



# Gas Transmission 2012 Annual Reports

## Integrity Verification Process (IVP) Workshop

August 7, 2013

***slide 13 revised 9-18-2013***

Arlington, Virginia



presented by  
**Blaine Keener**



**PHMSA**  
Your Safety  
Our Mission



# Topics

- Data Collection
- Data Access
- Data Summary
  - Total GT Miles
  - GT HCA Miles
  - by HCA and Class Location
- Part Overviews
- Congressional Mandate
- NTSB Recommendations



# Data Collection

- All operators of gas transmission (GT) pipelines were required to file the 2012 report by June 15, 2013
- 903 operators filed 951 reports by July 1, 2013  
32 less operators than 2011
- 115 reports have been supplemented to update and correct data. More supplemental reports are expected.
- [Form Online](#)
- [Instructions Online](#)



# Mileage Data Collection by Part

- Part H Nominal Pipe Size
- Part J Decade Installed
- Part K Specified Minimum Yield Strength
- Part L Class Location, includes HCA Miles
- Part P Material & Corrosion Prevention Status
- Part Q Maximum Allowable Operating Pressure (MAOP) Method and Records, includes HCA Miles
- Part R Pressure Test (PT) Range and Internal Inspection (aka In Line Inspection (ILI) and Piggable) Capability, includes HCA Miles



# Data Access

- As of 7/1/2013 data was added to the [Integrity Verification Process \(IVP\) Docket](#) and the [OPS Public Meeting](#) web page in early July
  - some reports are missing Parts
- Data related to mandates and recommendations added in mid-July, but Part Q MAOP Method & Records summary reports were about 10% too high
- [OPS Website](#)
  - as of 7/31/2013 data added on August 5
  - And some reports are still missing Parts
  - data set will be updated monthly



# Data Summary

- Since different attributes are reported in different Parts, the Total GT Miles and GT HCA Miles vary among Parts
- Data collection target was maximum differences of 0.5% for Total GT Miles and 0.3% for GT HCA Miles
- Total GT Miles
  - PHMSA uses Part J by Decade Installed
  - 302,427 miles
- GT HCA Miles
  - PHMSA uses Part L by Class Location
  - 19,808 miles 6.5% of Total GT Miles



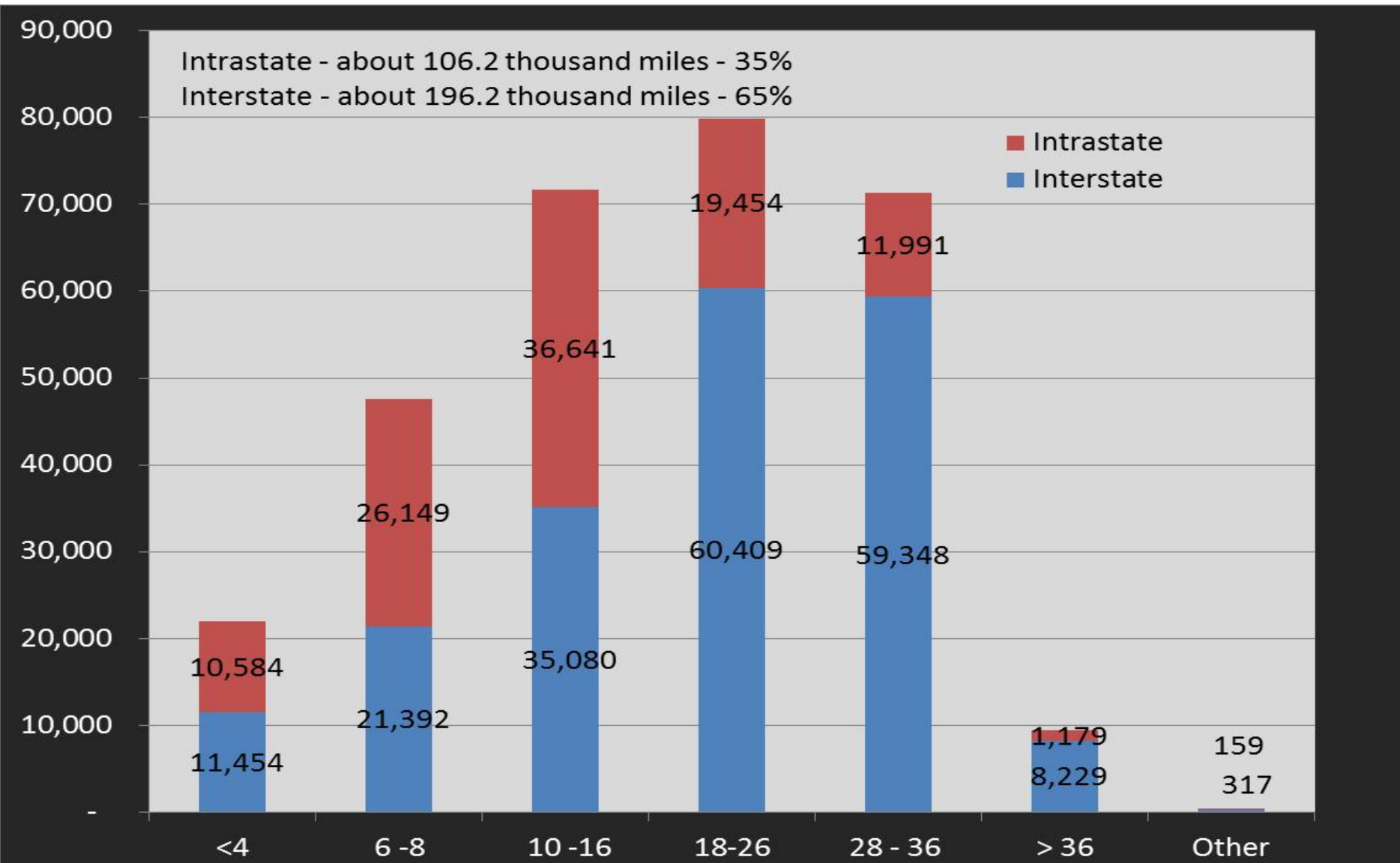
# Data Summary by HCA and Class Location

data as of 7-1-2013 from Part Q

Location	Total GT Miles	% in HCA	GT HCA Miles	Non-HCA Miles
Class 1	237,756	0.7	1,660	236,096
Class 2	30,210	4.7	1,412	28,798
Class 3	32,613	48.6	15,854	16,759
Class 4	962	78.2	752	209
<b>Total</b>	<b>301,540</b>		<b>19,678</b>	<b>281,862</b>

