NTTC Annual Meeting

Dr. Rachel A. Meidl, D.LP., CHMM
Deputy Associate Administrator
Office of Hazardous Materials Safety
Pipeline and Hazardous Materials Safety Administration (PHMSA)

Tuesday, May 2, 2017
PHMSA’s Vision and Mission

**Vision**

- The most innovative transportation safety organization in the world

**Mission**

- To protect people and the environment by advancing the safe transportation of energy and other hazardous material that are essential to our daily lives
Key Priorities

- Invest in Ourselves
- Increase Communication
  - Internal
  - External
- Position for Innovation
- Foster Transparency
- Improve Engagement
  - Employees
  - Partners
  - Stakeholders
New Administration

- Served as Chief with the Department of Homeland Security.
- Served as County Administrator in Campbell Co., KY
- Colonel, U.S. Army (Retired)

Acting Deputy Administrator
Howard “Mac” McMillian
New Administration (Cont’d)

AA/Chief Financial Officer
Tami Periello

AA for OPA
Kim Curry

AA for Administration
Everett Lott
U.S. Hazmat Incident Statistics

Total # of Incidents by Mode, 2012-2016

- Air: 6,556
- Highway: 74,062
- Rail: 3,170
- Water: 215

Period of Review (JAN-MARCH) 5/26/2016
U.S. Hazmat Incident Statistics

Total # of Incidents by Transportation Phase, 2012-2016

- In Transit: 23,494
- In Transit Storage: 2,929
- Loading: 16,702
- Unloading: 40,878
Types of Incidents, 2012-2016

- Bulk: 8,715
- Non-Bulk: 75,288
- Undeclared: 6,908

U.S. Hazmat Incident Statistics
U.S. Hazmat Incident Statistics

From 2007-2016, while we have seen a slow downward trend in the number of incidents with death and/or major injury, we have seen a recent upward trend since 2012.

This data, including the targets, is not normalized for changes in modal commodity flow over time.
Cargo Tank Rollovers – D&I

FY16:
• Over 30% of hazmat incidents involving death or major injury resulted from rollovers
• Gasoline main commodity
• 78% Driver Factors: Sudden maneuvers, braking, and excessive speed—“slosh and surge”

Modal Cooperation:
NTSB has issued recommendations to:
• FMCSA: driver training
• PHMSA: driver training and cargo tank design
• NHTSA: vehicle stability and anti-roll design
• FHWA: highway and bridge support design.

R&D: IAA between PHMSA and FMCSA—Human Factors study on Rollover Prevention
Cargo Tank Rollovers – D&I

Outreach and Prevention

• **Cargo Tank Rollover Prevention video:** jointly produced by PHMSA, FMCSA, and industry

• **The Hazmat Transportation Training Modules:** general awareness training available through a link on our website

• FMCSA provides useful reports, brochures, and other resources in their **Cargo Tank Rollover Prevention toolbox**
Atchison, Kansas Incident: Accidental Mixing of Sodium Hypochlorite with Sulfuric Acids

The plume generated by the chemical reaction led to a shelter-in-place order for thousands of residents. At least 120 employees and members of the public sought medical attention.
Sodium Hypochlorite and Accidental Mixing with Acids

Preliminary Finding - Unclear Labeling of Fill Lines.
Sodium Hypochlorite and Accidental Mixing with Acids

Preliminary Finding - Engineering flaw of having the fill lines of incompatibles so close.
What types of events trigger PHMSA’s involvement when trucks are unloading chemicals at fixed facilities?

If a company’s SOP is compliant with the attendance requirement, but the employee did not follow it, can/would DOT still cite the company?

Is it common for chemical delivery companies to have site-specific procedures for unloading chemicals at facilities, or general procedures that apply to all facilities where chemicals are unloaded?
Recommended Best Practices

Identify the piping path, equipment lineups, and operational sequencing and procedures for connecting piping, hoses, or other transfer connections.

Verify that the material is being transferred into the appropriate receiving container, and that the container, and its contents, are compatible with the lading and has sufficient capacity to hold the quantity of material being transferred.

“PIPES Act Requirements for Identification Numbers on Cargo Tanks Containing Petroleum Based Fuel”
- ANPRM addresses two petitions related to identification number markings on cargo tanks transporting flammable liquids
- PHMSA currently is weighing the 13 comments to the dockct to determine next steps.
Petition to amend 180.405(h)(3)

• Add language to harmonize with packaging specifications
• Would preclude use of fusible devices on MC307 when DOT407-compliant vent is installed
• **Merits consideration for future rulemaking**

Interpretation No. 16-0001

• “The required markings must be on the inlet and outlet equipment itself and in close proximity to its respective make/break connection point, rather than on the cargo tank wall.”
• Drafting a response to clarify existing clarification
Recent proposed rulemaking (HM-241): Adoption and IBR of ASME Section XII into the HMR

• Allow manufacturers to take advantage of lower priced/lighter weight tank materials, reduce manufacturing costs, and better compete internationally
• Shippers would be able to transport more material per tank, reducing overall transportation costs
• Updating Regulatory Analysis and drafting Final Rule
• Clarifies which cargo tanks can be tested using the EPA Method 27

• Only cargo tanks used to transport petroleum distillate fuels equipped with vapor collection equipment may be leak tested with EPA Method 27

• The authorization only for cargo tanks in dedicated service for the transportation of petroleum distillate fuel

• Qualification and maintenance requirements in HMR apply to all specification cargo tanks
  – No specific qualification, maintenance or retesting requirements for vapor collection equipment
Petitions

P-1646 – AAR (February 2015)
Prohibit use of railroad tank cars with shells or heads constructed of non-normalized steel for transportation of poison by inhalation (PIH) materials.

