Safe Communities, Norfolk Southern, and Crude Oil by Rail

Rudy Husband Delmarva Freight Summit August 6, 2014 Dover, Del.



### Moving crude oil is a small, growing business.

- NS transported little crude oil in 2010 and only 75,000 in 2013.
- NS also ships products for drilling sand, cement, pipes.
- Crude oil on NS moves across our high-capacity line from Chicago to Pa., Del., N.J. the shortest, most-direct route.
- NS is required by law to carry crude oil.



# US East Coast Crude Oil Receivers

### A Competitive Landscape

### EAST COAST CRUDE DESTINATIONS

### PHILADELPHIA AREA CRUDE DESTINATIONS



### North American Crude Oil Pipelines NS Markets Politically and Topographically Isolated from Pipeline Connectivity

Fuel TraNS - Crude by Rail



### Rail is the safe way to move oil and hazmats.

- NS carried 5.3 million hazardous materials shipments (including crude oil) 2000-2013.
- 99.997 percent arrived incident free.
- For the entire rail industry, 2012 and 2013 were safest years ever.
- Rail hazmat accident rates have declined 91 percent since 1980.





### Voluntary rail/USDOT pact further reduces risk.

## February 21, 2014

- Rail Corridor Risk Management System identifies safe, secure routes.
- Speed restrictions, such as 40 mph restrictions in High Threat Urban Areas (HTUA) for Key Trains meeting the agreement definition
- Additional rail inspections
- Additional advanced trackside detectors
- Training and tuition assistance for local first responders
- Creating local emergency response resource inventories

One line, infinite possib

• End-of-train devices for faster train stopping

# USDOT Emergency Order

### • May 7, 2014 – Docket DOT-OST-2014-0067

- Within 30 days railroads operating trains transporting 1,000,000 gallons or more of Bakken crude must provide applicable State Emergency Response Commissions with:
  - Reasonable estimate of the number of trains implicated by this EO that are expected to travel weekly through each county within the state.

- The routes over which the crude oil is transported
- Identification of at least one RR point of contact for emergency response coordination purposes.

## USDOT Notice of Proposed Rule Making

### July 23, 2014

- Operating Rules (for Trains with 20 or More Carloads of Crude or Ethanol)
  - 50 mph speed limit
  - Proposes three speed limit options for trains not meeting the new standards:
    - $\circ$  40 mph nationwide
    - $\circ$  40 mph in high threat urban areas
    - $\circ$  40 mph in cities with populations of 100,000 or more
  - Routing analyses required
  - SERC notification in the earlier emergency order would be made permanent

One line, infinite possibilities

- Requires use of ECP brakes where all cars are so equipped

## USDOT Notice of Proposed Rule Making

### July 23, 2014

### Retrofit of Existing Tank Cars

 DOT would require existing cars to be retrofitted to achieve the performance characteristics of the new car specification, according to the following schedule:

One line, infinite possibilities

- Packing Group I, by October 1, 2017
- Packing Group II by October 1, 2018
- Packing Group III by October 1, 2020

### Sampling and Testing

- DOT is proposing a sampling and testing program.
- Oil Spill Response Plans

## USDOT Notice of Proposed Rule Making

### July 23, 2014

### • Specifications for New Tank Cars Manufactured After October 1, 2015

- Would be required to address the bottom outlet handle, have full-height head shields, have a non-reclosing pressure relief valve, be constructed of TC-128 Grade B normalized steel, and include a jacket with thermal protection. In addition, comment is sought on the following three proposed requirements:
  - $\circ$  9/16" shell plus rollover protection and ECP brakes
  - o 9/16" shell without rollover protection and ECP brakes (AAR Tank Car)

- o 7/16" jacketed CPC-1232
- Comments due September 30, 2014

### Better tank car standards

### **EVOLUTION OF RAIL INDUSTRY TANK CAR STANDARDS FOR CRUDE OIL**

The railroad industry is proposing to increase the federal tank car design and construction standards for new tank cars used to transport crude oil. This proposal comes after a previous upgrade proposal which the industry voluntarily adopted and has been observing since October 2011. This graphic shows the additional tank car components included in the latest rail industry proposal.