# Nominal Pipe Size

data as of 7-1-2013 from Part H

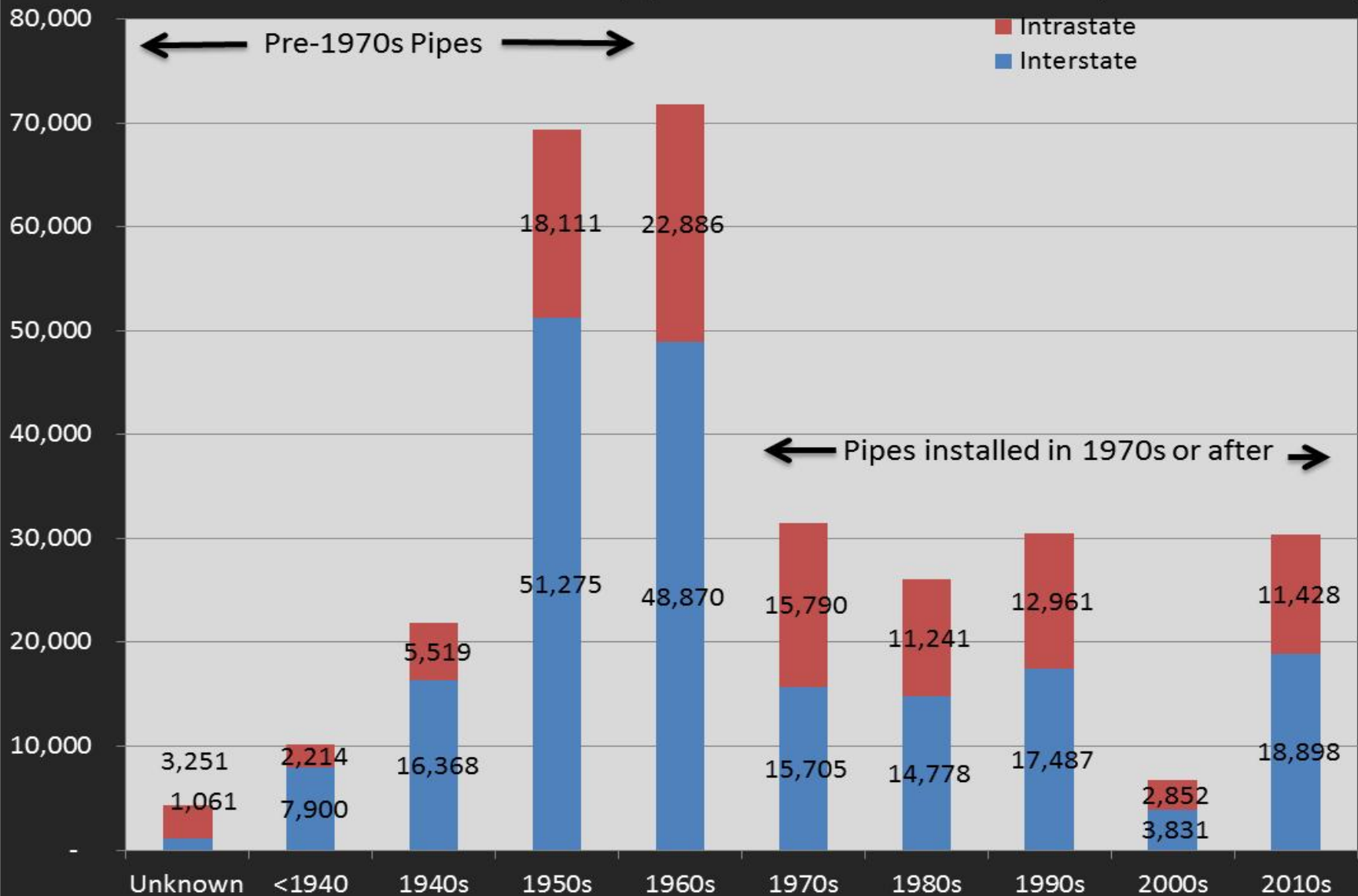




# Decade Installed

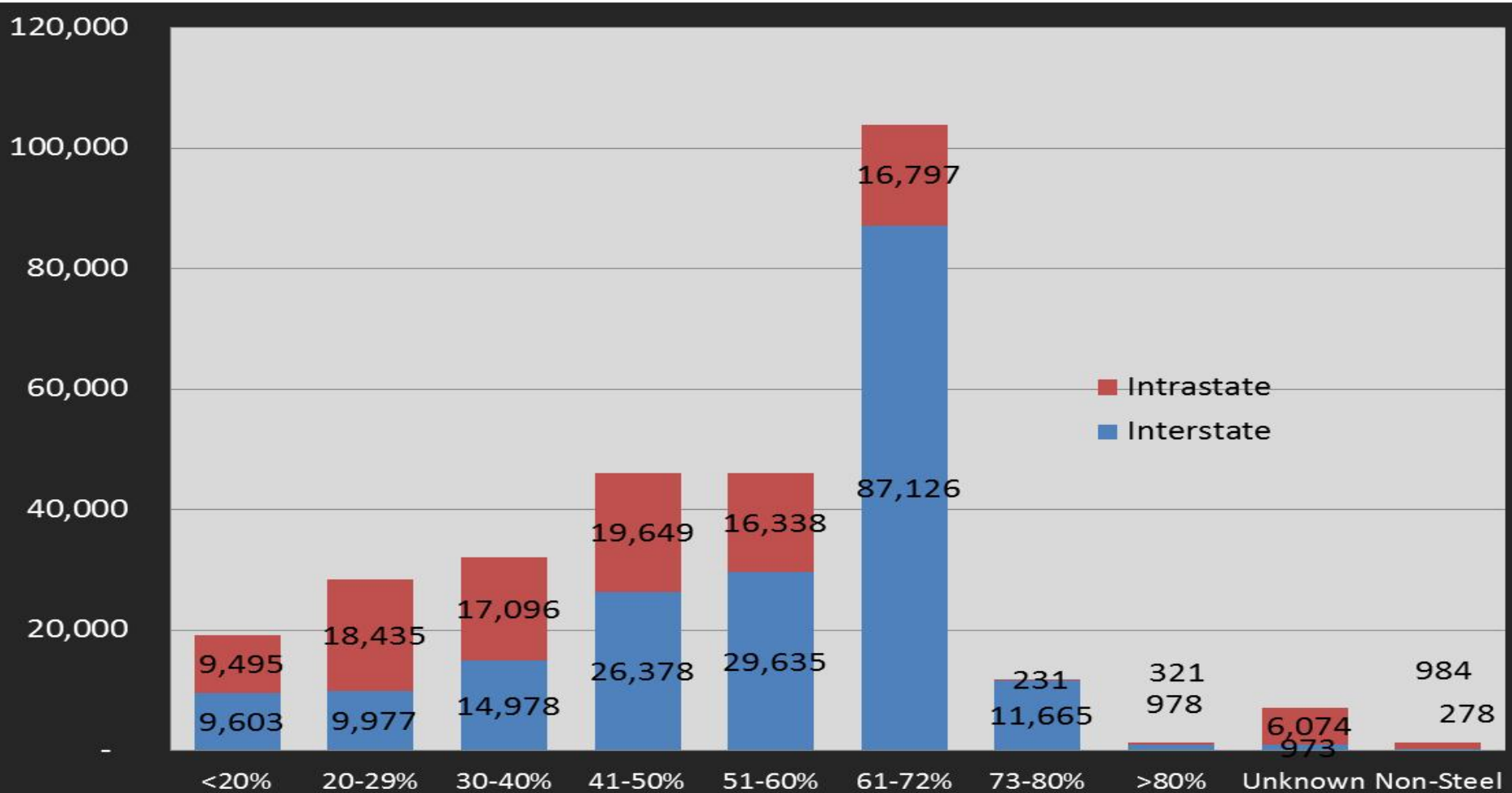
data as of 7-1-2013 from Part J

59% of the 302.4 thousand miles of pipes were installed before 1970s (includes unknown)



# Specified Minimum Yield Strength

data as of 7-1-2013 from Part K



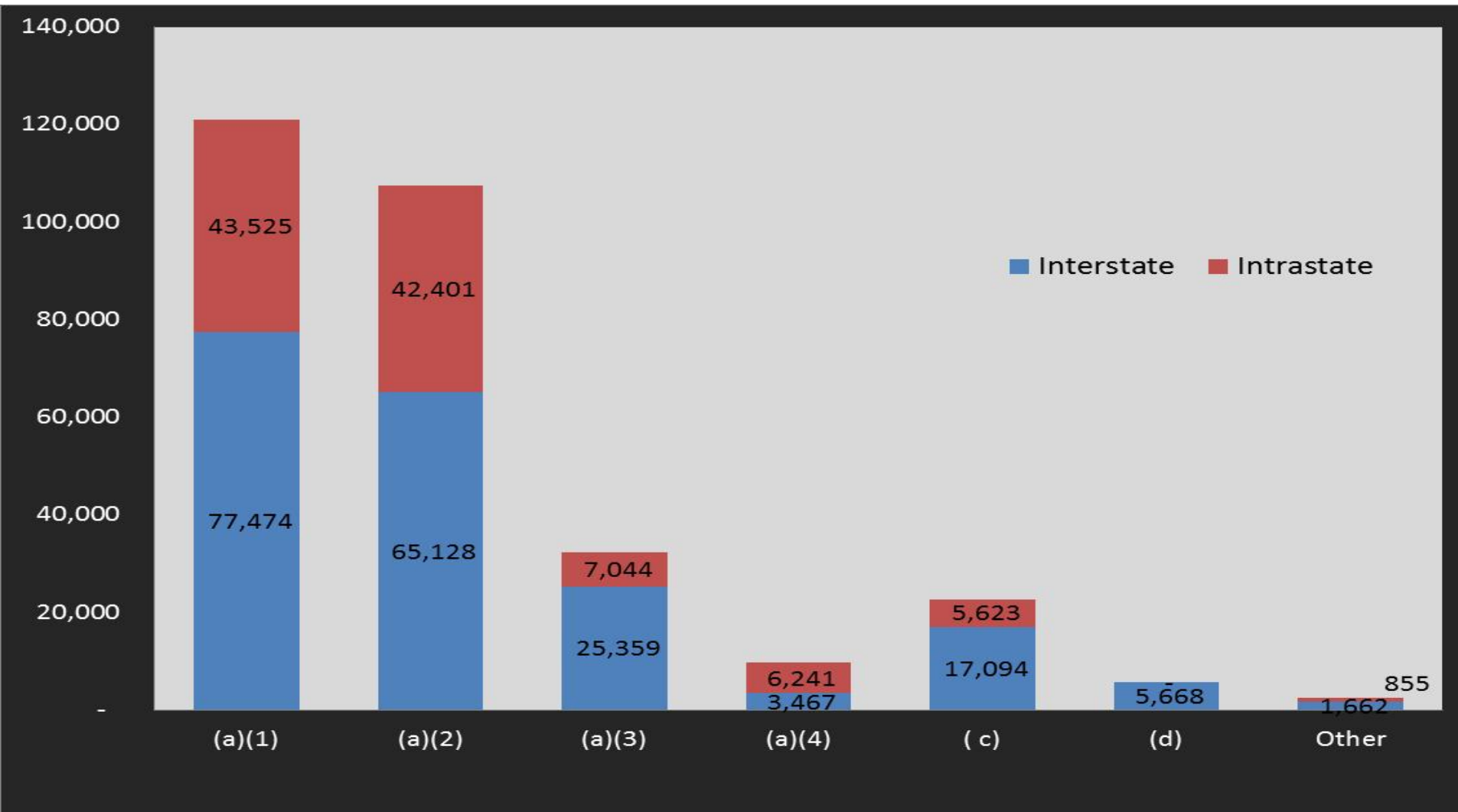


## Part Q – Grandfather Interlude

- 192.619(a)(3) **IS NOT** the grandfather clause
  - Under 619(a), MAOP is limited to the lowest of four criteria – design, pressure test, operating pressure in 5 years preceding 1970, and pipeline history
  - For miles reported under 619(a)(3), the operating pressure in 5 years preceding 1970 is less than the allowable pressure derived from design, pressure test, and pipeline history
- 192.619(c) **IS** the grandfather clause

