

Tank Car NAR Data Breakdowns 2017 Preliminary

Source of data: PHMSA on-line NAR data and data provided by
Canadian Class 1 railroads

AAR Annual Report of Non-Accident Releases of Hazardous
Materials Transported by Rail 2017

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Sources for the NAR Data

- The main source for incidents in the US is PHMSA's 5800.1-based data
- Canadian Class 1s also voluntarily provided data on incidents in Canada – Canadian Short Lines are not included
- Railroads are voluntarily adding BOE Cause Codes to their 5800.1 reports
 - More precision than PHMSA Cause Codes
 - However, this process was introduced mid-2017 and needed considerable follow-up to complete the dataset



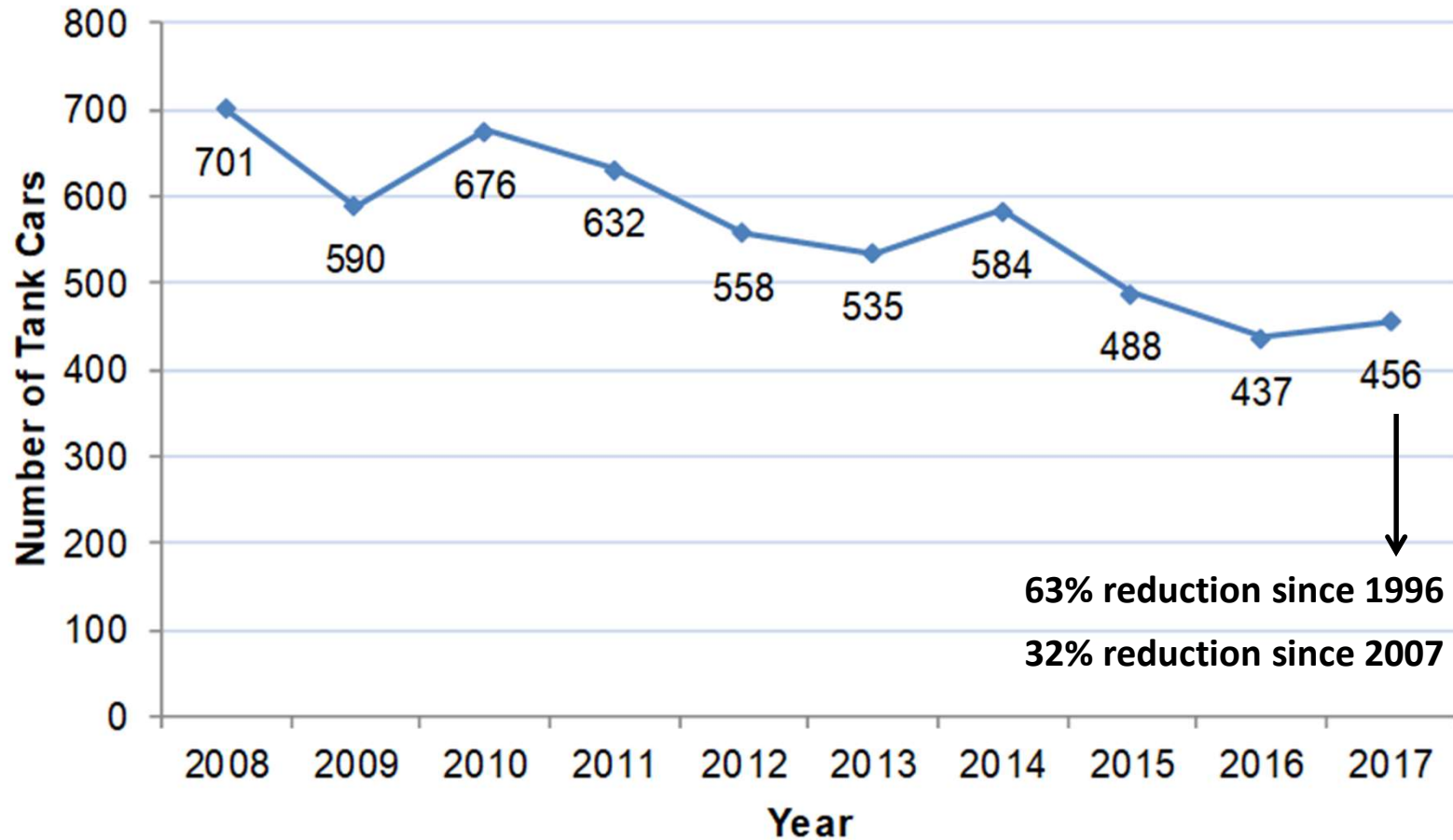
Further Notes on NAR Data

- Some gaps
 - Cause Codes for most US short lines
 - Canadian short line incidents
 - Did not attempt to include Mexican incidents
- 2017 data do include US short line incidents, while previous years lacked many of those – but they are excluded from the trend graphs for comparability with previous years
- While the 2017 dataset is finalized, the graphs shown here are preliminary because there has not been a full review of the various counts



Tank Cars with NARs by Year

US & Canada



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NARs in Other Modes of Rail Transportation

2017 Hazmat Releases in U.S. and Canada
(not including Short Lines)

- Intermodal – 64
- Other - 21



Rate of Release for Mode of Transportation

Worst Performers

1. Class 3 (Flammable Liquids)
 1. 169 Tank Cars / 16 Intermodal
2. Class 8 (Corrosive)
 1. 103 Tank Cars / 15 Intermodal
3. Division 2.1 (Flammable Gas)
 1. 83 Tank Cars
4. Class 9 (Misc. Hazmat)
 1. 35 Tank Cars / 25 Intermodal

	Tank Car	Intermodal	Other	Total
Load Originations	1,878,682	713,381	74,962	2,667,025
NARs	454	63	21	538
NAR Rate	0.242	0.088	0.280	0.202

Note: For Tank Car Incidents

- Flammable Gases have increased from 2014 to 2017
- Flammable Liquids have decreased from 2014 to 2017
- Corrosives have remained consistent from 2014 to 2017
- Misc. Hazmat have decreased slightly from 2014 to 2017



