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**Rail Safety in Virginia:
A State Homeland Security Perspective**

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Deputy Secretary of Public Safety &
Homeland Security



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Virginia's Rail System



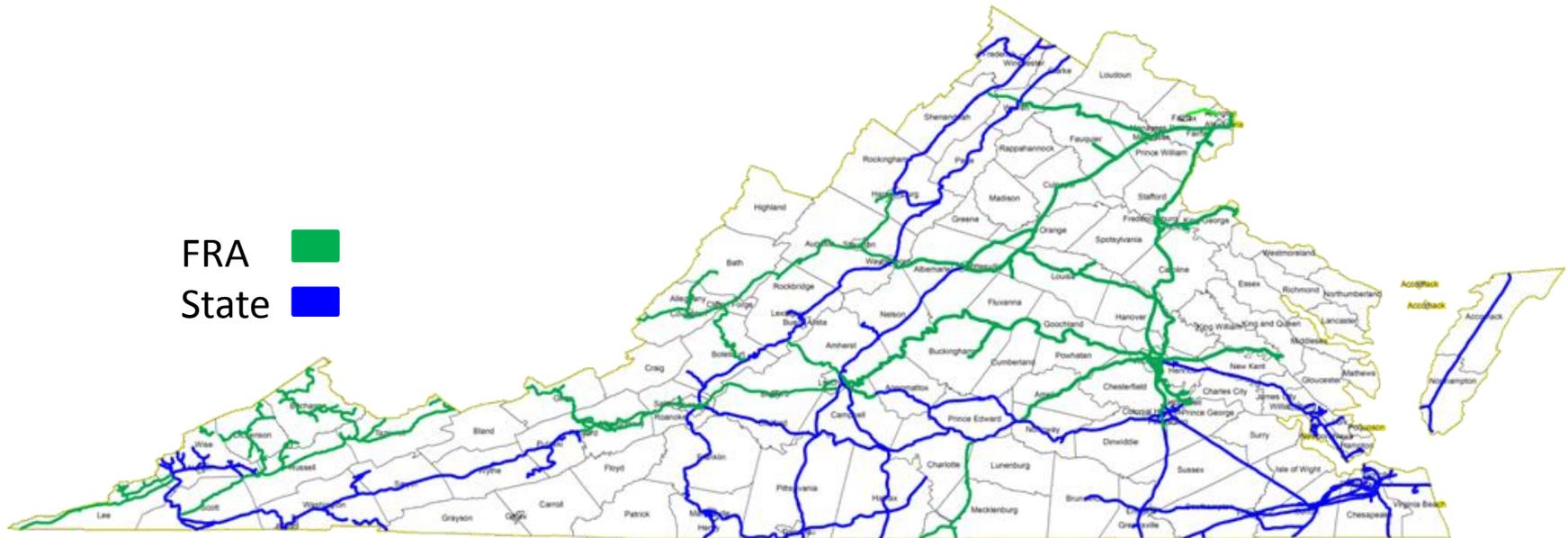
3,394 total track miles

- 2 Class I Railroads, CSX (850 miles) and Norfolk Southern (2,020 miles)
- 9 shortlines in VA (524 miles)
- 1 Intercity Rail Operator (Amtrak), 1 Commuter Rail Operator (VRE)



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Inspection Area Map



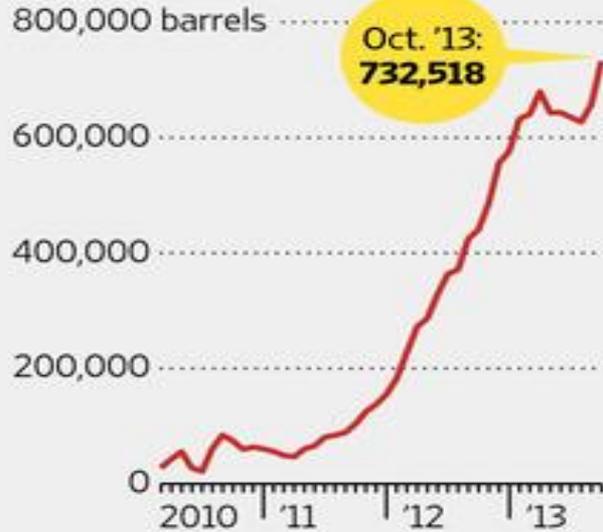


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Crude Oil Production On The Rise