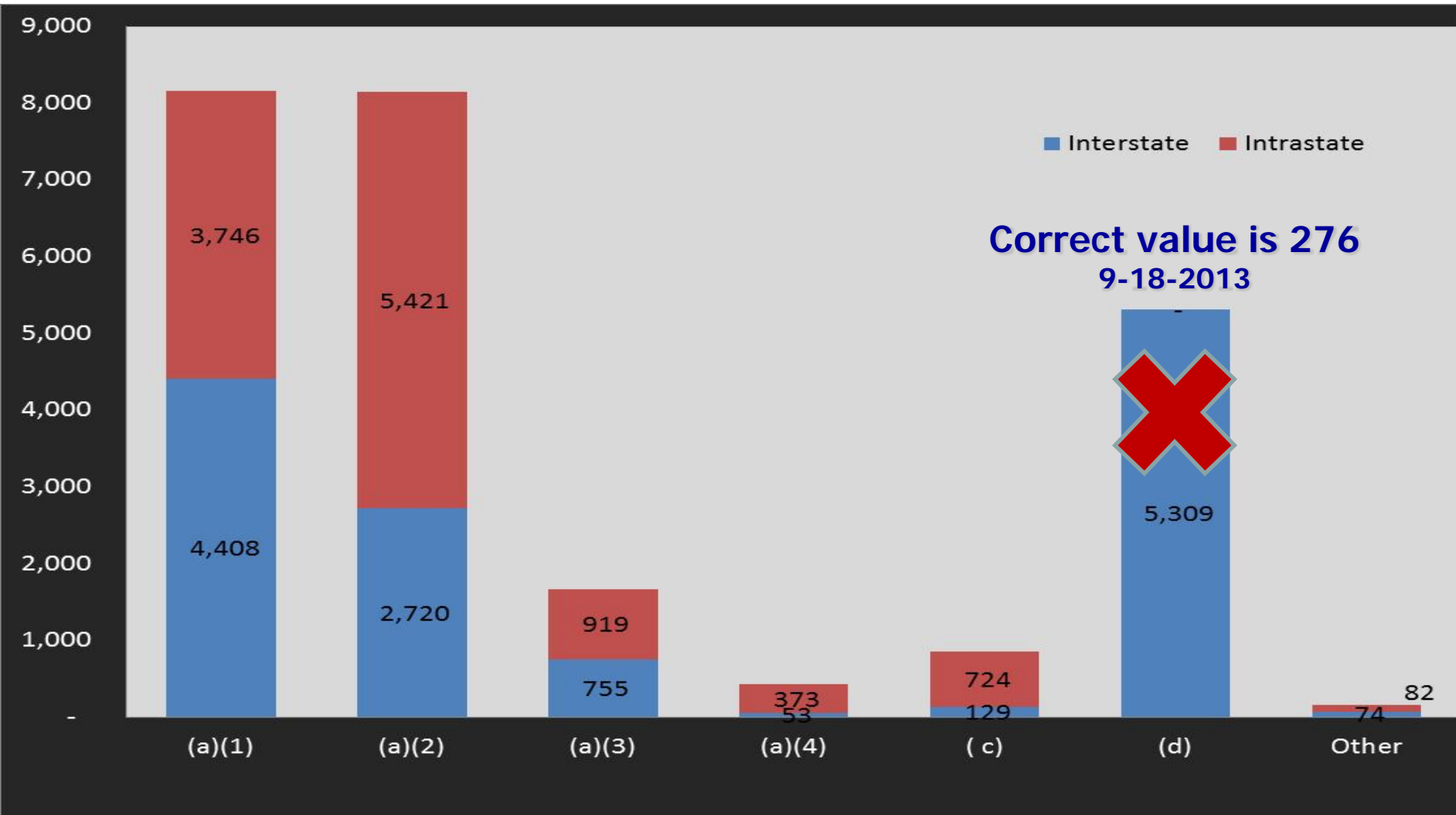
# Total GT Miles 192.619 MAOP Method

data as of 7-1-2013 from Part Q



# GT HCA Miles 192.619 MAOP Method

data as of 7-1-2013 from Part Q