Short Line Data 2017

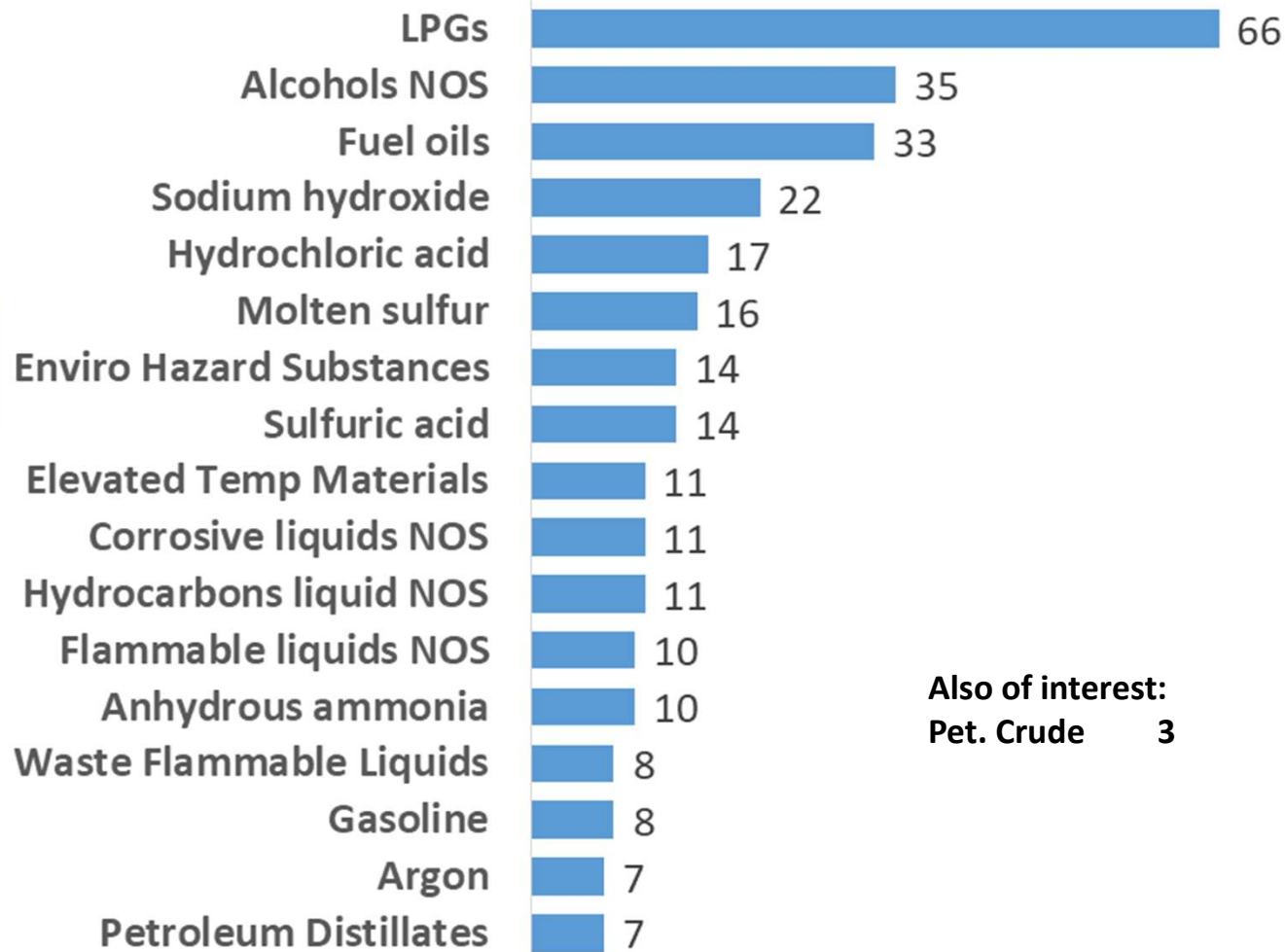
- 101 Short Line and Regional NARs
- Short Line data has not been reported in the past Annual Leak Report
 - Short Lines did not enter data in the Release Reporter
- Still having data quality issues
 - Short Line Association is educating short lines on the data needed when filing 5800s