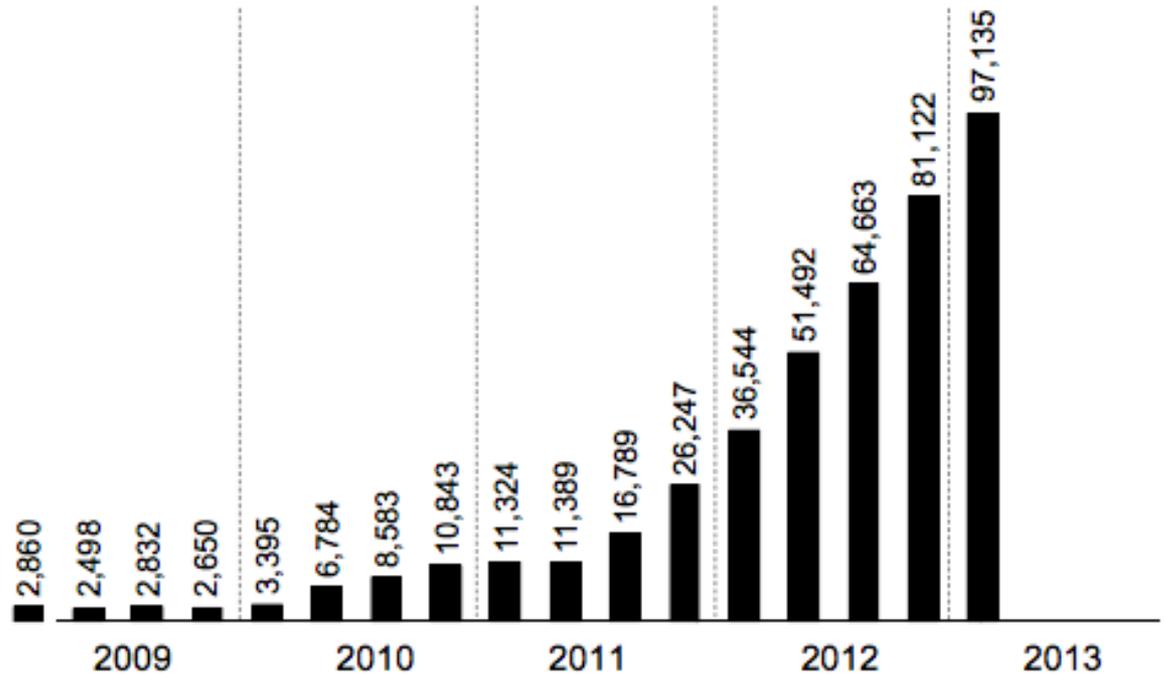
On Track

Average daily rail shipments
of crude oil from the Bakken shale



Source: North Dakota Pipeline Authority
The Wall Street Journal

Originated Rail Carloads of Crude Petroleum on U.S. Class I Railroads: Q1 2009 - Q1 2013