### HIGH CAPACITY PRESSURE RELIEF VALVE

### No:requirement

Requires a high capacity pressure relief device to protect against a rise In internal pressure resulting from fire. Provides for faster release of product.

### TOP ETTTINGS PROTECTION

Requires top fittings protection to protect the integrity of valves and fittings used to load product in the event of an accident

**Contains the** Barrie requirement

### STEEL TANK

Requires a minimum 1/2 Inch thick steel tank for unjecketed cars and a minimum % inch thick steel tank for jacketed cars.

Requires a minimum Nu inch thick steel tank

### Requires minimum 3/2 Inch

HEAD SHIELDS

Climent Standard

thick half height head shields at both ends of the tank car to Improve puncture resistance.

Latest Pall Indusity Proposal Reguires Veloch thick full-height head shields at both ends of the tank can

### BOTTOM OUTLET HANDLES

### Current Standard No requirement

### Letest Reil Industry Proposal

Requires bottom outlet handle reconfiguration to prevent the handle from inadvertently opening the bottom outlets in the event of an accident.

### JACKET AND THERMAL PROTECTION

Current Standard

Requires a minimum 1/2 inch thick steel tank OR a 14 inch thick steel jacket.

### Latest Reil Industry Proposal:

Requires the addition of both a % inch thick steel jacket around the tank car and thermal protection.

NORFOLK SOUTHERN

One line, infinite possibilities.

Susaire: Reconsistion of Alternate Ballycate, Petrateg 2018

### Rail customers own the tank car fleet.

- North American fleet consists of 335,000 tank cars.
- 99 percent are owned by rail customers and leasing companies.
- Modern tank car design and construction often exceed federal standards.





### NS operating standards for crude oil trains.

- "Key Trains" crude oil, ethanol, and hazmat shipments operate under long-standing best practices.
- Key Trains include:
  - 1 or more loads of toxic inhalation/poisonous inhalation (TIH/PIH) materials
  - 20 or more tank loads of any hazardous materials
- Special Handling for Key Trains:
  - Special identification and tracking
  - 50 mph max speed limit
  - Routes feature high standards for wayside wheel bearing detector spacing, frequency of track inspections, and maintenance of meet/pass tracks.
  - A Key Train is not left unattended on main line or siding tracks unless crew members and dispatcher conduct a detailed briefing re securement procedures, the reverser is removed, and the cab is locked.

## NS keeps first responders informed.

- Helps local Emergency Planning Committees (LEPCs) assess hazmats moving through their communities
- Assists LEPCs in assessing safeguards against unintentional releases
- Provides specific commodity flow info to emergency response agencies and planning groups
- Provides train and hazmat information to CHEMTREC for quick relay to responders in event of major incident.





## NS is prepared for incidents.

- 24x7x365 hazmat, environmental operations, and industrial hygiene groups
- Certified subject matter expert employees
- More than 300 "NS Sentinels" employees specially trained under Occupational Safety and Health Administration (OSHA) and Hazardous Waste Operations and Emergency Response (HAZWOPER) certification programs.

One line, infinite possibl

• NS Sentinels stationed on key train routes

## NS supports emergency first responders.

- Training for 4,800 state, local responders at 108 locations in 2013 alone
- Scholarships for emergency management agencies to attend Security and Emergency Response Training Center in CO.
- Full-scale drills for staged accidents involving crude oil
- 14 national achievement awards from the Transportation Community Awareness and Emergency Response Program (TRANSCAER)





### Additional expertise is on call.

NS brings outside resources to bear through master contracts with:

- 44 emergency response contractors throughout the rail system
- Experts in environmental remediation and ecological assessment
- Leading organizations in worker protection, exposure assessment, vapor plume modeling, air monitoring

One line, infinite possibi

### Site remediation is comprehensive.

- NS is responsible for mitigation and restoration in the event of a spill.
- NS contracts with pre-approved, experienced experts to perform the work.
- State agencies oversee the process and sign off on completion.



# THANK YOU