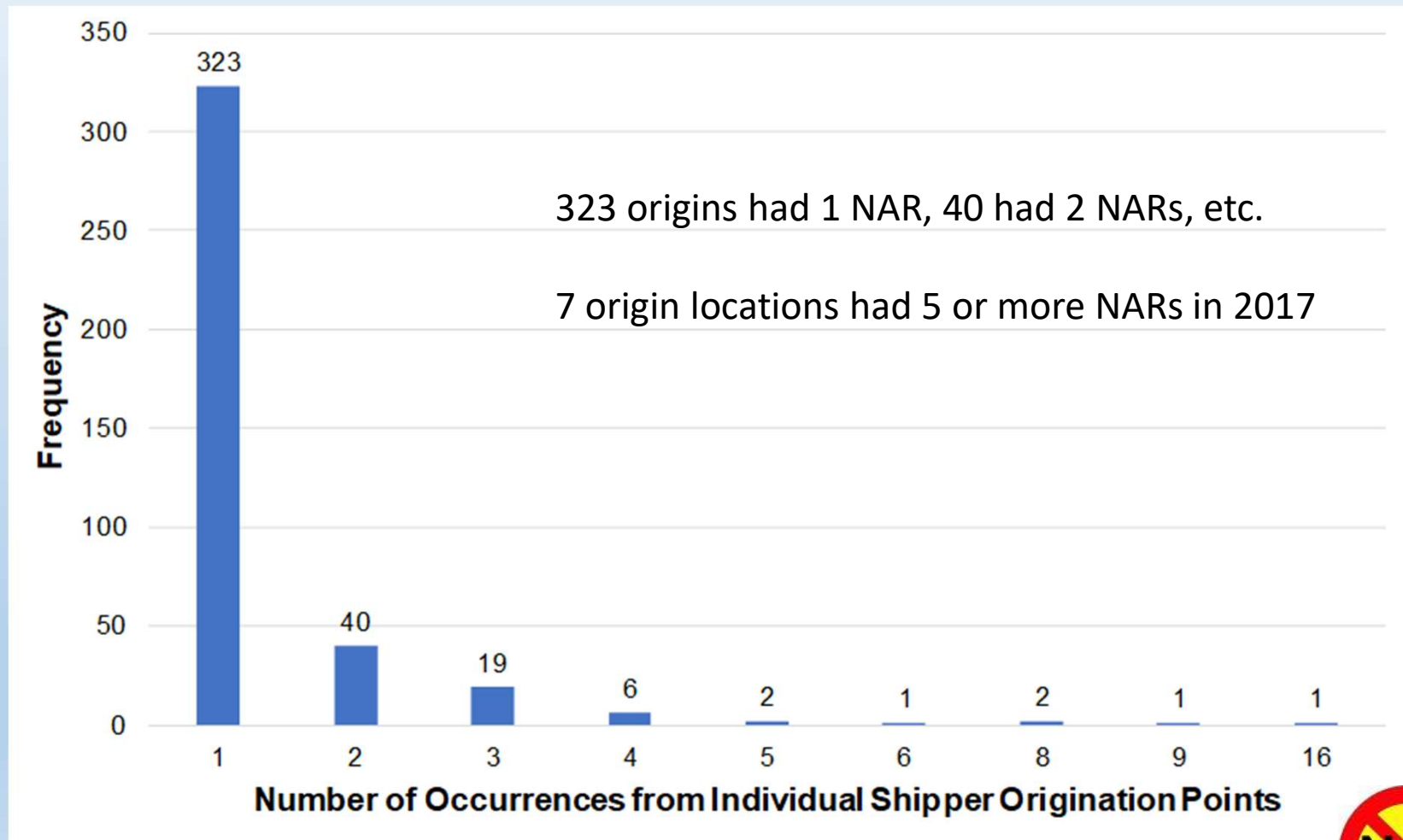
Top Commodities for NARs

Top 15 in Tank Car NARs in 2017

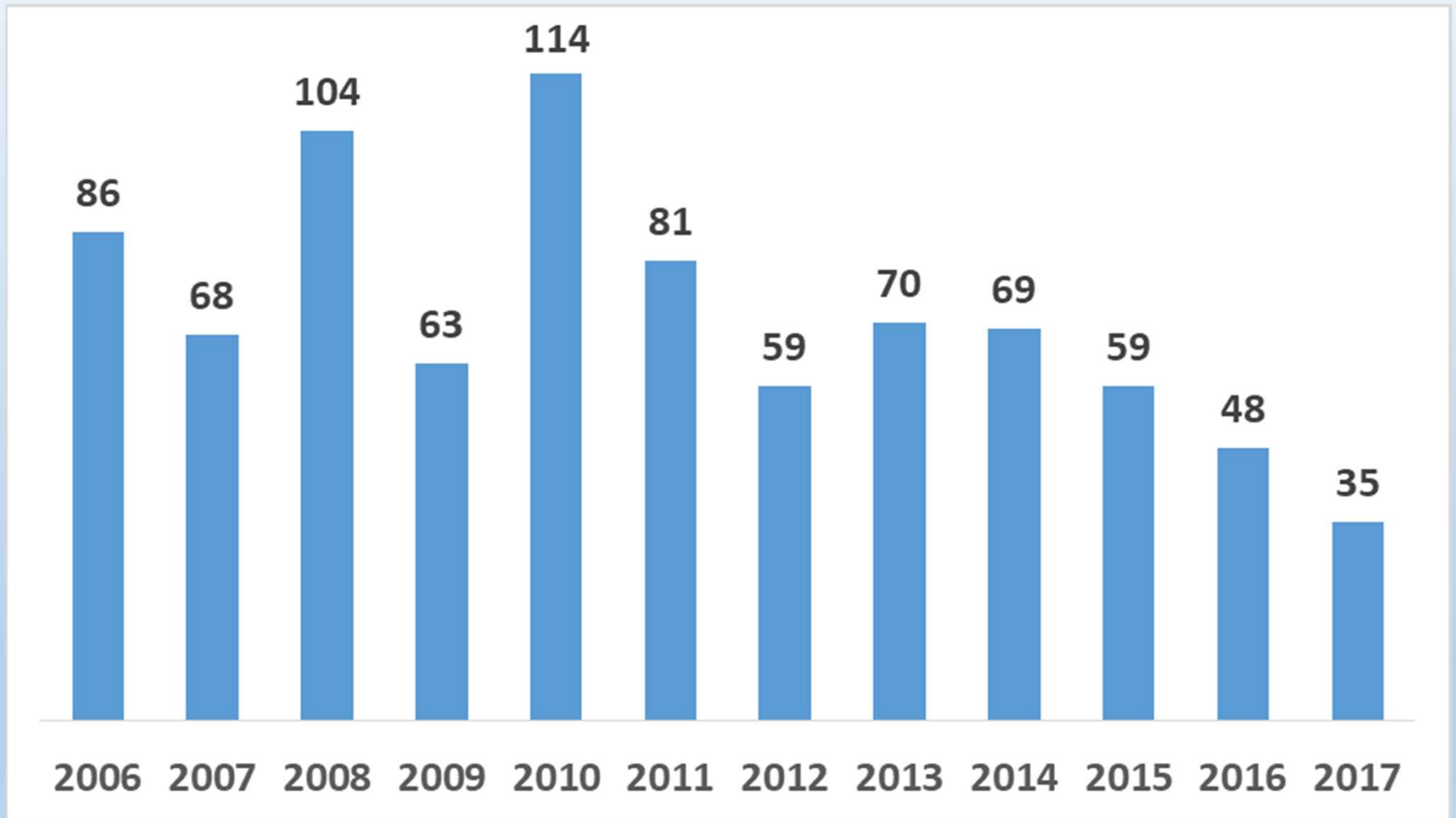
US & Canada



