

Director, Approvals and Permits Division – Office of Hazardous Materials Safety

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Pipeline and Hazardous Materials Safety Administration (PHMSA)

Introduction

Independent Inspection Agency Meeting

Washington, DC
November 4-5, 2015

Presented by :

Duane M. Cassidy

Chief, Pressure Vessels, Approvals and Permits Division
Office of Hazardous Materials Safety (OHMS)



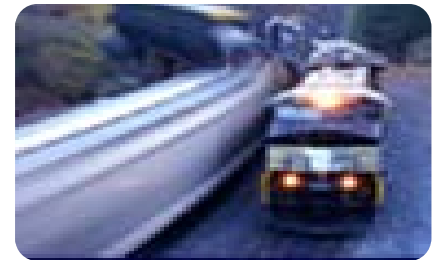
Points of Discussion

- Welcome – General Information
- Introductions
- PHMSA's Mission
- Scope and Purpose – “Bridging the Gap”



Our Mission

OHMS's mission is to safeguard people, property, and the environment from hazardous materials transportation risks.



Meeting Scope and Purpose

- **To discuss the roles and responsibilities of Approved Independent Inspection Agencies (IIA).**
- **Discuss continued efforts to increase the oversight and inspection on all approval and permit holders.**
- **Communicate PHMSA's expectations of the IIA's.**



Overall Cylinder Program Goals:

- Risk based approach to determine gaps and mitigate risks by appropriate oversight and use of resources and personnel.
- Work closely with Field Operations to increase domestic and international oversight and compliance through:
 1. Improved approval process/ letter requirements/compliance
 2. Continued information sharing and communication with all approval holders, especially our 3rd Party Agencies.
 3. Consistent application of the HMR and PHMSA's policies to all applicants foreign/domestic.



Continuation of The 3 “C’s” ...

- Compliance
- Consistency
- Communication



Update – What have we been doing?

Increased review of fitness on all approved manufacturers/IIA's.

Continued review of internal processes regarding Tech review/Fitness

Receipt/Review of semi-annual reports

Review/Revision of Letter templates

Continuing efforts to upgrade staffing and IT support



Questions for you?

- With regards to your IIA approval letter provisions and our approvals process, what is working and what is not, from the IIA's perspective?
- As you listen to the presentations today, what changes in your process can you make to assist PHMSA in achieving its stated goals?
- Overall, how are we doing and what would you change/why?







Pipeline and Hazardous Materials Safety Administration (PHMSA)

Independent Inspection Agency Meeting

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Approval Letter Provisions

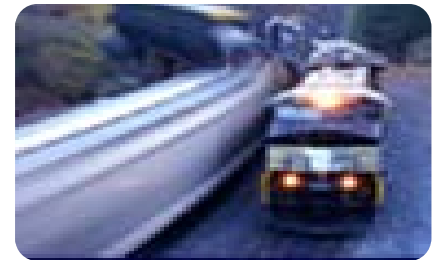
Presented by:
Isreal Mallard

*U.S. Department of Transportation
Pipeline & Hazardous Materials Safety Administration
Office of Hazardous Materials Safety*



Our Mission

PHMSA's mission is to safeguard people, property and the environment from hazardous materials transportation risks.



Discussion Points

- Role of the Independent Inspection Agency
- Approval Letter Provisions



The Role of the IIA

- Independent Verification and Testing
- Oversight of Manufacturing facilities
- Audit of Requalifier facilities
- Audit of Cylinder Manufacturing facilities



The Requirements of the IIA

- Pre-Audits
- Approved Facilities
- Approved Inspection cylinder specifications
- Reporting Requirements



Approval Letter Provisions

- A Copy of the IIA Approval Letter
- Non-compliance Actions
- Training Requirements



Question for you?

- What current approval provisions would you like to see changed?



Questions?





Pipeline and Hazardous Materials

Safety Administration (PHMSA)

Independent Inspection Agency

(IIA) Approval Application



Domestic/International IIA's

Washington D.C.

November 4-5, 2015

Presented by :

Neil Benninghoven

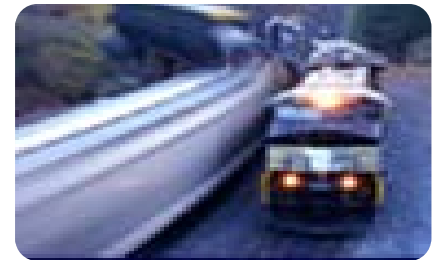
Pressure Vessels Division (PHH33)

Pipeline and Hazardous Materials Safety Administration (PHMSA)



Our Mission

OHMS's mission is to safeguard people, property, and the environment hazardous materials transportation risks.



Discussion Points

➤ *IIA Applications*

➤ *PHMSA's part of Application Process*

➤ *What Happens Next*



Discussion Points (Cont.)

- *Additional Information Requests*
- *DOT's Oversight on IIA Program*
- *Active Approvals That Are Missing*
- *Semi-Annual Reporting*



IIA Application

- *Separate Application to PHMSA*
 - *49 CFR 107.705 & 107.803*
- *Pre-Audit Report*
 - *49 CFR 178.35(4)*
- *Duties of the Inspector*
 - *49 CFR 178.35(c)*



IIA Application (cont.)

- *Chemical Analysis Report*
 - *49 CFR 178.35(2)(i)(ii)*
- *List of Inspectors*
- *Training Records*
- *Stamp of each Inspector*
- *IIA Stamped Copies of Drawings*
 - *49CFR 107.803(5)(6)*



PHMSA's Part of Application Process

- *Original Approval Letter of Manufacturer (if a renewal)*
- *HAZMAT Intelligence Portal (HIP) Report (Initial Fitness)*
- *Evaluation Form*
- *Technical Review*
- *Fitness Determination Memo*



What Happens Next?

- *Begin processing BOTH applications*
- *If further Fitness Evaluation is required BOTH applications will be sent together to Field Operations-Enforcement*
- *BOTH applications will be approved at same time*



Additional Information Requests

- **49 CFR 107.709**
- *30 days to respond*
- *Denial After no response*
- *IIA's will now be copied on any/all requests for additional information*



DOT's Oversight on IIA Program

- *Permits & Approvals / Initial Application / Final Approval Determination*
- *Engineering – Technical Review*
- *Field Operations-Enforcement / Fitness Evaluation*



Active Approvals That Are Missing

- *Verify All Current Approvals*
- *Provide PHMSA List of Missing Approval Letters*
- *Submit Approval Application*



No Expiration Date Approvals

- *Verify All Approval Expiration Dates*
- *Provide List of Approvals Without Expiration Dates to PHMSA*
- *Submit Renewal Application*
- *Renewal of Approvals May Require Fitness Evaluation*



Semi-Annual Reporting

- *Submit Every 6 Months (As Per Approval Letter)*
- *Information is saved in PHMSA Net*
- *Field Operations - Enforcement and Permits & Approvals use Information*



Additional Items of Concern

- Combined Applications for different areas of approval
 - ✓ RIN and Competent Authority (CA), must be two separate applications
- Incomplete Drawings
 - ✓ Missing information on manufacturer drawings
- Missing Pre-Audit Reports
 - ✓ Need to be completed prior to submittal of application for approval



Question's for You

- *Would you or your manufacturer benefit from a drawing template provided by the Engineering Department that provides the desired information on a manufacturers drawing needed for a technical review/Why or Why not?*
- *How do you feel about a web based Semi-Annual Reporting system?*





Questions?