P-1678 – ACC, AFPM, API, CI, NACD, NITL, SOCMA, TSI, USCPA, and TFI (August 2016)
Explicitly prohibit any person from requiring compliance with tank car specification that are different from those applicable regulations.
**Petitions**

- **P-1636** - *The Chlorine Institute* – (June 2014) - Increase the service life of the HM-246 compliant tank cars from 15 years to 50 years. This has been proposed in the HM-219A NPRM published on June 30, 2016.

- **P-1691** - *American Association of Railroads / The CI / American Chemistry Council / The Fertilizer Institute / Railway Supply Institute* – (December 2016) – Make the HM-246 interim standards as codified in the HM-246 final rule the final standards for PIH/TIH rail cars. This petition is currently under PHH-60 policy review.

- **P-1692** - *American Association of Railroads (AAR)* – (December 2016) - Phase out over a six-year period all TIH/PIH tank cars that do not meet the HM-246 specification standard as implemented in the 2009 final rule. This petition is currently under policy review.
Cross-Jurisdictional Issue: OHSA/EPA/PHMSA

<table>
<thead>
<tr>
<th>49 CFR 173.5(b): Portable and Mobile Refrigeration Systems</th>
<th>Duplicative and conflicting requirements to existing OSHA PSM and EPA RMP regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received Petition for Rulemaking</td>
<td>Proposal to remove/amend rule and regulate solely by OSHA and EPA</td>
</tr>
<tr>
<td>Creates undo and onerous burden on owners of equipment</td>
<td></td>
</tr>
<tr>
<td>Economic impact to replace equipment</td>
<td>Overall impact to U.S. economy: $638 million</td>
</tr>
<tr>
<td></td>
<td>Loss of production of fruits and vegetables in harvest season</td>
</tr>
</tbody>
</table>
DOT has full jurisdiction over hazcom in transport.

Hazcom conforming to GHS such as that required by OSHA’s regs is optional in transport and not required.

Confusing or contradictory hazcom not conforming to GHS is prohibited in transport.

OSHA has full jurisdiction in the workplace.

OSHA is open to considering modernized mechanisms that ensure information is available to workers in the workplace based on new technologies.
Preemption Power

• Federal hazmat law preemption standards preclude non-Federal governments from imposing requirements applicable to hazardous materials transportation if:
  • The Dual Compliance Test
  • The Obstacle Test
  • The Substantively the Same As Test
• Petitions:
  • New York—Determination made; undergoing internal coordination
  • California—Public comment period closed; processing the application
R&D Funding, 2015-2017 – Funding ($000)

- DOT/DOE/SNL Program ($2,000)
- Volpe Facilitation in FY16 ($250)
- Volpe Facilitation in FY 17 ($150)

<table>
<thead>
<tr>
<th>Category</th>
<th>Funding ($000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY15 SBIR Program</td>
<td>$277</td>
</tr>
<tr>
<td>HM-ACCESS Phase II</td>
<td>$250</td>
</tr>
<tr>
<td>Large Format Li Battery</td>
<td>$300</td>
</tr>
<tr>
<td>Thermal Runaway Li Battery</td>
<td>$200</td>
</tr>
<tr>
<td>Metallic Foam Research</td>
<td>$150</td>
</tr>
<tr>
<td>2020 ERG Support</td>
<td>$105</td>
</tr>
<tr>
<td>2020 ERG Reactivity Studies</td>
<td>$195</td>
</tr>
<tr>
<td>IDIQ Analytical</td>
<td>$200</td>
</tr>
<tr>
<td>IDIQ Deterministic</td>
<td>$200</td>
</tr>
<tr>
<td>Oil Classification, W-ink</td>
<td>$300</td>
</tr>
<tr>
<td>Explosives Classification</td>
<td>$150</td>
</tr>
<tr>
<td>Hydrogen Embrittlement</td>
<td>$1,005</td>
</tr>
<tr>
<td>SOO/BAA Risk Reduction</td>
<td>$1,023</td>
</tr>
<tr>
<td>Small LNG Facilities Risk</td>
<td>$200</td>
</tr>
<tr>
<td>Lit. Review of LNG Testing of LNG</td>
<td>$100</td>
</tr>
<tr>
<td>Modeling of UN Modal Tanks</td>
<td>$150</td>
</tr>
<tr>
<td>LNG Release Consequence</td>
<td>$150</td>
</tr>
<tr>
<td>SOO/BAA or New Projects</td>
<td>$800</td>
</tr>
</tbody>
</table>

- $2,177 Designated and $2,178 In Evaluation
**Energy Product Classifications**

- DOT/DOE/Transport Canada Crude Oil Research
- To better understand and mitigate the risks associated with large volume rail transport of crude oil.