Multiple Tank Car NARs During 2017 from the Same Origin Point



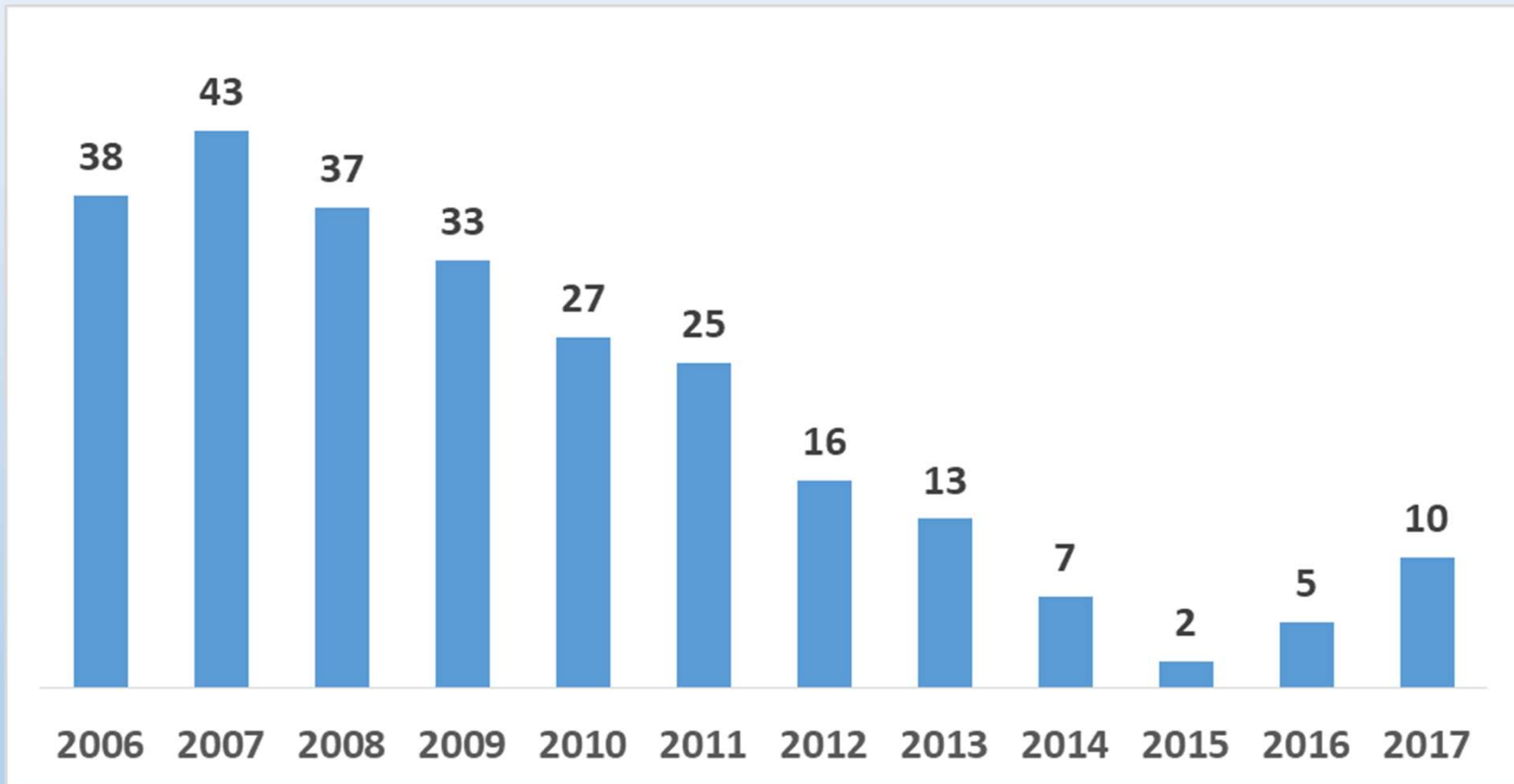
Alcohols NOS Trend



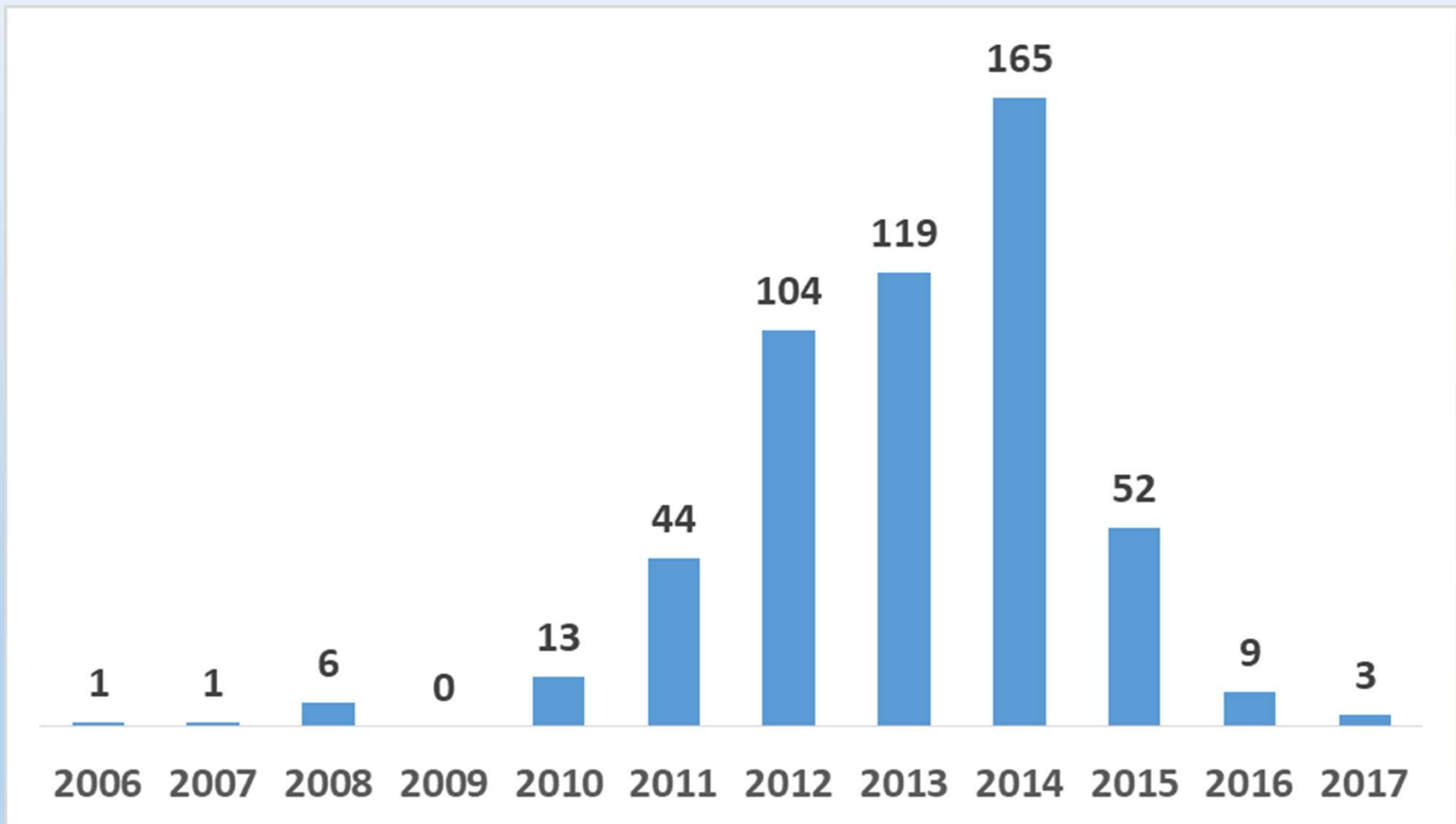
7/11/18 PRELIMINARY