Pipeline and Hazardous Materials Safety Administration (PHMSA)

Technical Review of Approvals Applications



What do we Need in an Application?

- **Cover letter explaining the request**
- **Complete design drawing** - *a fully dimensioned sketch including minimum wall thickness, service and test pressure, cylinder volume and weight, the method of manufacture, heat treatment, material chemistry, guaranteed mechanical properties, batch test requirements, design calculations and marking etc.*
- **Summary sheet for all the test results:**
 - **Batch and Design qualification test results**
 - **Hydraulic pressure test, Hardness test reports etc.**
 - **Dimensional checks and UE examination results/reports**
 - **Include photos of tests where relevant.**
- **Drawing and test reports should be in English and stamped by the IIA.**
- **Limit application to one subject/design type (and < 4 designs)**



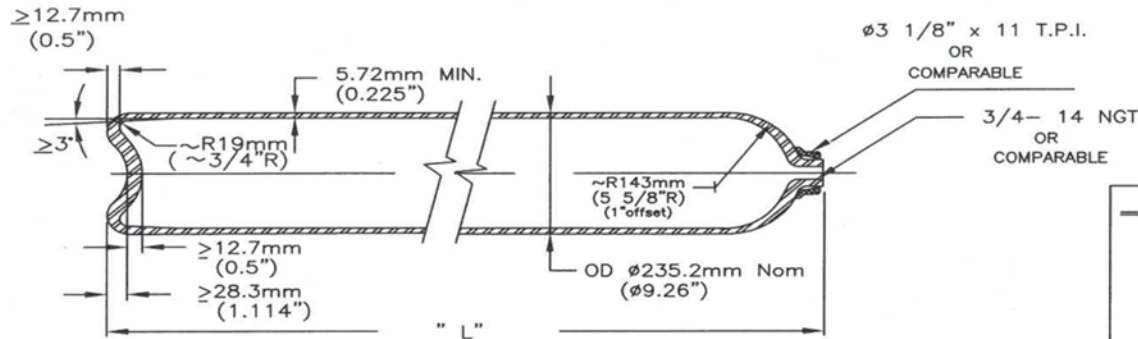
Design Drawing

Must include the following:

- **Reference to specification to which the design complies.**
- **A fully dimensioned cylinder drawing covering all dimensions as required in the reference standard. Marking drawing is also required.**
- **Service and Test pressures, Min volume and Empty cylinder weight**
- **Method of manufacture, Material chemistry, Heat treatment**
- **Mechanical and Physical properties (Tensile, Bend/Flattening, Charpy and Hardness test requirements etc.)**
- **Performance tests required on batch basis (Burst, Cycle, Flaw tests etc.)**
- **Sidewall thickness calculations *as required in the specification or standard.***
- **Proper title for the drawing clearly indicating the scope and any limitations applicable to the design.**



Sample Design Drawing



REV.	ECN	DESCRIP.	DATE	DRWN.	CHKD.

D.O.T. Wall Stress Calculations: $S = P(1.3D^2 + 0.4d^2)/(D^2 - d^2)$

$S = \text{Maximum wall stress, psi}$ $s = 4000 [1.3 (9.183)^2 + 0.4 (8.735)^2] / (9.183)^2 - (8.735)^2$
 $P = \text{Test pressure, psi}$
 $D = \text{Outside diameter, inch}$ $s = 69,835\text{psi (481.5 MPa)}$
 $d = \text{Inside diameter, inch}$
 Required Minimum tensile: $= \frac{69,835}{0.67} = 104,231\ \text{psi (718.7 MPa)}$

SPECIFICATION: ISO 9809/1: 1999
DOT 3AA 2400

1. Service Conditions:

- DOT rated service pressure: 165 bar (2400 psi)
- ISO rated working pressure: 184 bar (2666 psi)
- Hydraulic test pressure: 275.8 bar (4000 psi)

2. Material:

Cr-Mo-Steel, Fully killed and made to fine grain practice by basic oxygen or electric furnace process.

Chemical Composition (%)

	C	Si	Mn	P	S	Cr	Mo
Min.	0.28	0.15	0.40	--	--	0.80	0.15
Max.	0.33	0.30	0.60	0.020	0.020	1.10	0.25

Note: S+P < 0.030

3. Manufacture:

Hot billet extrusion followed by hot drawing

4. Heat Treatment: Quenched and Tempered

- Austenitize: $\sim 899^\circ\text{C}$ (1650°F)
- Quenchant: Water based polymer: (temperature $\leq 60^\circ\text{C}$ (140°F))
- Temper: $\sim 627^\circ\text{C}$ (1160°F) (Min. 30 minutes at temp.)

5. Mechanical Properties: (at room temperature)

- Tensile (Rg): 775 - 930 MPa (112.4 - 134.8 ksi)
- Yield (Re): $\geq 604.5\ \text{MPa}$ (87.675 ksi)
- Elong (A): $\geq 14\%$ (ON $5.65\sqrt{S_0}$)
 $\geq 20\%$ on 2" G.L. for DOT
- Hardness: 225-270 BHN
- Flattening test: Flatten to $\phi 6 \times t$ without cracks
- Alternative Bend Test: Bend to 4-6 x t (based on actual tensile value) without visible cracks
- Charpy test (-50°C , Trans): $\geq 35\ \text{J/cm}^2$ (avg.)
- UT flaw detection: Each cyl. per ISO 9809-1
- Batch burst test: $P_b \geq 441.3\ \text{bar}$ (6400psi)

6(a). Thickness Calculations: (ISO 9809/1: 1999)

$$a = 0.5 \times D \left(1 - \sqrt{\frac{(10FRe - \sqrt{3} Ph)}{(10FRe)}} \right)$$

Where:

- $P_h = \text{Test Pressure (bar)} = 275.8\ \text{bar}$ (4000psi)
- $D = \text{External diameter of container} = \phi 235.2\text{mm}$
- $F = \text{Lesser of } 0.65/(Re/Rg) \text{ or } 0.85; Re/Rg \leq 0.9$
= Lesser of 0.65/0.78 or 0.85 = 0.833 (for $Re/Rg = 0.78$)

$$a = 0.5 \times 235.2 \left(1 - \sqrt{\frac{(10 \times 0.833 \times 604.5 - \sqrt{3} \times 275.8)}{(10 \times 0.833 \times 604.5)}} \right) = 5.714\text{mm (0.2249")}$$

NOTE: a, the guaranteed min thickness = 5.72mm (0.225") exceeds/equals calculated min thickness, a.

