



Safety on Scene



Crude Oil Trains – What Fire Chiefs Need to Know

The Hazard

- Due to new drilling technology, record amounts of crude oil are being generated in the United States and Canadaⁱ. 2015 estimates are over 9 million gallons of crude are produced per day.
- Much of this crude is being transported via railcars to various destinations across the U.S.
- Almost one half million railcars of crude were transported in 2014.
- Crude oil is a Class III Flammable Liquid.
- Today's crude oil is more volatile than previous grades. The volatility can vary based on the well site and methodology used to extract the oil. This crude oil is often not fully classified prior to loading in railcars.ⁱⁱ

The Risk

- The number of railcars transporting crude oil has increased dramatically.
- Many of these unit trains (over 100 cars) each carry more than 1,000,000 gallons of product. Such trains are now known as High Hazard Flammable Trains (HHFT).
- Train routes run through rural, suburban, and urban areas, some with high population exposures. It is estimated that 25 million people live within a one-mile evacuation zoneⁱⁱⁱ
- Post incident analysis reveals that both mechanical and human error has led to multiple crude oil train derailments.

What Fire Chiefs Need to Know

- New Federal regulations require HHFT rail tank car safety improvements but these changes will take years to implement. <http://www.transportation.gov/briefing-room/final-rule-on-safe-rail-transport-of-flammable-liquids>
- The same regulations also require reduced speeds in urban areas, improved train routing analysis, and mandated communications with emergency response agencies.
- Utilize the appropriate mobile app for your jurisdiction; AskRail>><http://www.askrail.us/> or CSX's Rail Respond>><http://www.csxrailrespond.com> (activated on August 27, 2015) for rail car planning and response information.

What Your Department Should Be Doing

- CONDUCT a hazard and risk analysis if crude oil trains travel in or near your jurisdiction.
- PRE-PLAN response to crude oil incidents and engage mutual aid partners in pre-incident planning, preparation, and resource acquisition.
- CONTACT your State Emergency Response Commission (SERC) and Local Emergency Planning Committee (LEPC) for data and information on crude oil shipments by rail.
- ENGAGE your railroad safety representative for participation in planning, preparation, and training. DO NOT meet your railroad representative for the first time after the incident has already occurred.
- IDENTIFY needed resources – these incidents will be resource intensive.
- TRAIN – conduct appropriate training at the local and regional levels to prepare for a large scale incident involving a crude oil train derailment.

ⁱ American Association of Railroads

ⁱⁱ Pipeline and Hazardous Materials Safety Administration

ⁱⁱⁱ U.S. Department of Transportation