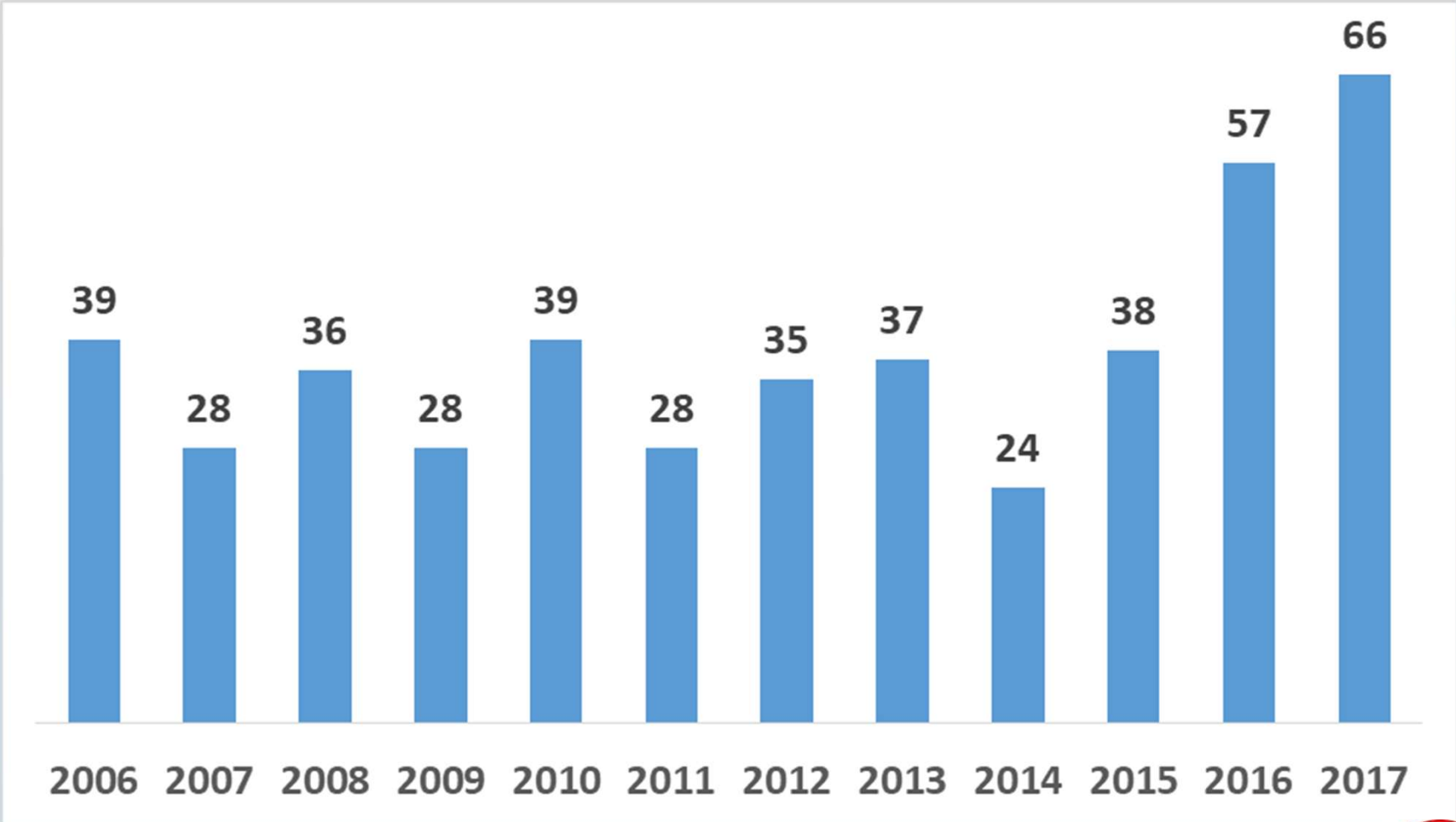
Anhydrous Ammonia Trend



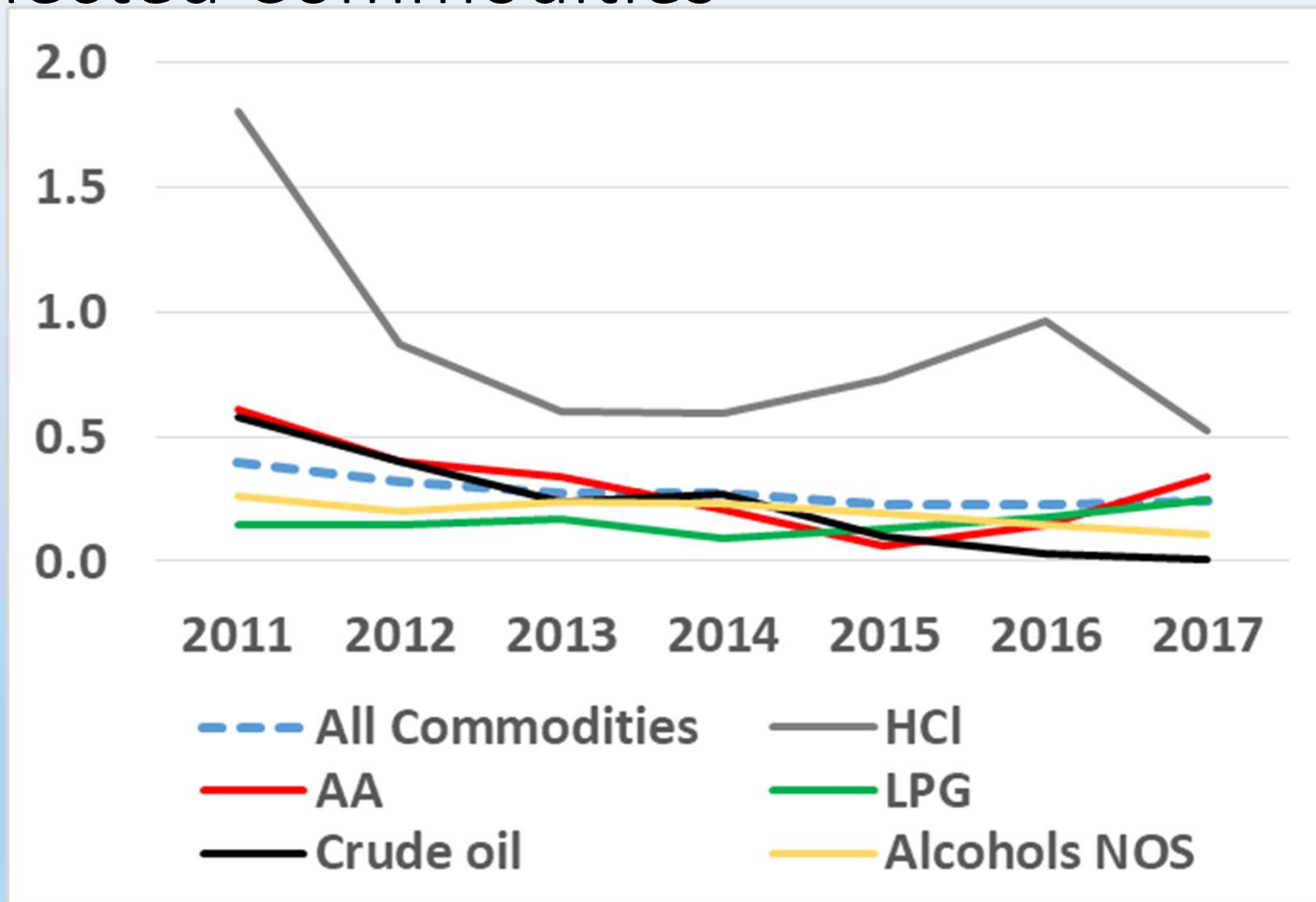
Crude Oil Trend



LPG Trend

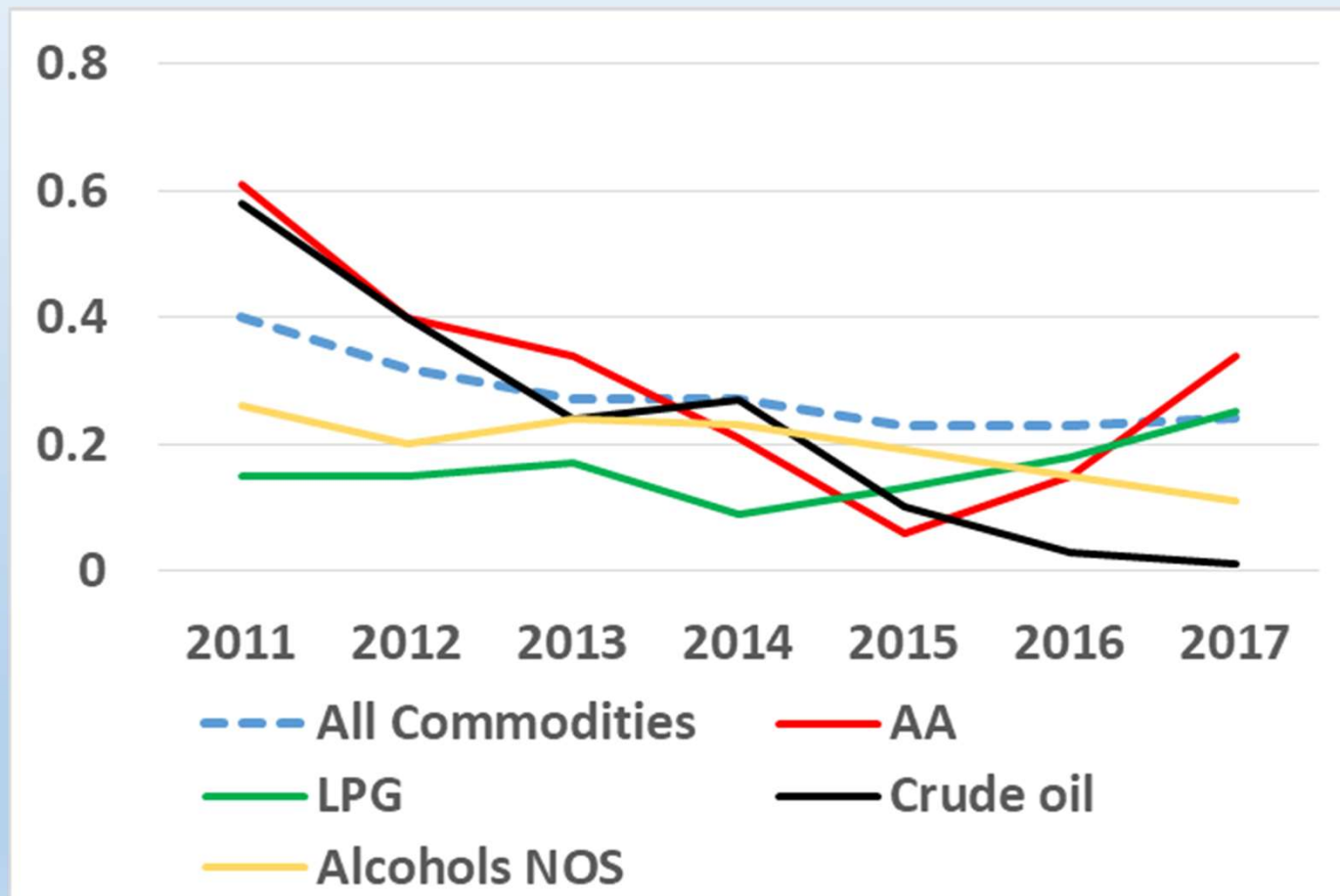