MODEL	LENGTH 'L'		Min WATER CAPACITY		APPROX. WGT. W/O FITTINGS	
	MM	IN	LITERS	IN ³	KG	LBS
	1410	55.5	49	2995	60.8	134
*Vmin	708	27.9	21.7	1325	34	75
*Vmax	1727	68	TBD	TBD	TBD	TBD

*Note: Model 8BC300P is the design qualification test cylinder. Vmin and Vmax represent the range covered by the same design family.

REFILLABLE SEAMLESS STEEL CYLINDER FOR PERMANENT AND LIQUEFIED GASES - $\phi 235\text{mm}/275.8\ \text{Bar TP}$



Sample Summary Sheet for Approvals Application

Item	Test	Cylds required	ISO 9809-1: 2010 sec/clause refr.	Requirement	Report Page No.	Results
1	Cylinder Drawing	N/A	7.9	Fully dimensioned drawing with material specification	Specify Page no	Dwg # ----
2	Cylinder Stamping Drawing	N/A	13	Document	"	Dwg # ----
3	Manufacturer's Declaration of Conformity	N/A	N/A	Document	"	Complete
4	Material chemistry check	N/A	6.2	Meet requirements of clause 6.2. Note S, P and S+P do not exceed clause 6.2.2 limits.	"	OK
5	Heat Treat Summary Sheet	Per A.I	6.4		"	OK
6	Thickness Report / Hardness Test	All	11.3	Specify hardness range BHN.	"	PASS
7	UT flaw	All	8.4, Annex B	Per ISO 9809-1, Annex B	"	PASS
8	Out-of-roundness	Per A.I.	8.5	(@top, mid, bot secs.) <2% of actual dia.	"	List values obtained?
9	Mean diameter (pi-tape)	Per A.I.	8.6	(< ±1% of nom dia.) Specify min / max values	"	PASS: Values?
10	Straightness (banana)	Per A.I.	8.7	Max 0.01xL	"	List values obtained
11	Verticality (lean)	Per A.I.	8.8	Max 0.003xL	"	List values obtained
12	Thread Inspection	Per A.I.	8.9		"	PASS
13	Hydrotest	All	11.2	Test pressure: ? Perm expn < 10% of TE	"	PASS
14	Mechanical tests	2			"	PASS
14a	Tensile	"	10.2	Rg, Re and %E values guaranteed on the drawing (ISO-Prop rectangular bar)	"	List values obtained in tests.
14b	Charpy (-50 deg C, Trans)	"	10.4	Avg of 3 tests>35J/cm^2 w/ no single <28 (test to be done per ISO 148)	"	List actual values obtained
14c	Thickness check for sidewall, base and head (on cylds taken for mechanical tests)	2 (ISO mech test cylds.)	9.2.2(a), hash 2	Meet design drawing	"	List values obtained
14d	Bend Test	"	10.3	to 5 x tnom w/o cracks	"	
15	Base Check (on Cycle Test cylds.)	2	9.2.3	within 15% of design min	"	Bottoms within 15% of design
16	Hydraulic Burst Test Summary	2	10.1.2 & 10.5	Pb & Py to meet requirement of ISO 9809/1	"	List values obtained in the tests
17	Cycle Test Summary	3	9.2.2	12,000 cycles min. After cycle test, section bases and measure base thickness .	"	Show that base thickness in within 15% of tb on drawing.
18	Neck ring Test	Per A.I	When fitted(7.6)	Specify axial and torque load required values	"	Actual values obtained
19	Internal/external surface check	Per A.I	8.3 & 9.2.19a) & Annex-A	Free of injurious defects	"	PASS



Questions





Safety Administration (PHMSA)

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Presented by :

Diane Jones

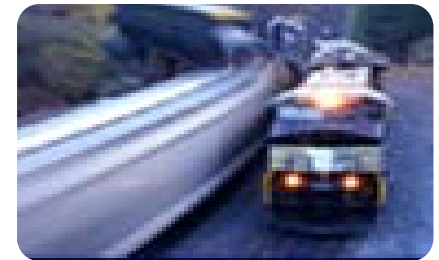
Angie Wang

Pressure Vessels, Approvals and Permits Division
Office of Hazardous Materials Safety (OHMS)



PHMSA's Mission

To safeguard people, property, and the environment from hazardous materials transportation risks.



Discussion Points

CFR Regulations
Approvals Process
Requalifiers (RIN)
Repair / Rebuild (K#)

Diane Jones
Diane Jones

Complete Inspection Report
DOT Special Permit Cylinders
Current Projects

Angie Wang
Angie Wang
Angie Wang





49 CFR Overview

49 CFR Part 107 Subpart H

General Application Procedures

- Filing an application for approval
- Processing an application for approval



49 CFR Overview

How to submit an application

49 CFR Part 107.705

Attention: Approvals Division, PHH-33

a) US Postal

Department of Transportation
East Building
1200 New Jersey Avenue
Washington, DC 20590

b) Faxing

202-366-3753
or
202-366-3308

c) Email

Approvals@dot.gov

d) Webpage

phmsa.dot.gov



49 CFR Overview

IIA Approvals	49 CFR 107.803
Requirements of an Independent Inspector	49 CFR 178.35
Designation of an US Agent	49 CFR 105.40
General requirements for requalification cylinder	49 CFR 180.205
Record keeping requirements	49 CFR 180.215
Training requirements	49 CFR 172.704



49 CFR Overview

www.phmsa/dot/ecfr.gov

The screenshot displays the e-CFR website interface. At the top, there is a navigation bar with links for 'About GPO', 'Newsrooms/Media', 'Congressional Relations', 'Inspector General', 'Careers', 'Contact', 'askGPO', and 'Help'. Below this is the GPO logo and the text 'U.S. GOVERNMENT PUBLISHING OFFICE | Keeping America Informed'. A secondary navigation bar includes 'Home', 'Customers', 'Vendors', and 'Libraries'.

The main content area is titled 'ELECTRONIC CODE OF FEDERAL REGULATIONS' and features the 'e-CFR' logo. A button labeled 'View past updates to the e-CFR. Click here to learn more.' is present. A red banner states 'e-CFR data is current as of October 21, 2015'.

A table lists the contents of Title 49 Transportation, organized by volume and chapter. The table includes columns for Title, Volume, Chapter, Browse Parts, and Regulatory Entity.