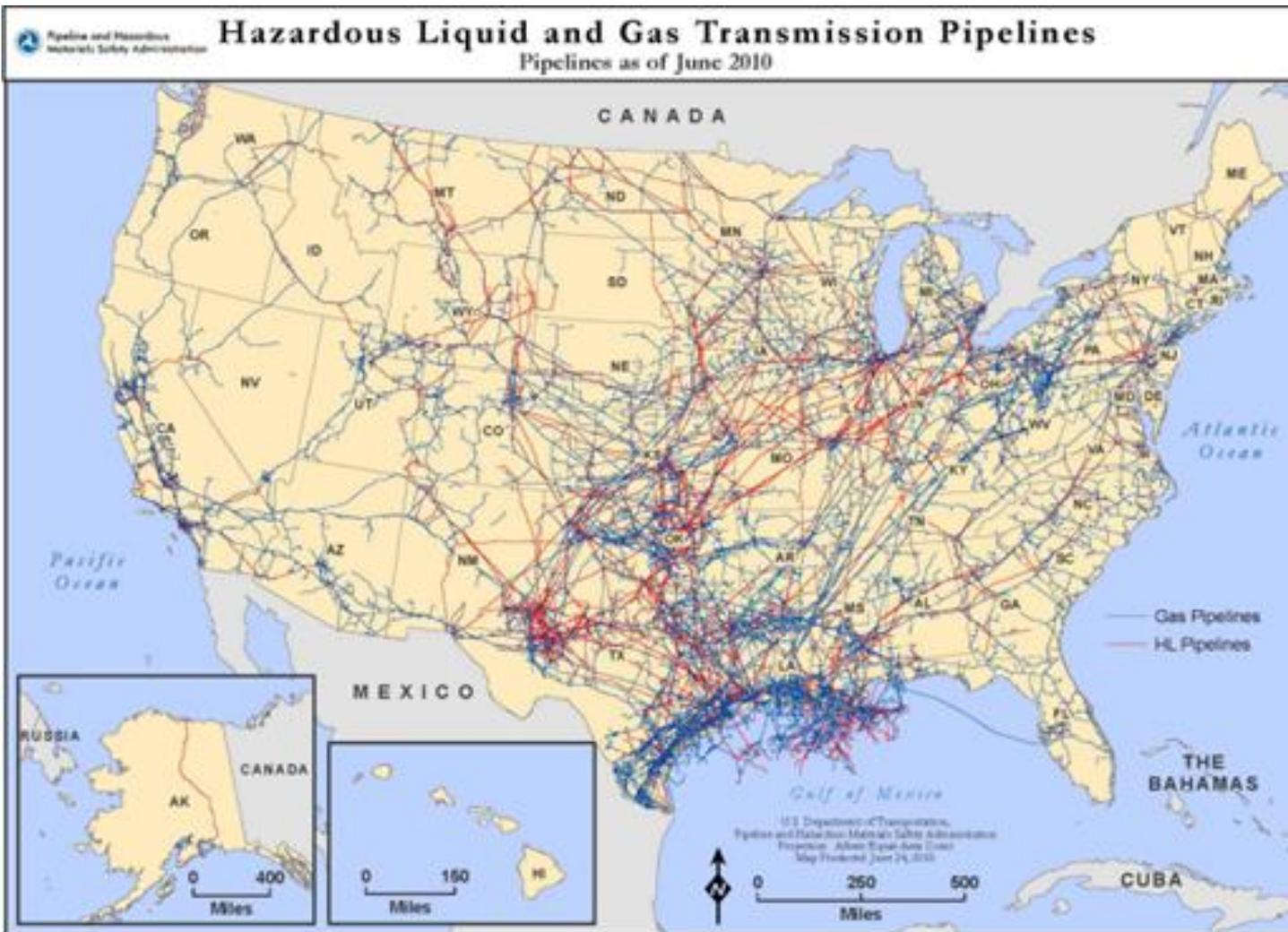


Source: AAR Quarterly Commodity Statistics



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US Hazardous Gas and Liquid Pipelines





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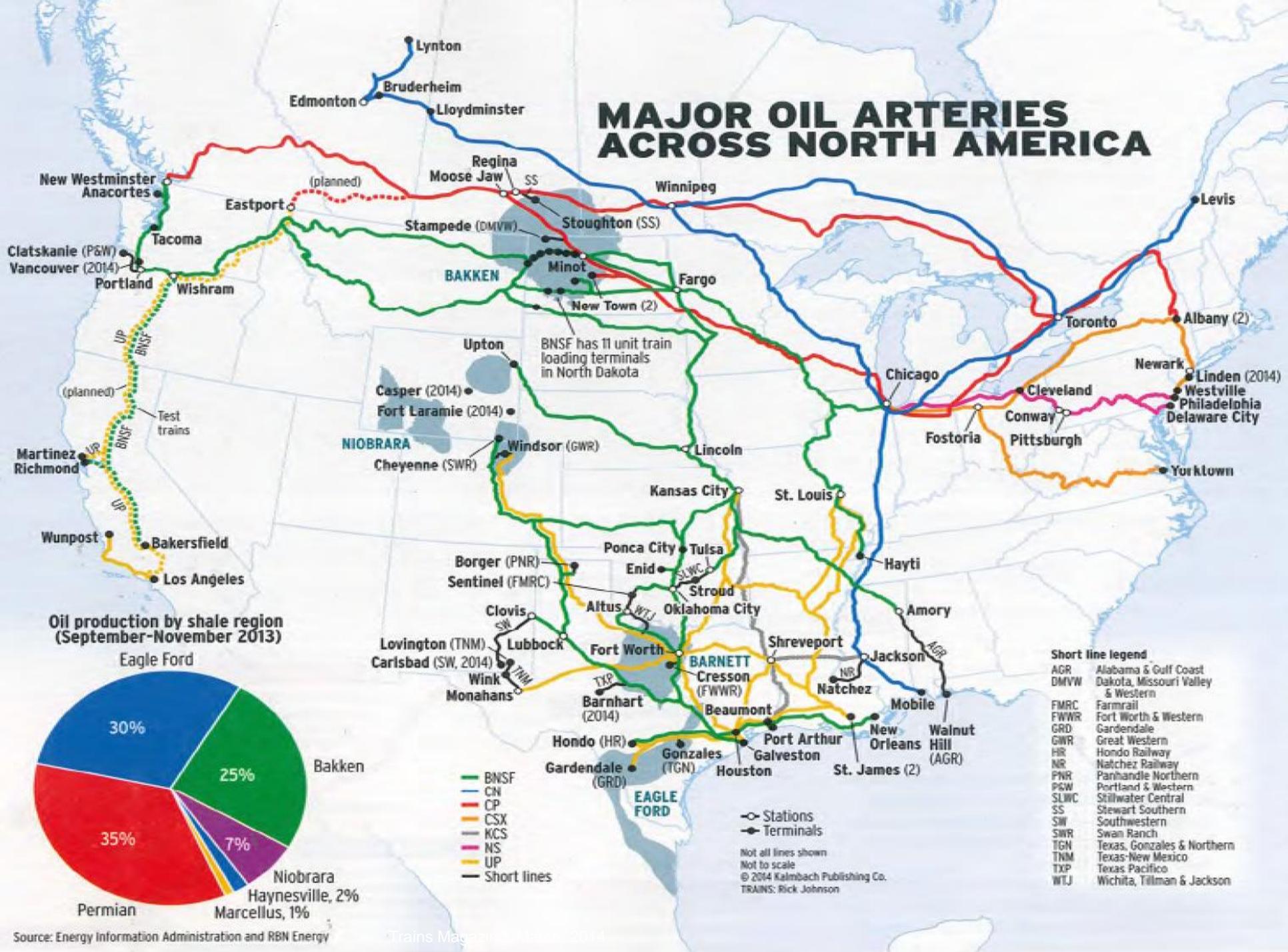
Unconventional Oil and Gas Production