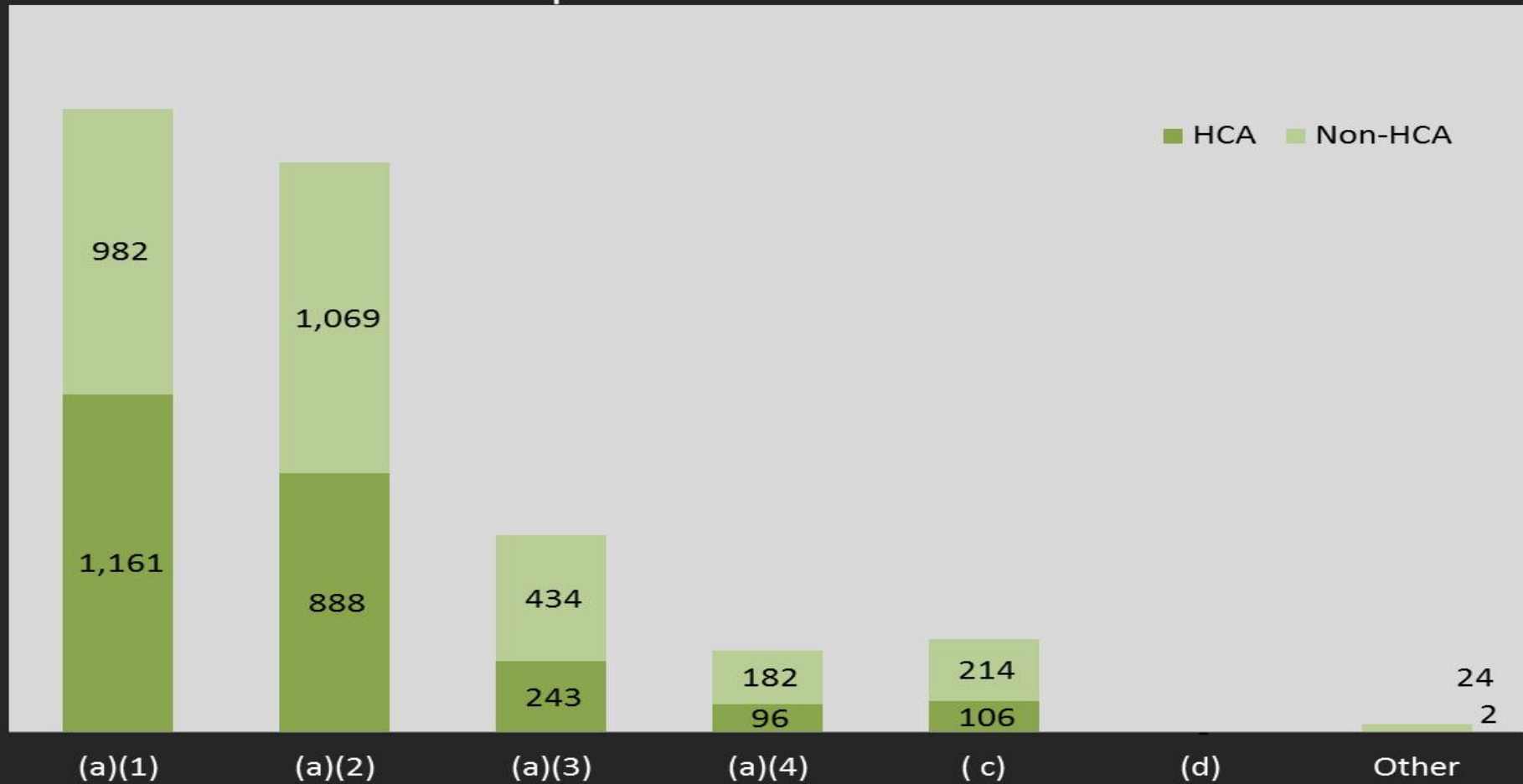


# Incomplete Records for MAOP

data as of 7-1-2013 from Part Q

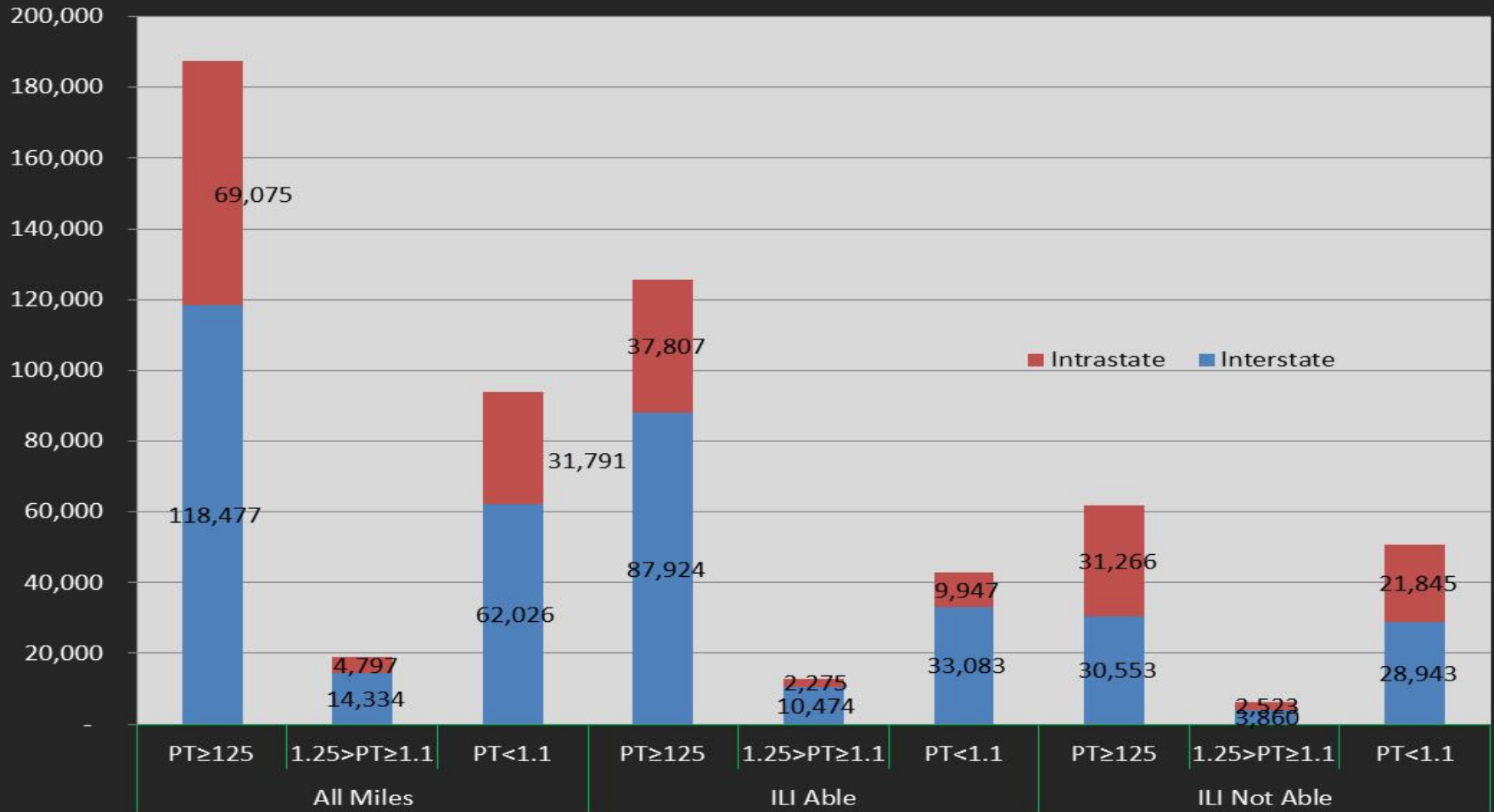
Record status *not* collected  
for Class Locations 1 & 2 outside of HCAs