Title	Volume	Chapter	Browse Parts	Regulatory Entity
Title 49 Transportation	1	Subtitle A—Office of the Secretary of Transportation		
		1-99	OFFICE OF THE SECRETARY OF TRANSPORTATION	
	2	Subtitle B—Other Regulations Relating to Transportation		
		100-177	PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION, DEPARTMENT OF TRANSPORTATION	
	178-199	TRANSPORTATION		
	3			
	4	II	200-299	FEDERAL RAILROAD ADMINISTRATION, DEPARTMENT OF TRANSPORTATION
	5	III	300-399	FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION, DEPARTMENT OF TRANSPORTATION
	6	IV	400-499	COAST GUARD, DEPARTMENT OF HOMELAND SECURITY
	7	V	500-571	NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, DEPARTMENT OF TRANSPORTATION
		572-599	TRANSPORTATION	
		VI	600-699	FEDERAL TRANSIT ADMINISTRATION, DEPARTMENT OF TRANSPORTATION
		VII	700-799	NATIONAL RAILROAD PASSENGER CORPORATION (AMTRAK)
	VIII	800-999	NATIONAL TRANSPORTATION SAFETY BOARD	

On the left side of the page, there is a sidebar with 'FDsys: GPO's Federal Digital System' information, search options (Simple Search, Advanced Search), and a 'Related Resources' section.



Approvals Process

Approval Types

➤ **RIN Approvals (Retester Identification Number)**

49CFR 107.805

Hydrostatic
Acetylene
Ultrasonic
Acoustic
Mobile Unit

➤ **Competent Authority Approval (CA)**

49 CFR 107.805

K Numbers (Repair and/or Rebuild)

49 CFR 180.211



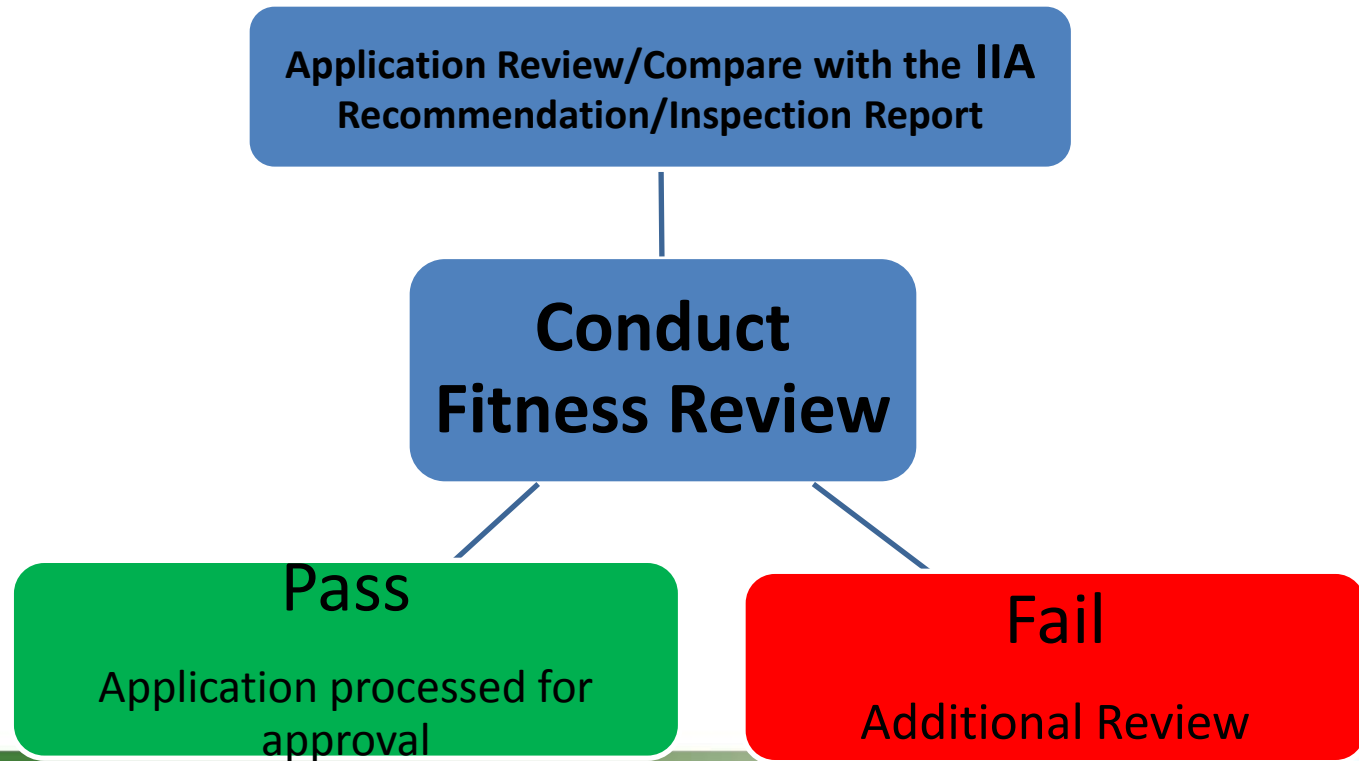
General Application Requirements

49 CFR 107.705

- A request is required for all applications being submitted PHMSA
- Identify the section of the 49 CFR under which the approval is being submitted
- Describe the activity for which the approval is required
- IIA Report/Recommendation Letter



Processing Requalifiers (RINs) & Repair /Rebuild (K-Numbers)



Approvals Process

Additional Review:

First Level Review

Chief of Pressure Vessels

Second Level Review

Enforcement/Field Operations Division

This level of review determines whether an applicant needs an onsite inspection by the Enforcement/Field Operations Division before determining a final decision from the Pressure Vessels Division.



What is Requalification of Special Permit Cylinders

- Definition:
 - A Special Permit sets forth alternative requirements, or variances, to the requirements in the HMR.



How to Search a Special Permit Cylinders

- Webpage:
 - <http://www.phmsa.dot.gov/hazmat/regs/sp-a/special-permits/search>

PHMSA
U.S. Department of Transportation
Pipeline and Hazardous Materials
Safety Administration

Enter Search Term(s): Search

For the Public | Hazmat Safety Community | Pipeline Safety Community | Briefing Room | Doing Business with PHMSA | Calendar

Home | Hazmat Safety Community | Regulations | Approvals & Permits | Special Permits | Special Permits Search

Special Permits Search

The provided special permits are official copies of every current document (with date and signature) and, due to numerous inquiries, several expired special permits.

Note: All rulemakings, regulations and notices issued prior to February 15, 2005 refer to the previous Research and Special Programs Administration (RSPA). Although RSPA is no longer an operating DOT agency, all rulemakings, regulations, and notices issued by the agency continue to be valid.

Use Tips

- Searching for a special permit using the special permit number: the results displayed may include several related items. Click the Tracking Number or refer to the Company Name for details.
- Change the order of the list by clicking the title of each column.
- Download your search results: click a format type at the bottom of the search window.