North American Shale Plays



Source: U.S. Energy Information Administration based on data from various published studies. Canada and Mexico plays from ARI.
Updated: May 9, 2011

MAJOR OIL ARTERIES ACROSS NORTH AMERICA



Source: Energy Information Administration and RBN Energy

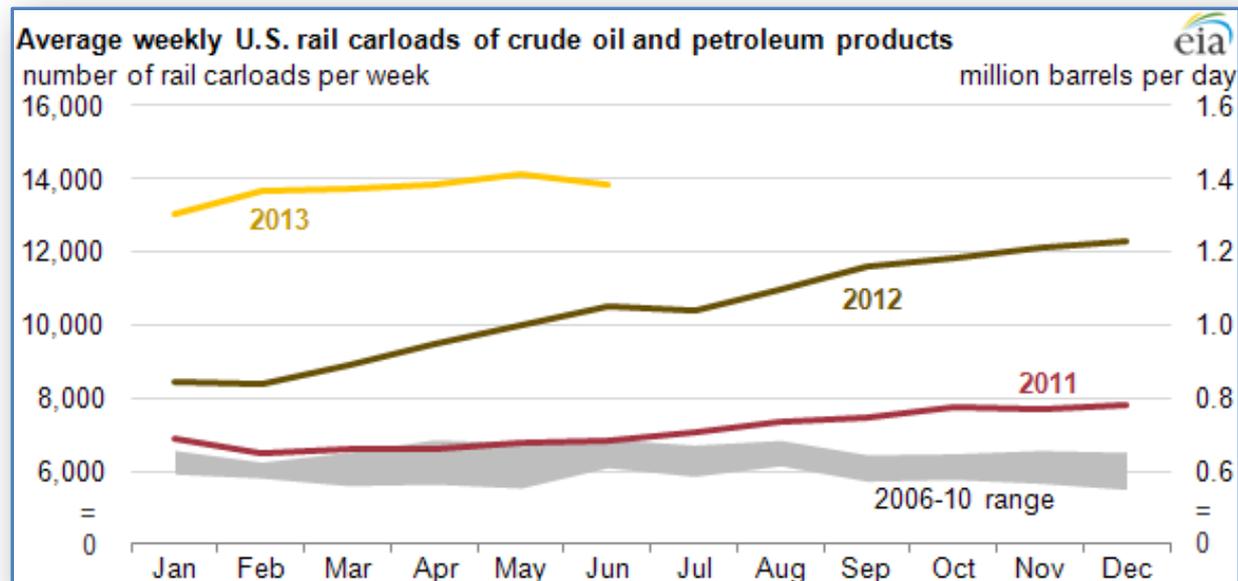
Trains Magazine, March 2014



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Significant Rise in Crude Oil Shipments by Rail

- Limited pipeline capacity and location of refineries that process light crude favors transport by rail.
- The increase in frequency and volume of rail shipments is projected to continue.