Total Miles with Incomplete Records for Each MAOP Method



# Pressure Test Range & ILI

data as of 7-1-2013 from Part R





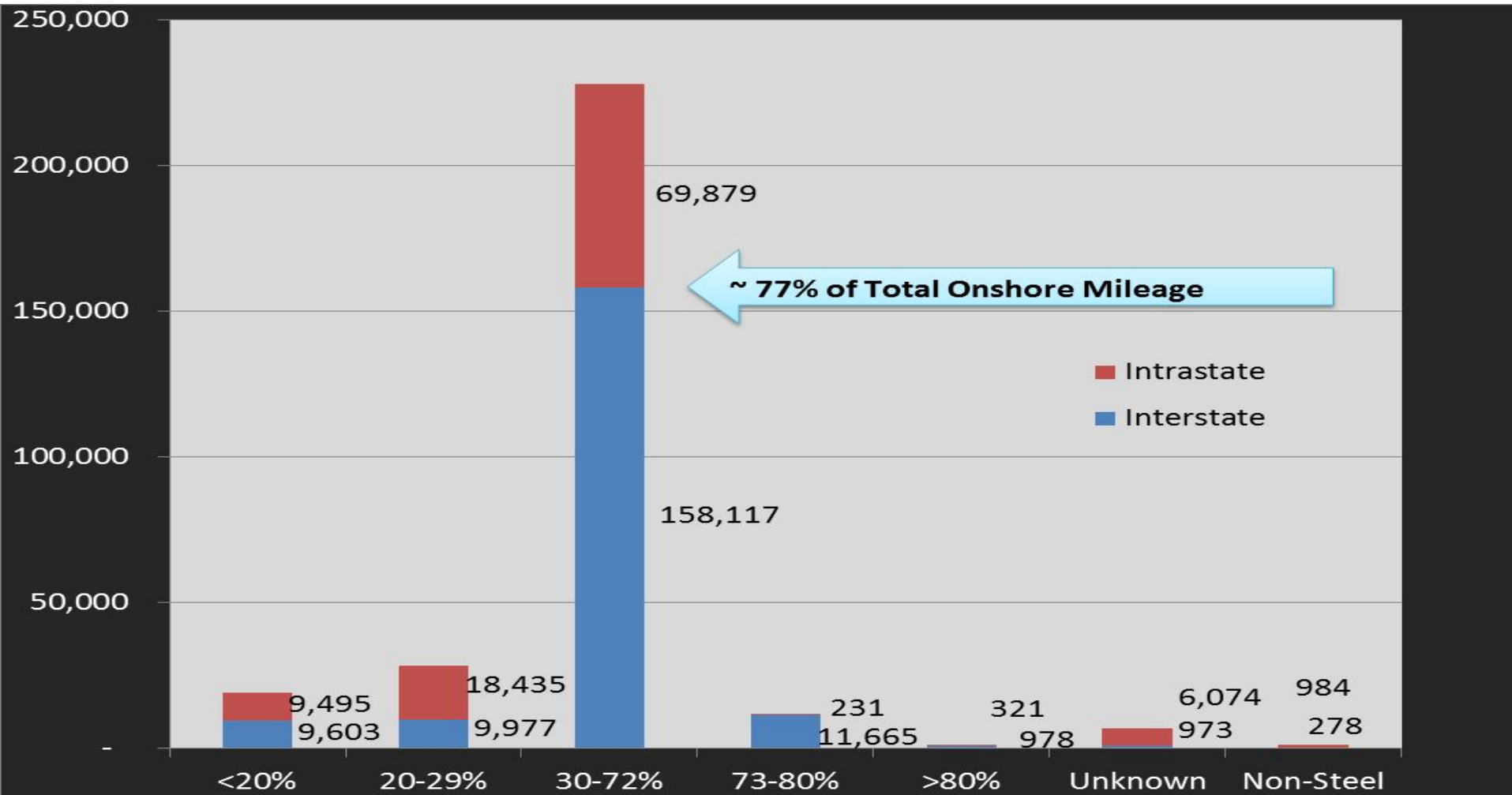
## §23 PSA of 2011– MAOP Mandate

- Verify records for Class Locations 3 & 4 and HCAs
- Reconfirm MAOP for pipe with incomplete records
  - **5,401 miles with Incomplete Records**
    - **2,496 miles in HCA**
    - **2,905 miles in Class Locations 3 & 4 outside HCA**
- Strength test all untested pipe in HCA operating at > 30% SMYS
  - **3,220 HCA miles with Pressure Test < 1.1 MAOP**
  - **assume 77% is over 30% SMYS – see next slide**
  - **also “covered” by NTSB Recommendation P-11-15**