Special Permits List

This listing shows special permits listed by groups of SP numbers. Note: these do not link to the Grants/Party To letters. Once you have enough information from the list, locate more information using the search tool.

Special Permits:	<input type="text"/>
Company Name:	<input type="text"/>
State:	<- Select a State ->
Number of Results:	Display <input type="text" value="50"/> results per page
<input type="button" value="Search"/>	



Special Permit

- What are we looking from IIA report:
 - Correct Special Permit List in the IIA report
 - Non expired Special Permit list



Complete Application

- IIA Report
 - Recommendation Letter
 - Equivalent level of safety to what is required under the regulations
 - Special Permit List (if any)
 - Correct Application Form



Current Projects

- M-V Portal
 - <https://portal.phmsa.dot.gov/PHMSAPortal2/>
- Bulletin Board
 - <http://vbulletin.phmsa.dot.gov/forumdisplay.php?f=168>
- Reciprocity with Canada
 - Regulatory Cooperation Council (RCC)
- Cylinder Requalification Locator



Questions or Comments

- Information Center:
 - 1-800-HMR-4922
202-366-4488
phmsa.hm-infocenter@dot.gov
- Pressure Vessel and Cylinder
 - 202-366-4512
 - Webpage:
<http://www.phmsa.dot.gov/feedback/approvals-questions-form>



Questions or Comments

PHMSA
Pipeline and Hazardous Materials
Safety Administration

U.S. Department of Transportation

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About PHMSA | Pipeline Safety | Hazardous Materials Safety

Enter Search Term(s):

Approval Feedback/Questions/Concerns

*(Required fields are identified by an *)*

Contact Information

Name: *

Organization:

Street Address:

City:

State:

Country (International Only):

Zip Code:

E-mail Address: *

Telephone Number: *

Fax Number:

Message Summary

Question Category: *

Please Enter Your Question/Comment: *



Questions

- When conducting pre-approval audits of Cylinder Requalifiers, are you verifying that the company meets the requirements of each DOT Special Permit for which you are giving a recommendation for approval?
- Are you verifying that the DOT Special Permits are still active prior to adding them to your list of recommended cylinders to be requalified?



Questions



FIELD OPERATIONS ENFORCEMENT PHH-40

Kimberly Yoder

Acting Cylinder Program Manager
Office of Hazardous Materials Safety Field Operations

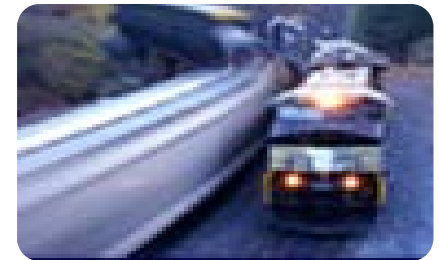
<http://phmsa.dot.gov/hazmat>

November 2015



OUR MISSION

PHMSA's mission is to protect people, property and the environment from the risks of hazardous materials transportation.



Enforcement Operational Activities

- Promotes the safe and secure shipment of hazardous materials in transportation
- Activities Include
 - Compliance inspections
 - Incident investigations
 - Fitness determinations
 - Outreach and training activities
 - Information and intelligence gathering

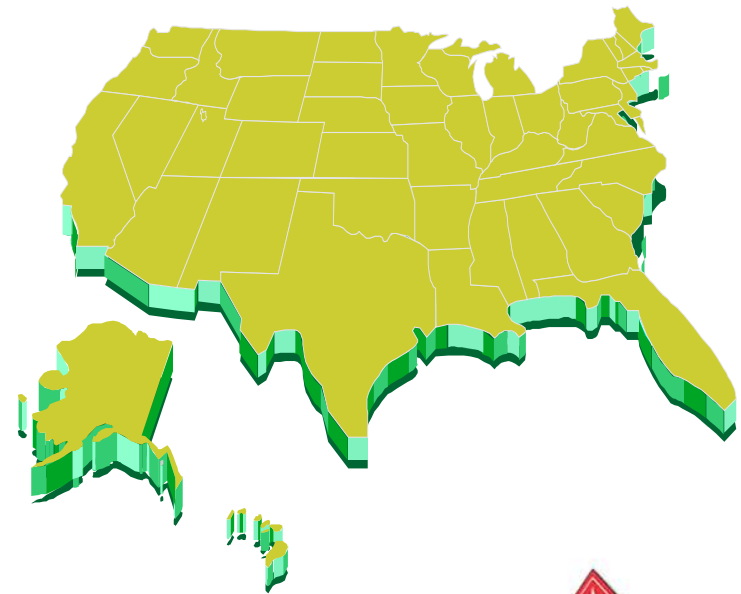


Hazmat Shipments in the U.S.

Over 1,000,000 Shipments Daily

2.2 Billion Tons Shipped Annually by All Modes

Hazardous Materials Support \$1.5 Trillion of US Economy Annually



PHMSA Office of Hazardous Materials Safety (OHMS) Regional Offices



Who Does PHMSA Regulate?

- **Shippers/Carriers (HAZMAT)**
 - Class 1-9
 - Waste
- **Freight Forwarders**
- **Third-Party Labs**
- **Special Permit Holders**
- **INDEPENDENT INSPECTION AGENCIES**
- **CYLINDER REQUALIFIERS**
- **DESIGNATED APPROVAL AGENCIES**
- **Aerosol Fillers/Shippers**
- **Agricultural Industry**
 - Nurse Tanks
- **Packaging Manufacturers**
 - Tanks, Drums, IBCs, **CYLINDERS (PRESSURE VESSELS)**, Boxes, etc...
- **Packaging Self-Certifiers**
- **Distributors/Brokers**
- **High Hazard Entities**



Determination of/Scheduling On-Site

INTERNATIONAL MANUFACTURER/IIA/DAA RISK MATRIX

August 14, 2015

APPLICATION TYPE	CYLINDER SERVICE	ENFORCEMENT HISTORY	LENGTH OF TIME SINCE LAST INSPECTED	PRIORITY RISK CODE	ONSITE PRIOR TO APPROVAL
NEW MFG/REBUILDERS	All services	N/A	N/A	1	X
NEW IIA	All services	N/A	N/A	1	X
IIA CHANGE	All services	N/A	N/A	1	X
NEW DAA	All services	N/A	N/A	**	
RENEWAL MFG, DAAs, REBUILDERS	All services	Incident(s) reported, or other reports of possible violations received**	N/A	1	X
RENEWAL MFG (and their approved IIA), DAAs, REBUILDERS, etc.	All Services	PHMSA inspected, findings/violations/QCs noted.	0-2 years	4	N/A
			2-5 years	3	
			5-7 years	2	
		PHMSA inspected, no findings/violations/QCs noted.	0-2 years	5	
			2-5 years	4	
			5-7 years	3	
No recent enforcement history	> 7 years or never	1			



Inspections Trends

Common Issues Identified

- Administrative
 - Failure to maintain training records
 - Manufacturer's report errors
 - Failure to maintain approvals (to include updating, etc.)
 - Incomplete applications
- Technical
 - Failure to train hazmat employees
 - Inspector training/processes not in place
 - Failure to perform chemical analysis (International)
 - Failure to witness/verify as required



The Inspection Process

- **Introduction**
 - General Information/Overview
- **Items Reviewed**
 - What are we looking for?
 - Manufacturing processes, test reports, training records, technical drawings, SOPs, quality assurance manuals, calibration certificates, approvals, sales orders, etc.
- **Evidence Gathering**
 - Interviews, documentation, photographs, statements, etc.
- **Obtaining Samples for Independent Verification Testing**
- **Closing the Inspection**
 - Cylinder manufacturing checklist, Cylinder requalification checklist, Exit Briefing, etc.