Tank Car NARs per 1,000 Originations Selected Commodities



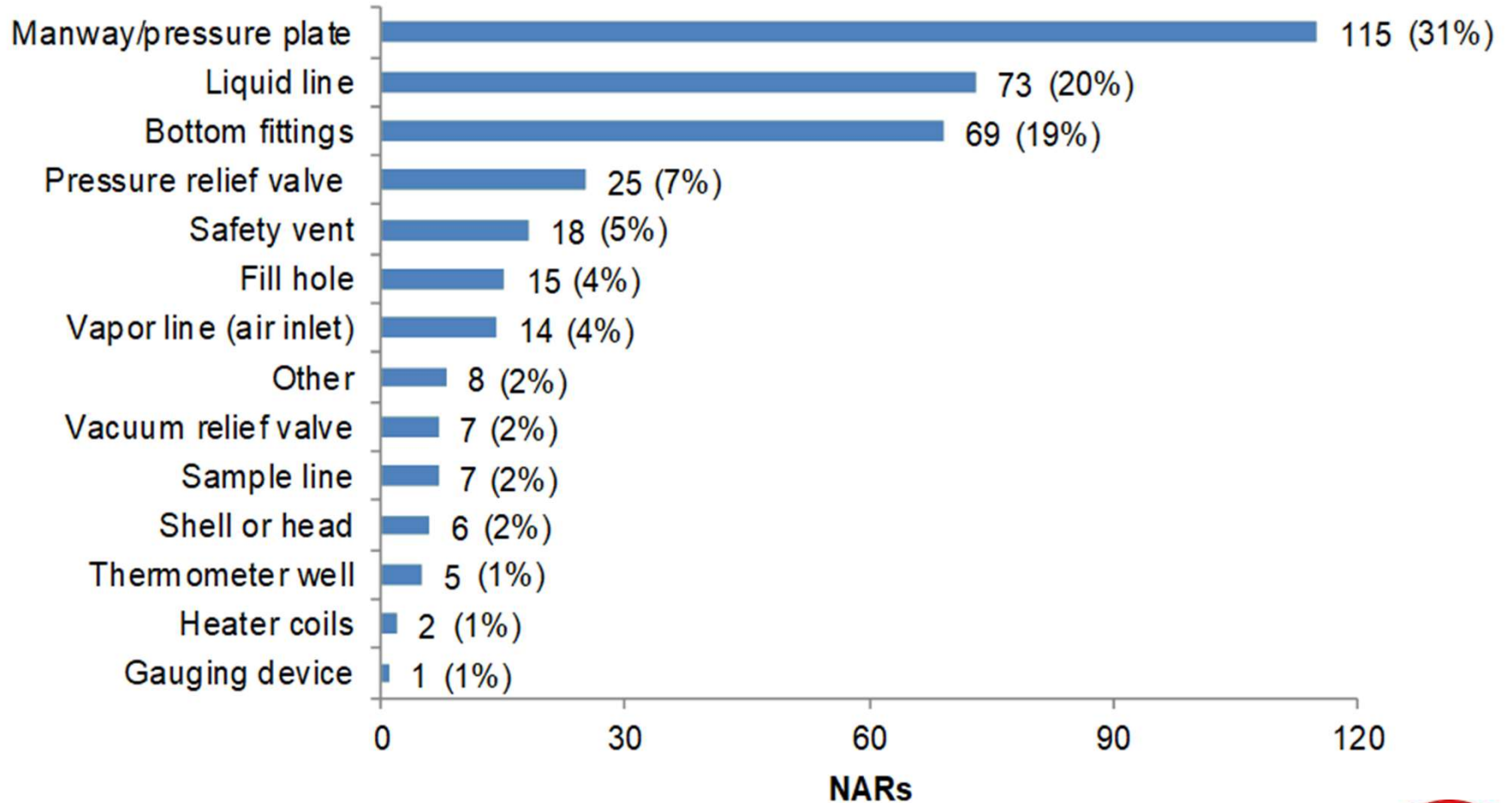
Tank Car NARs per 1,000 Originations Selected Commodities

