performed using standard methods where present
- Regulatory inadequacies and inconsistencies are evaluated and referred to Standards Office as recommendations
- PHMSA Testing standards, protocols, procedures and strategies are posted to PHMSA HM Enforcement website

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Results

Fail?

PASS

Re-Testing,

Enforcement Sanction, or

End of Activity (no further action)

Improvements

End of Activity

# LOGSA

- **U.S. Army Materiel Command, Packaging Storage and Containerization Center (PSCC), Logistics Support Activity (LOGSA), Tobyhanna, PA**
  - 50 years as DOD's lead service facility for packaging
  - 12 years and 330+ non-bulk and IBC designs for PHMSA
  - PHMSA selects all designs for testing
  - LOGSA conducts tests in accordance with HMR and ASTM
  - PHMSA shares results and videos with manufacturers
  - Data from testing is used to identify trends and patterns



# Other Packaging Roles

- **Rulemaking Development**
- **Systems Analysis and Feedback**
  - Recommendations on:
    - Safety, Process, Adequacy, Performance
- **Rulemaking Committee Participation**
  - Compressed Gas Association (CGA)
  - Industrial Packaging Alliance of NA (IPANA)
    - (SSCI, RIBCA, PDI, FDC)
  - Plastic Shipping Container Institute (PSCI)
  - IOPP (Chemical Packaging Committee)
  - Reusable Industrial Packaging Alliance (RIPA)



# Transparency and Cooperative Efforts

- **National Packaging Strategy, Packaging policies and LOGSA protocols to be on Hazmat Safety Homepage**
- **POP validation test reports provided to industry in 2008 include, RIPA, RIBCA, PDI**
- **Numerous industry tours of LOGSA in past 24 months**
- **Cooperative efforts with SSCI, RIPA and Third Party Laboratories to address consistency in testing**



# Setting Focus

- **OHME will evaluate combination packaging for performance in air transportation, and new, rebottled and remanufactured composite IBC's through continued surveillance and collection of data and intelligence.**
- **OHME will establish performance testing benchmarks that are commensurate with safety.**
- **OHME will evaluate and assess industry best practices of packaging.**
- **OHME will magnify its outcomes by leveraging its hazardous materials packaging resources through internal and external training and education and outreach.**



# NEXT STEPS

- **National Team Charters and Action Plans**

Sets focus and ensure consistent application of oversight

- **POP, Cylinders, Explosives, RAM,**
- **Lithium Batteries, Radioactive Materials**
- **3HT cylinders, Select Agents, Port Inspections**
- **Build internal and external capabilities**
  - **Expanding our data sources**
  - **Regulatory review of HMR for packaging**
  - **Develop / Identify standardized test methods for all parties**
  - **Best practices for packaging professionals**



# Questions?