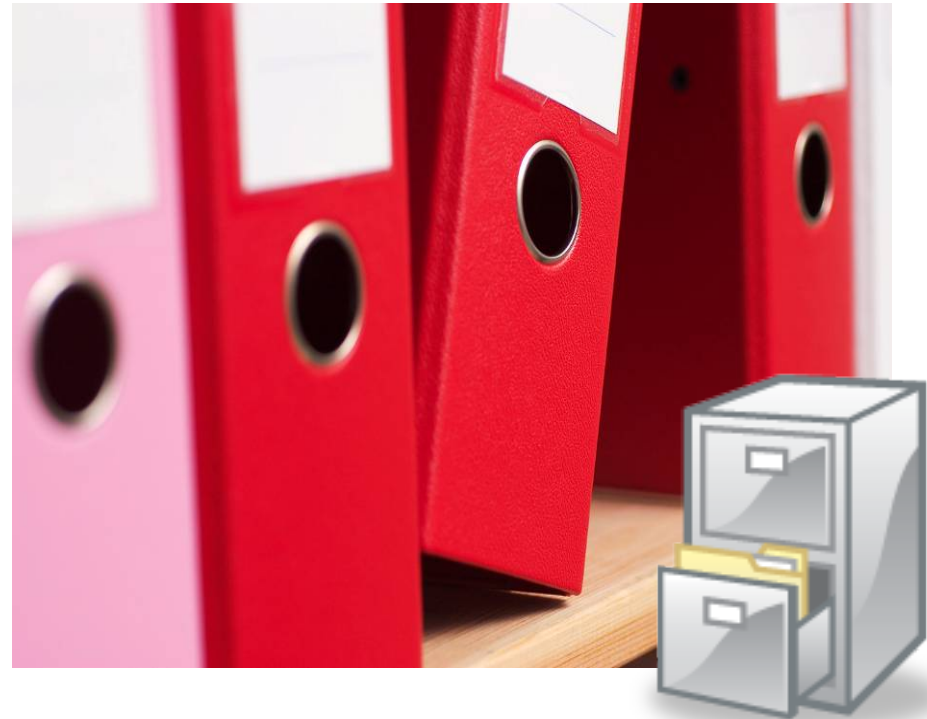
The Inspection Process – Items Reviewed

- Processes and Procedures
- Testing Equipment
- Manufacturing Equipment
- Travelers
- Raw Material Verifications
- Chemical Analysis
- Witnessing/Verification points (Travelers)
- Training
- Approvals
- Manufacturer's test reports
- Application(s)
- Technical Drawings



The Inspection Process – Evidence Gathering (Documentation)

- Certifications (Test Reports)
- Production Records (Travelers)
- Training Records
- Invoices/Sales Records
- Calibration certifications
- Test Records
- Approvals
- Quality manuals/SOPs
- Drawings



The Inspection Process – Closing the Inspection

■ Exit Briefing

- A “Field Report” not a “Final Report”
- Used to summarize the inspection and notate “probable violations”
- Reviewed with company official
- Request corrective action
- Refer to penalty guidelines
- Obtain signature(s) and provide copies



Investigator Feedback

- **Based on Experience**

- Other Entity Comparisons (names omitted)

- **Geared Toward**

- Safety
- Overall Compliance
- Adherence to regulation/approva
- Systemic Improvements
- Streamlining Operations



The Inspection Process – Next Steps

- **Investigator returns to regional office to prepare inspection report**
 - Awaits independent inspection verification testing results
 - Reviews inspection with Region Chief/Cylinder Program Manager (as necessary)
 - Formalizes interviews, photos, documentation, etc.
 - Documents facts and evidence
- **Awaiting Corrective Action (within 30 Days)**
 - Attach to completed report and submit to Region Chief (within 60 days of receiving final independent testing)



The Inspection Process – Next Steps

- **Region Chief/Director will review report**
- **Investigator generates “fitness memo” to be sent to Approvals**
- **File is reviewed by Approvals**