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task 1</td>
<td>- Literature review</td>
</tr>
<tr>
<td>Task 2</td>
<td>- Sampling and Analysis</td>
</tr>
<tr>
<td>Task 3</td>
<td>- Burn Characteristics and Modelling</td>
</tr>
<tr>
<td>Task 4</td>
<td>- Survey of Shale Oil Characteristics</td>
</tr>
</tbody>
</table>
LNG Projects

- Transportation Impacts Associated with Small-Scale Natural Gas Liquefaction Facilities
- Fire Testing and Modeling of Tanks and Tank Cars
- Safety Assessment of Transporting LNG in IM Portable Tanks
- Crashworthiness of Inner Modal (IM) International Standards Organization (ISO) Tanks
Electronic Hazmat Communications

Paperless Hazard Communications Pilot Program

• Mandated under Moving Ahead for Progress in the 21st Century Act (MAP-21)
• Reduce paperwork and environmental burdens associated with paper recordkeeping
• Collected data regarding the feasibility, effectiveness, and safety associated with electronic transfer of hazmat shipping paper data
• Report will be submitted to Congress
Large truck companies are developing connective technology and conducting pilot demonstrations.

Roll out for these technologies will likely happen within the next 3-5 years.
Project Goal: Implement a new Reporting System with modernized capabilities that provide further automation and improved efficiencies and user experience for stakeholders.
# Hazardous Materials Incident Communication System

## Project Goal:
Replace the current data collection with the Hazardous Materials Incident Communication System (HazmatICS)

<table>
<thead>
<tr>
<th>Advantage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve how the data is collected and validated based on current and new business rules</td>
<td>Simplifies reporting process of an incident, eliminates the need for submission of multiple reports for a single incident</td>
</tr>
<tr>
<td>Enforces data correctness completeness</td>
<td>Aligns with agency strategic goals Data Assessment and Strategy</td>
</tr>
<tr>
<td>Integrates with other PHMSA portal-based systems</td>
<td>Automation and other efficiencies that will improve the user experience for stakeholders</td>
</tr>
</tbody>
</table>
If you are interested in Learning More About HAZMATICS, or would like to set up a demonstration to learn how it works, please contact Yolanda Braxton, OHMS Data Operations Coordinator at Yolanda.Braxton@dot.gov
ISO-9001 Certification for a Data Operations Quality Management System (QMS)

ISO Certification
- Standardizes processes and procedures using a systematic approach

ISO-9001 Certification
- Based on the principles of strong customer focus, top management engagement, process approach, and continual improvement

QMS Targets
- Targets and minimizes risks related to non-standard procedures & practices, staff competencies, accountability, resource issues, oversight, and quality assurance

OHMS Results
- Expects improved processing times and efficiencies, resource use, stakeholder satisfaction, and data quality and consistency
Safety Management Systems (SMS)

PHMSA SMS Principles for continuous safety improvements:
- Management commitment to safety
- Value, maintain, and operate risk management processes
- Assess processes and procedures and validate systems
- Measure and assess safety performance indicators and targets
- Leverage emerging trends, metrics, investigations and inspections
- Empower and invest in our people to advance our mission.
- Internal and external collaboration and communication.
Outreach and Engagement

• 2016 Emergency Response Guidebook (ERG)
  – Printed and distributed over 1.5 million copies
  – Mobile application available

• New and Improved Hazardous Materials Transportation Training Program
  – Free Hazardous Materials Transportation Training Modules available on PHMSA’s website
The Online Code of Federal Regulations (oCFR), is an interactive web-based application that automates the accessibility of 49 CFR Parts 171-180.

- **oCFR** released March 25, 2016
- **Navigate Between Related Content:**
  - CFR
  - Rulemakings
  - Letters of Interpretation
  - Petitions
  - Approvals & Special Permits
  - Enforcement Cases
- **Mobile App**
When an agency promulgates a new regulation, it shall identify at least two existing regulations to be repealed.

“2-for-1 Rule”

For FY17, the total incremental cost of all new regulations, including repealed regulations, to be finalized this year shall be no greater than zero.

Any new incremental costs associated with new regulations shall be offset by the elimination of existing costs associated with at least two prior regulations.
EO 13777: Enforcing the Regulatory Reform Agenda

Issued February 24, 2017

Directs each agency to establish a regulatory reform task force and designate agency official to evaluate existing regulations and make recommendations:

– Improving implementation of regulatory reform initiatives and policies.

– Identifying regulations for repeal, replacement, or modification.
The President’s “Skinny” budget proposal includes a 13% decrease in DOT funding.

Achieved by proposed changes to DOT programs including privatization of Air Traffic Control.

Funding for PHMSA was not affected by these proposed cuts.
THANK YOU!