HCI Excluded



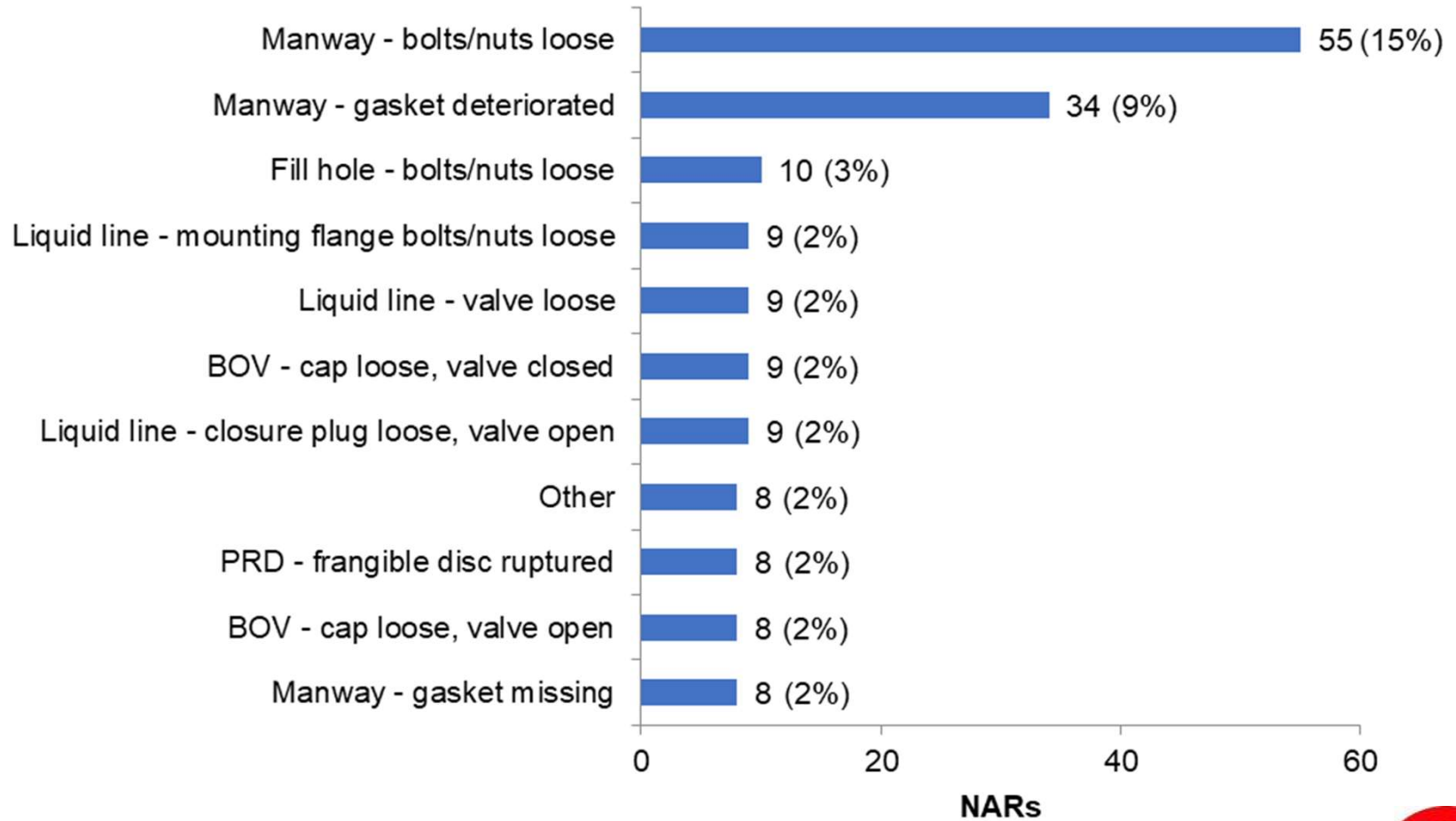
Components Involved in NARs Non-pressure Cars