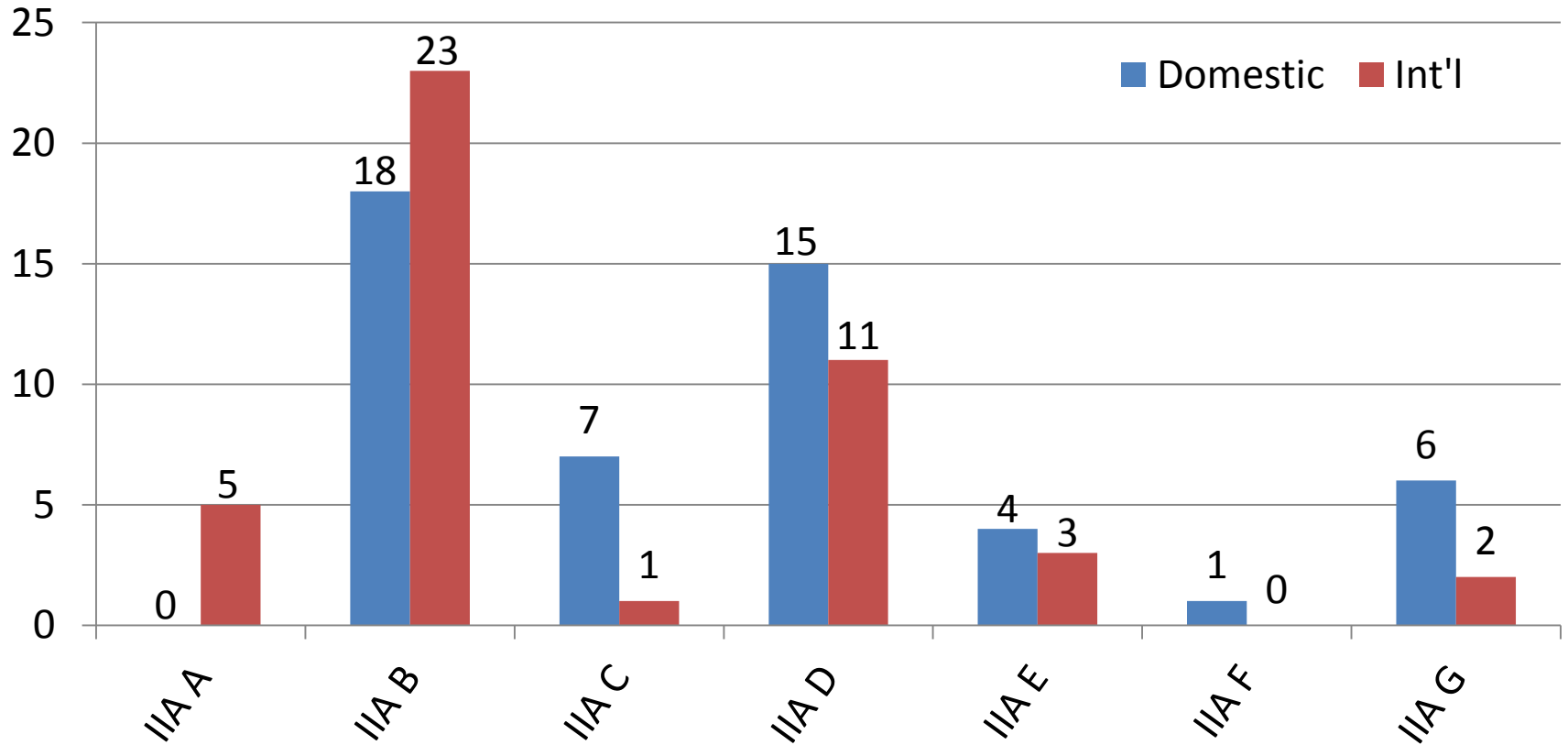


Inspection Results/Actions

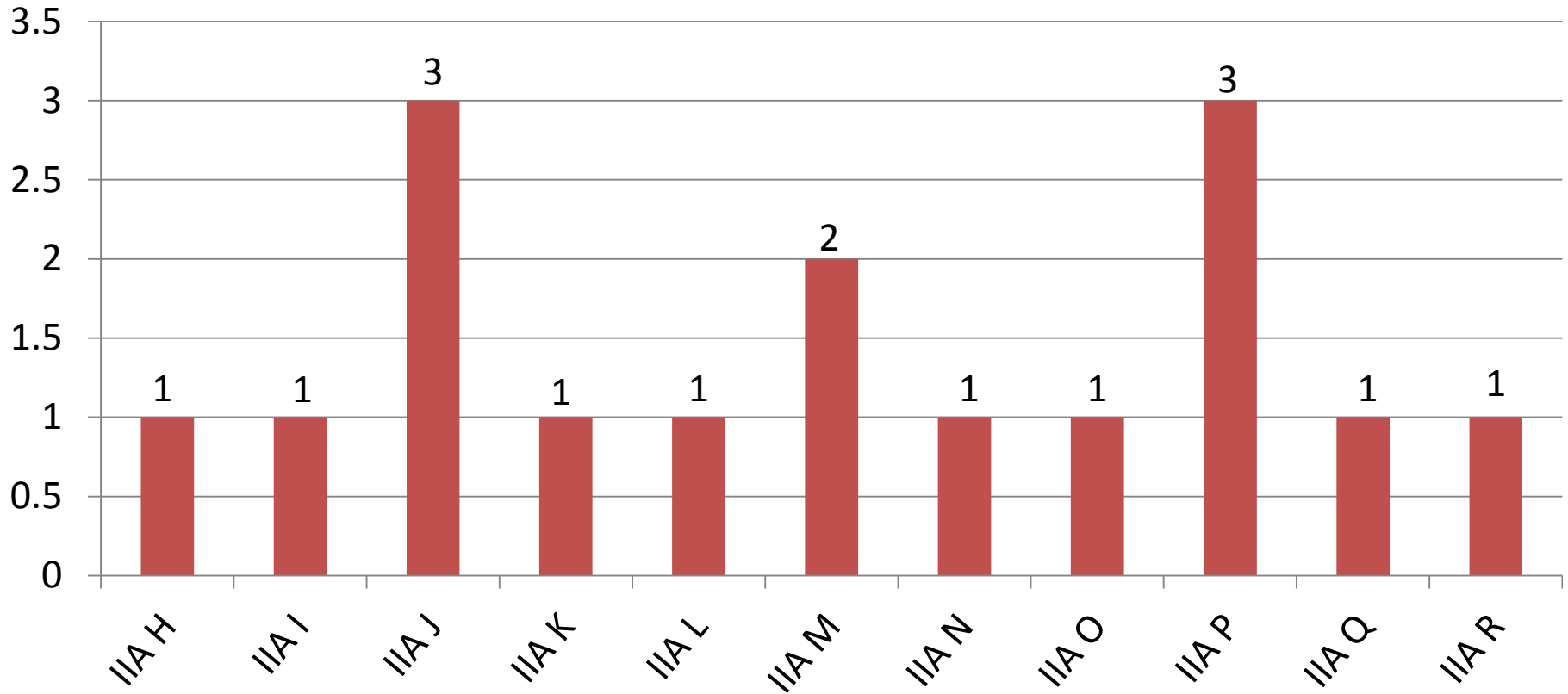
- **No Further Action (OK)**
- **Warning Letter**
- **Ticket for Non-Compliance**
- **Civil Penalty Case**
 - General Counsel
- **Criminal Case**
 - General Counsel
 - Office of Inspector General (OIG)