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Recent Bakken Crude Oil Derailments

- *Lynchburg, VA*

April 30, 2014 – 17 of 105 cars of Bakken Oil unit train derailed

- *Plaster Rock, NB*

January 7, 2014- 16 cars derailed, 8 were hazmat

- *Casselton, ND*

December 20, 2013 - 20 of 106 crude oil tank cars derailed

- *Aliceville, AL*

November 8, 2013 - 25 of 90 crude oil tank cars derailed

- *Lac-Megantic, QE*

July 6, 2013- 74 cars derailed of runaway train resulting in 47 fatalities





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Lynchburg Incident

Crude oil train derailment

A 105-car CSX tanker train traveling from Chicago to Yorktown, Va., derailed April 30, spilling crude oil into the James River.

- 105 cars, 13 derailed
- 3 cars partly submerged in river
- Estimated 50,000 gal. (190,000 l) spilled





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Public Safety & Homeland Security Involvement

- April 30 – May 1: Deputy Secretary on scene to support City of Lynchburg
- May 9: Governor McAuliffe announces Rail Safety & Security Task Force
- June 4: First meeting of the Rail TF in Richmond
 - Agency Presentations and Way Forward
- August 20: Rail TF meeting in Lynchburg
 - Lynchburg FD Response Presentation, Public Questions & Comments
- October 24: Rail TF meeting in Norfolk
 - Rail Industry and Virginia Port Presentations
- January, 2015: Rail TF Report with Recommendations (anticipated)



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State Agency Actions Already Taken

- VDEM Re-opening SHSP grant submissions
- VDEM/VDFP foam trailer enhancements for all 7 regions
- Virginia Fusion Center extending Fusion Center Liaison Training to CSX
- VDFP Coordination to provide railway safety training to fire services personnel
- VDEM has provided state resources to all jurisdictions along the crude oil route through the hazmat system and the regional hazmat teams



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State Agency Actions Already Taken

- VDEM has developed an awareness level training program “Crude Oil Movement in VA” and delivered 17 classes for 298 personnel
- VDEM has identified 26 localities that may be affected by the transportation of Bakken crude oil through the Commonwealth
- VDEM has partnered with CSX and met with all jurisdictions along the crude unit train route, providing them an overview of the state hazmat response program, as well as training opportunities to enhance preparedness for rail incident



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U.S. DOT Actions

- **EMERGENCY ORDERS**

- Railroads to properly secure rolling equipment.
- Shippers must properly analyze and classify oil prior to transportation
- Railroads required to provide states with information about Bakken crude oil being transported by rail

- **SAFETY ADVISORIES**

- railroads take additional action to eliminate risk.
- importance of proper characterization, classification, and selection of a packing group for Class 3 materials.
- Bakken crude oil may be more flammable than traditional heavy crude oil.
- Shippers and carriers take all possible steps to avoid the use of DOT 111 tank cars when transporting Bakken crude oil.



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Emergency Response Issues

- **Lack of information** – commodity flow and chemical/physical properties
- **Capability** - Most local fire departments not able to effectively respond offensively to 100+ tank car unit train incidents (20-30K gal per carload)
- **Shale crude oil is not an exotic product** – it is a flammable liquid – no new special curriculum is needed
- **Improved Cooperation** – among shippers, railroads and local responders for emergency planning and response
- **Training** – needs to reflect local risks and capabilities – focus on incident management versus technical and tactical
- **Response** - Industry may need to supplement response resources

RISK = Probability x Consequences



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Next Steps

- Governor's Rail Safety and Security Task Force meeting in Norfolk on October 24th
 - Will take information presented from all three meetings and develop a report with recommendations on action that can be taken by the Commonwealth to improve rail safety and security
- Continue collaborative efforts with U.S. Department of Transportation and rail industry to ensure coordinated efforts
- Maintain ongoing engagement with citizens and advocacy groups to continually identify areas of concern



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Coordination is Key!

- One of the best ways for localities to learn what may be traveling through their area and be prepared is to contact the Virginia Department of Emergency Management
- VDEM can help with:
 - Educating leadership and responders on types of hazards being shipped
 - Identifying relevant training opportunities
 - Coordinating additional resources in the event of an emergency



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- For more information, please contact:

Virginia Department of Emergency Management
Technological Hazards Division
10501 Trade Court
Richmond, Virginia 23236
(804) 897-6500



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Questions?