2017

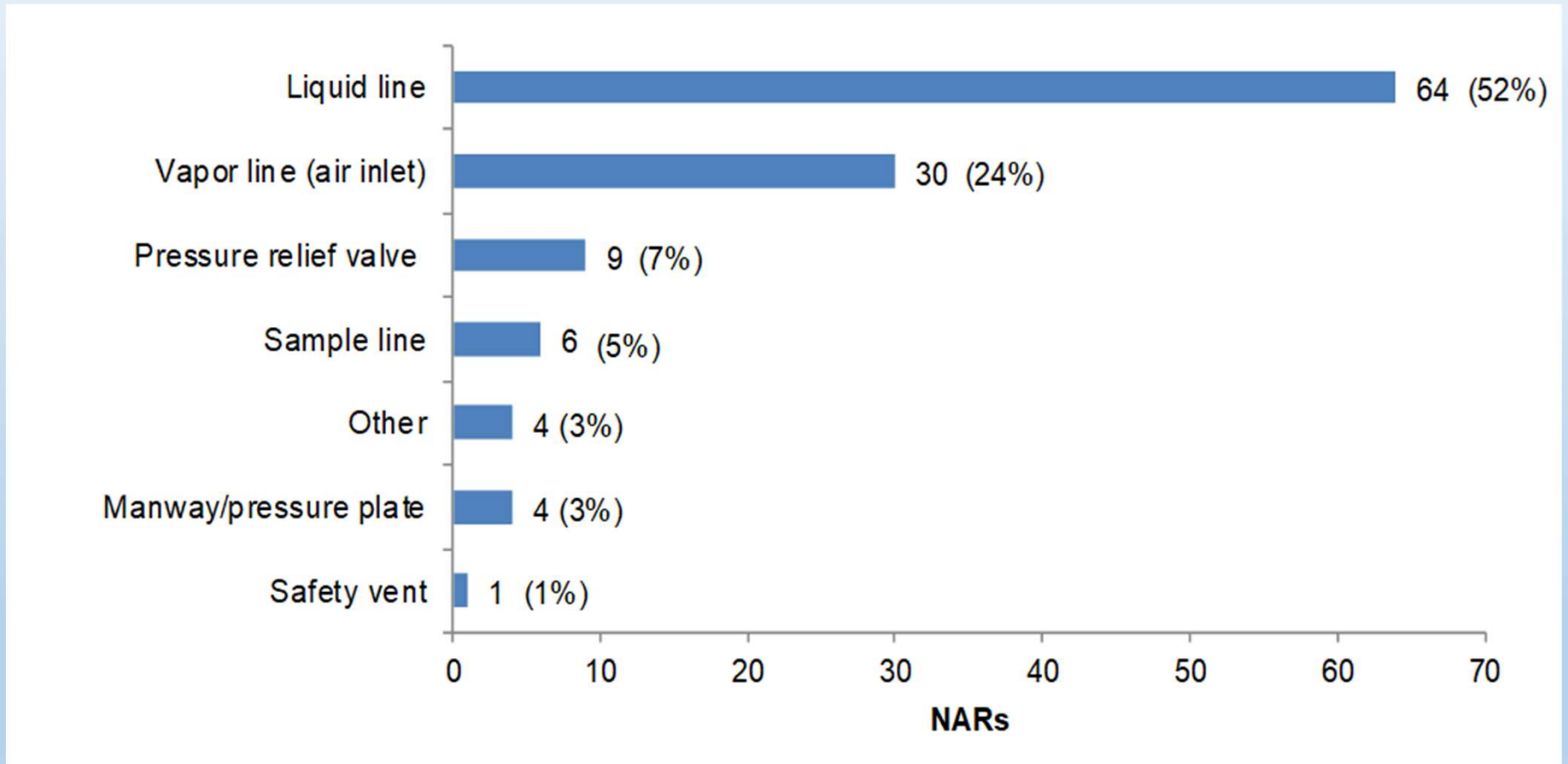


Top Specific Causes for Non-pressure Cars

2017

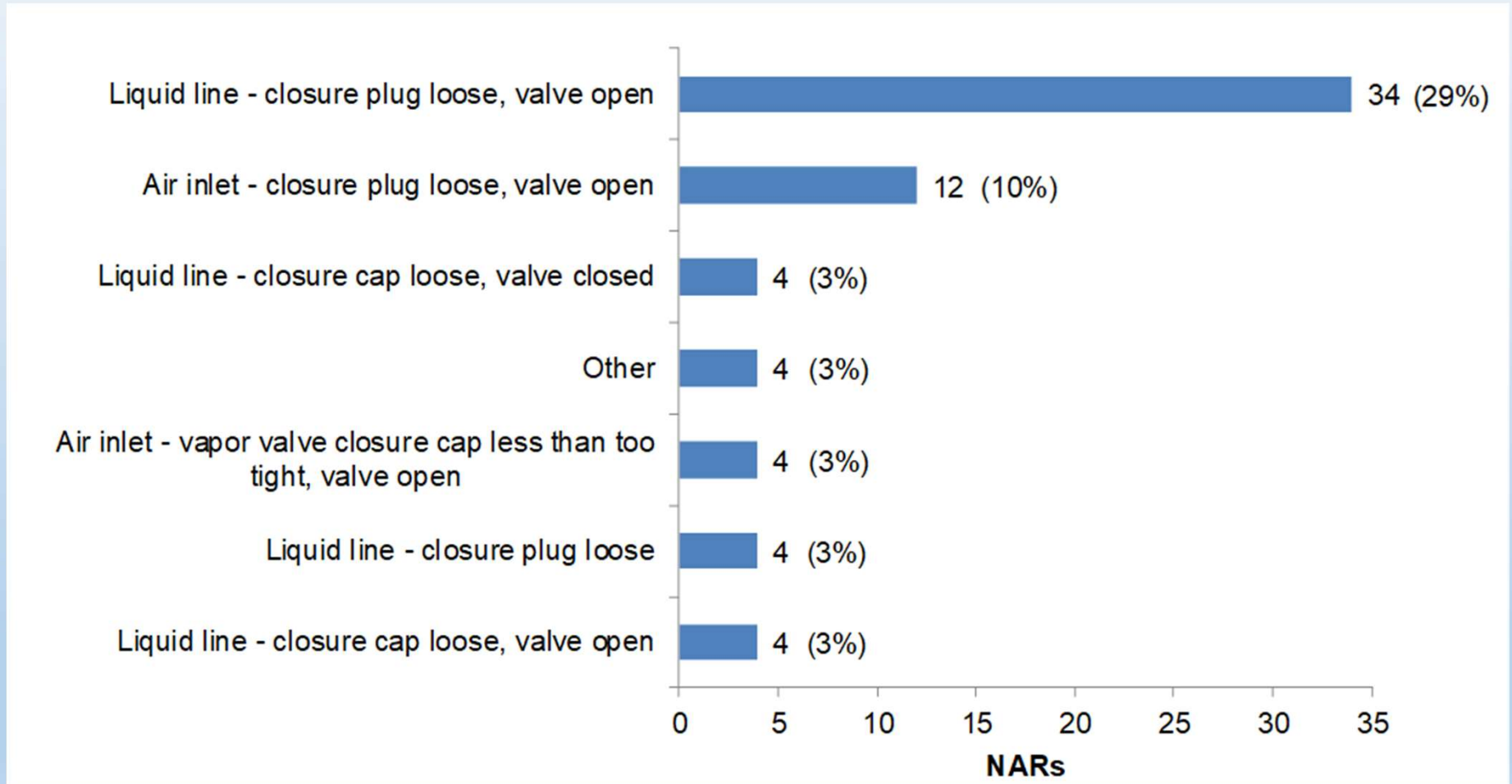


Components Involved in NARs Pressure Cars 2017



Top Specific Causes for Pressure Cars

2017



Steps Moving Forward

- NAR Task Force has begun monthly calls
- NAR Task Force is developing a “industry standard” cause analysis document so Carriers can request a root cause analysis from shippers
- NAR Task Force is working with the FRA to develop an “industry standard” cause analysis document
- Continue to work with the Short Line railroads for education on the importance of data from the 5800 system



Steps Moving Forward

- NAR Task Force to look at Pamphlet 34 with the stakeholders
- NAR Task Force to look at the Loading and Unloading video distributed by the DOT for opportunities to update
- NAR Task Force to look at other educational documents for improvement



Questions?