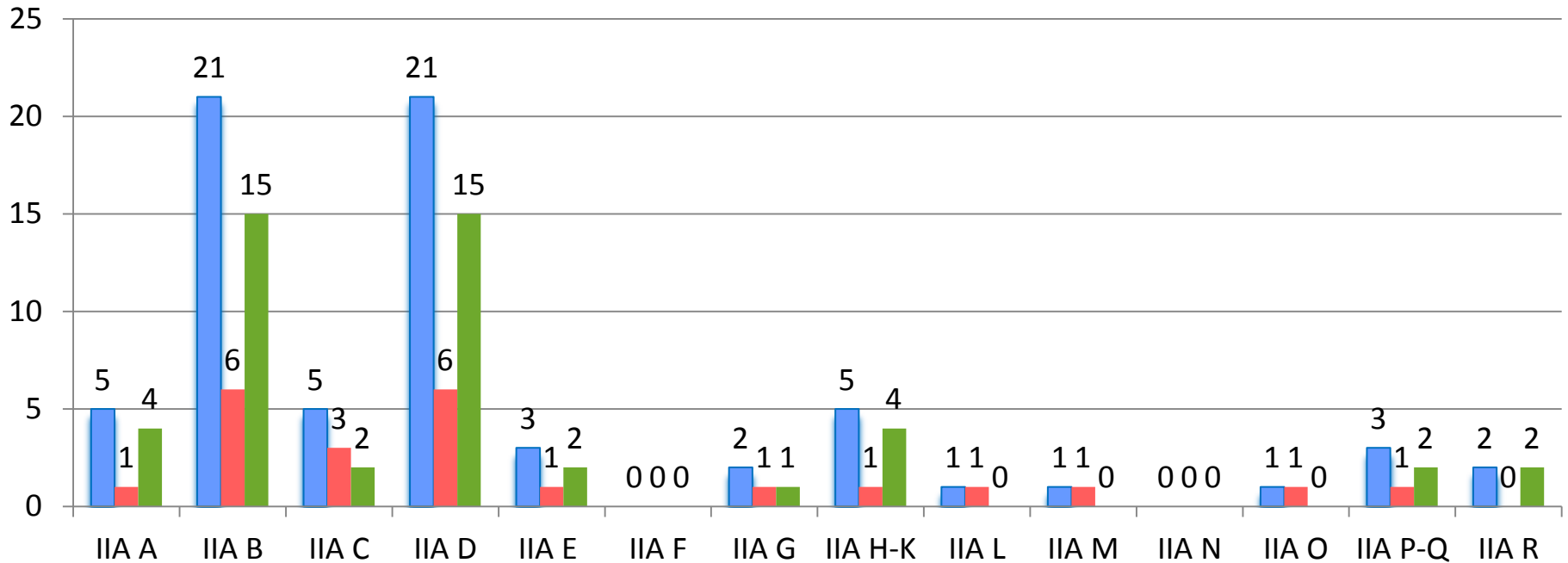
ACTIVITY OF DOMESTICALLY-BASED IIAs AS REPORTED (excluding requalifiers)



ACTIVITY OF INTERNATIONALLY-BASED IIAs AS REPORTED/KNOWN (at manufacturers)



IIA Inspections (70 from Jan 2011-Jul 2015)



■ Total Inspections

■ Reports w/ findings 33%

■ Reports w/out findings 77%



Additional Issues

- Incomplete recommendations regarding corrective actions
- Failure to include all findings & supporting documentation
- Findings not linked to regulatory, approval, or an IBR requirement
- Including corrective action “proof” as part of your report



Additional Issues

- Misuse of inspection checklist with DOT symbol/letterhead
- Ensure assigned inspectors have completed training prior to DOT onsite inspection
- Relying too much on main IIA representatives to answer questions
- Ensure testing is performed in accordance with company SOPs, CFR 49, CGAs, Special Permits, and investigator's testing requests



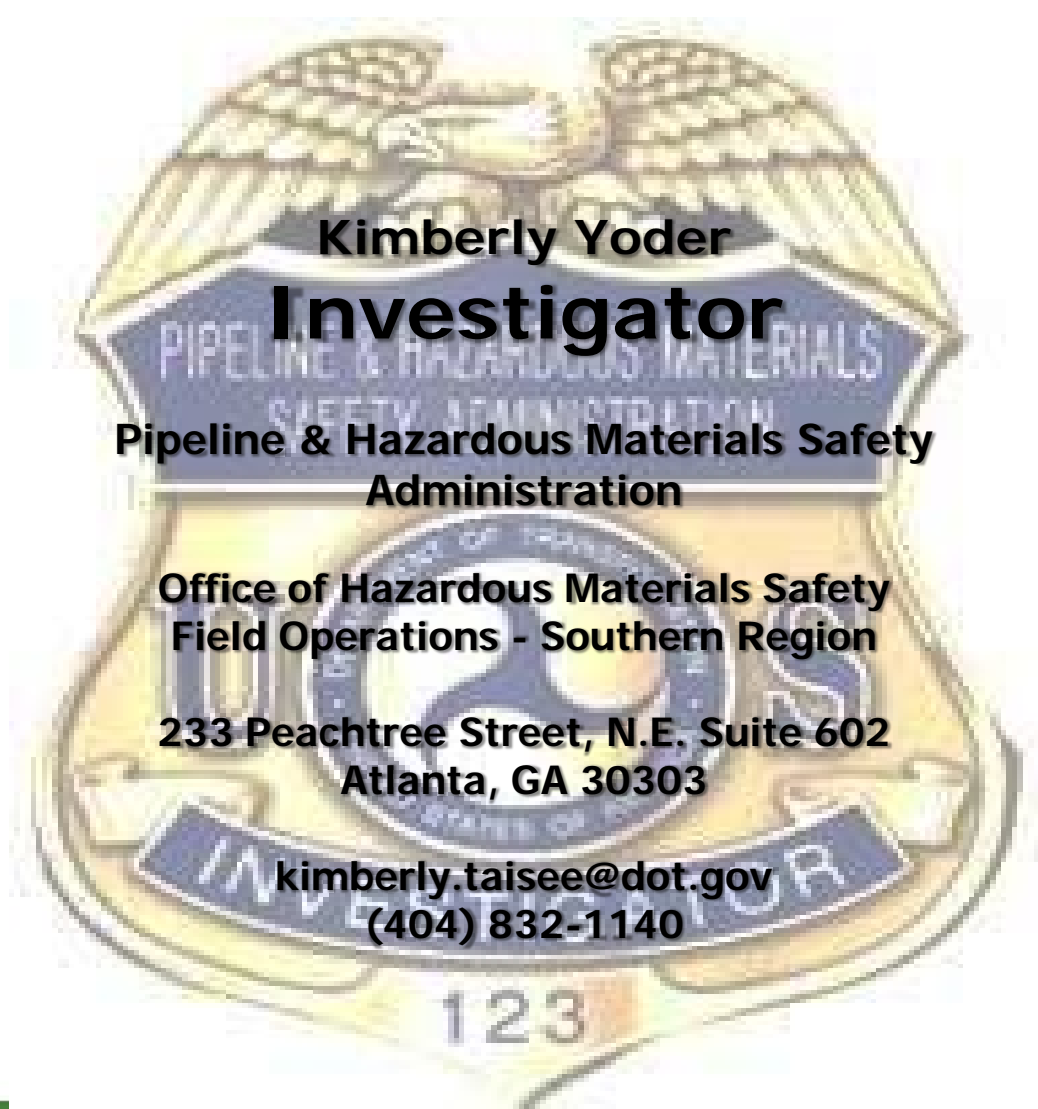
QUESTION AND ANSWER TIME

What improvement would you suggest to enhance Enforcement/Field Operations?

What would you like to see happening that is not happening now?

What worries you the most about your role?





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Investigator

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Closing Remarks

- What did we learn?
- How do we implement action?
- What's next?