# Specified Minimum Yield Strength

data as of 7-1-2013 from Part K



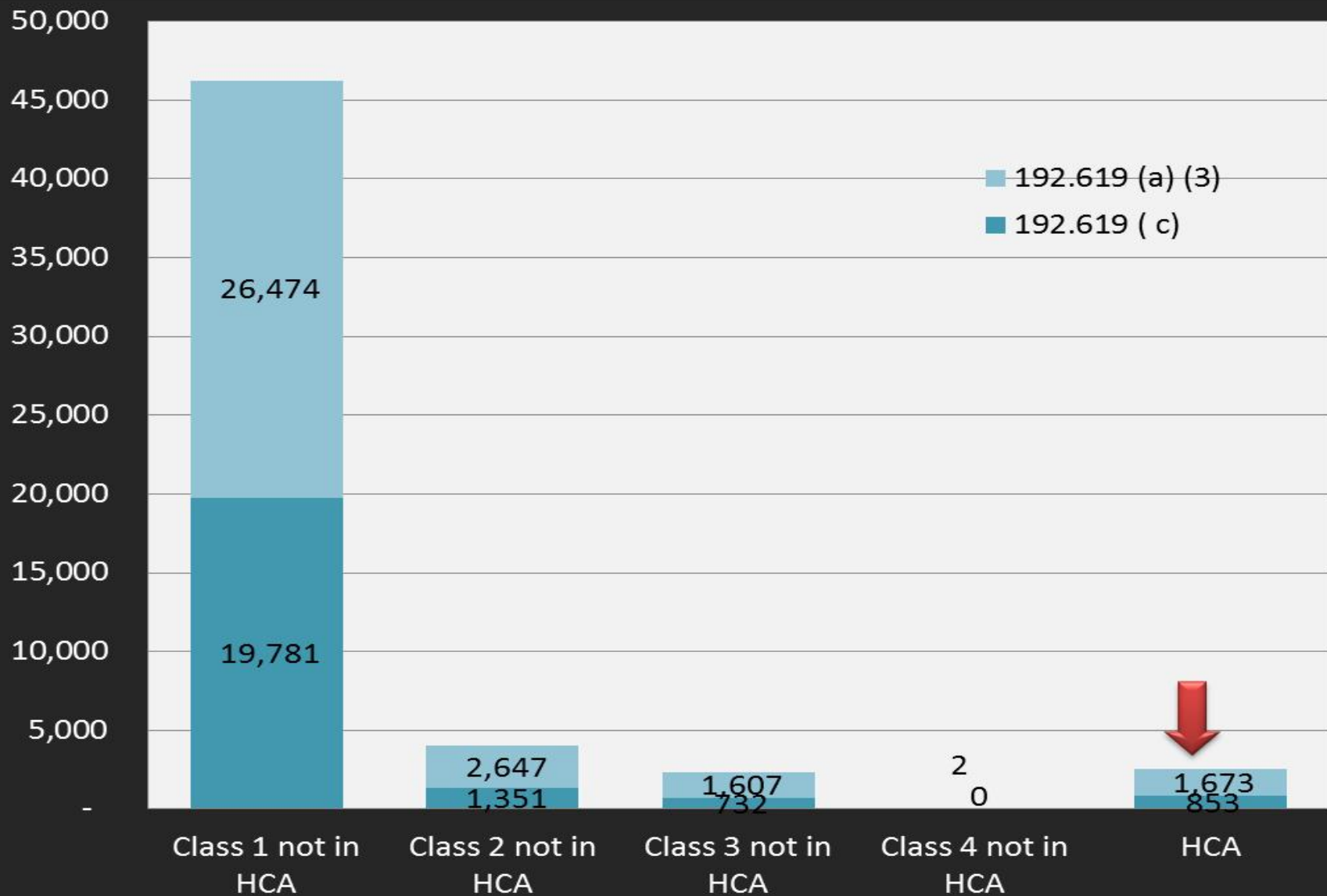


# NTSB Recommendation P-11-14

- **Eliminate Grandfather clause and require hydrotest with a spike test for all pre-1970 pipe**
  - **55,120 miles** Grandfathered, including miles reported under 619(c) (22,717) and 619(a)(3) (32,403)
  - **93,817 miles** with Pressure Test < 1.1 MAOP
  - **20,272 miles** with Stress Level > 72% SMYS or Unknown. Except for Special Permit/Alt MAOP pipelines, PHMSA expects this mileage is Grandfathered.
- **PHMSA expects that Grandfather miles and Pressure Test < 1.1 MAOP are actually close to the same number**  
**Somewhere between 55 and 94 thousand miles**

# Grandfathered Miles

data as of 7-1-2013 from Part Q



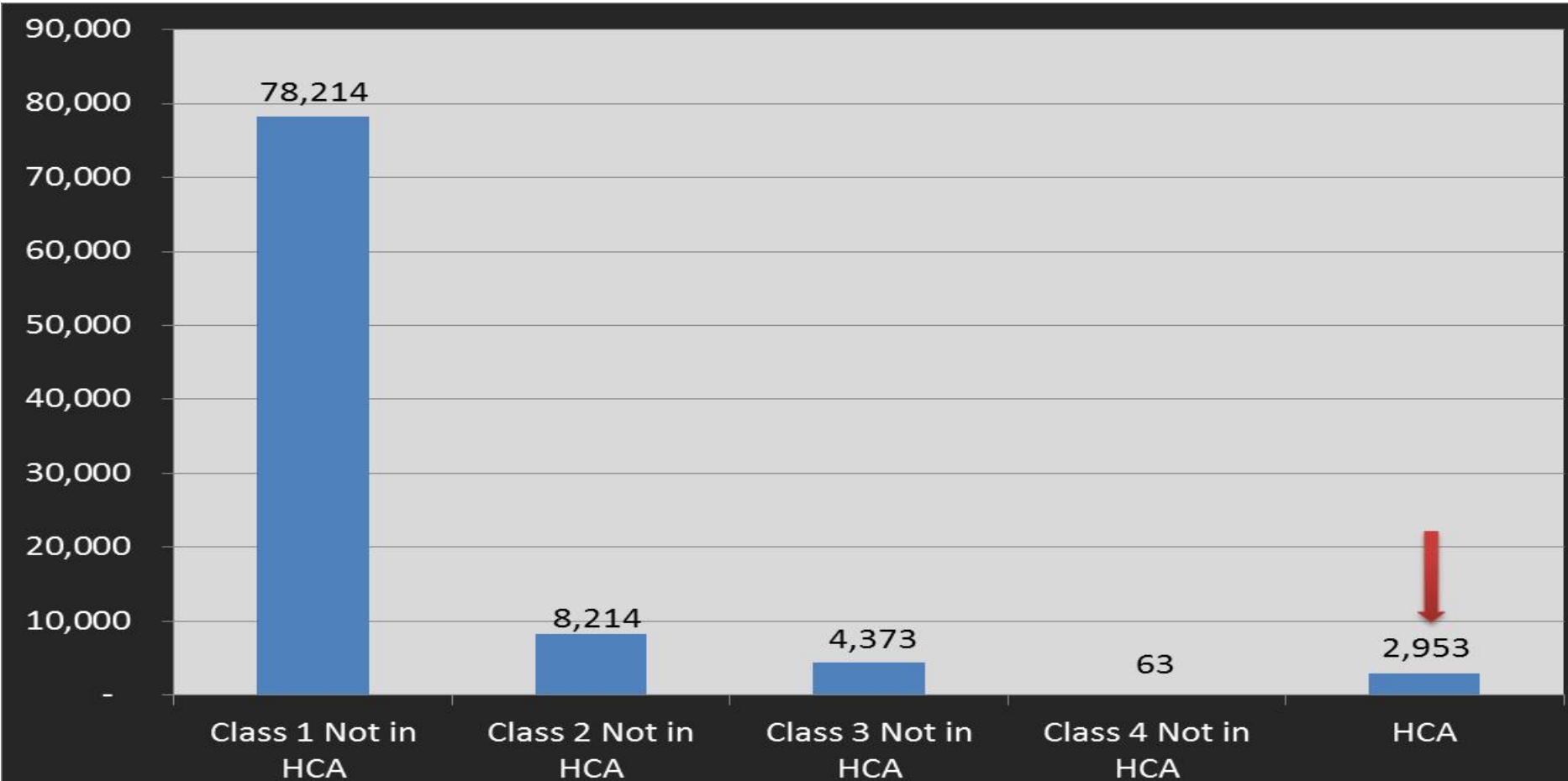


## Pressure Test Range – Part R

Pressure Test Range	Total Miles	% Total
<b>PT &lt; 1.1 MAOP or no PT</b>	93,817	31%
<b>1.25 MAOP &gt; PT ≥ 1.1 MAOP</b>	19,131	6%
<b>PT ≥ 1.25 MAOP</b>	187,628	62%

# Pressure Test < 1.1 MAOP

data as of 7-1-2013 from Part R





# Part K - Operating Stress Levels over 72% SMYS & Unknown

% SMYS	Interstate	Intrastate	Total
> 72 to 80	11,665	231	11,895
> 80	978	321	1,299
Unknown	973	6,074	7,038

- Miles operating between 72 and 80% SMYS are either Grandfathered, Special Permit, or Alternative MAOP under 619(d)
- Miles with Unknown SMYS are Grandfathered



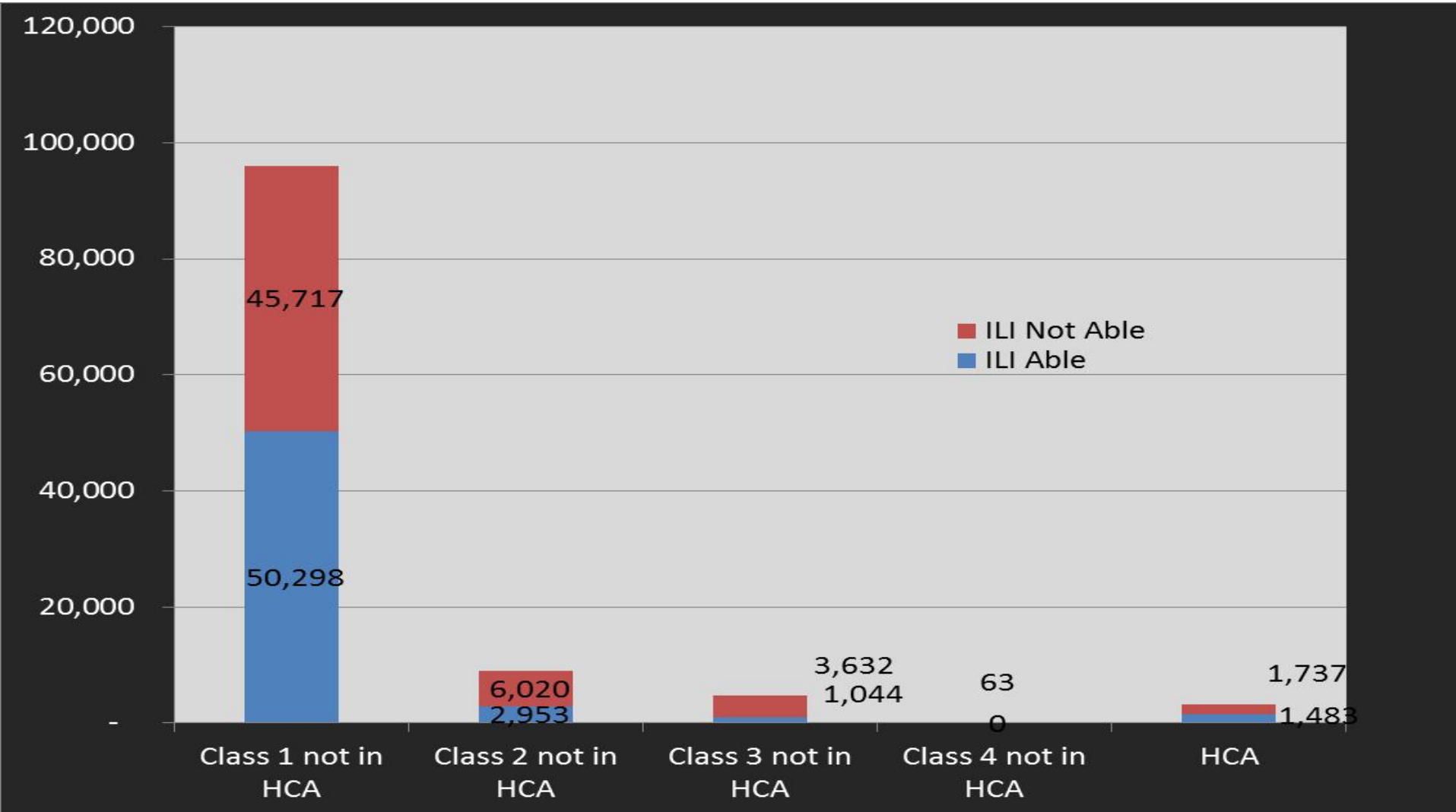
# NTSB Recommendation P-11-15

**Manufacturing & Construction Defects Considered Stable  
Only for Pipe with Test Pressure  $\geq$  1.25 MAOP**

- **3,220 GT HCA Miles with Pressure Test  $<$  1.25 MAOP**
  - **1,483 miles ILI Able**
  - **1,737 miles ILI Not Able**

# Pressure Test < 1.25 MAOP

data as of 7-1-2013 from Part R







# NTSB Recommendation P-11-17

**Configure all lines to accommodate smart pigs, with priority given to older lines**

- **118,947 miles**      ILI Not Able      40% of Total
- **69,579 miles**      Diameter  $\leq$  8-inch      23% of Total
- **44,600 miles**      Diameter  $\leq$  6-inch      15% of Total
- **???? miles**      ILI Not Able due to system configuration



# ILI Able vs Not Able

Part R	Total Miles	ILI Able	ILI Not Able
Class 1 - HCA	1,658	1,380	278
- non-HCA	234,851	146,035	88,816
Class 2 - HCA	1,409	1,152	257
- non-HCA	28,978	15,073	13,905
Class 3- HCA	15,850	10,469	5,381
- non-HCA	16,751	6,924	9,827
Class 4 - HCA	752	366	386
- non-HCA	209	112	97
<b>TOTAL</b>	<b>300,458</b>	<b>181,511</b>	<b>118,947</b>



# Questions?

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