Common Carrier Obligation: Why Freight Railroads Must Transport Hazmat

KEY TAKEAWAY

As the safest way to move hazmat over land, freight railroads are legally required to transport this commodity under a common carrier obligation. While the industry’s safety efforts have significantly decreased the hazmat accident rate, railroads have limited control over hazmat transportation decisions, and the true costs and risks are not fully reflected in shipping rates. The industry advocates for sensible regulatory solutions to address these challenges.

Under their common carrier obligation, railroads move large quantities of hazmat, including fertilizer, ethanol, crude oil, refined petroleum and chlorine. The rail industry has invested enormous resources to ensure that the overall movement of hazmat is safe — with the aspiration of eliminating accidents and incidents altogether.

Thanks to ongoing private investments, technological innovation, rigorous employee training, and community safety efforts, the hazmat accident rate is down 73% since 2000, and the 2022 hazmat accident rate was among the lowest ever. Rail is still the safest way to move hazmat, with more than 99.9% of all hazmat reaching its destination safely. The rail industry has not asked — and is not now asking — to be relieved from its obligation to carry these materials.

Rail’s Limited Decisions

Railroads are just one step in the production, distribution, and consumption chain for hazmat and have limited control over decisions about transporting hazmat. Even though the transportation of hazmat involves actions and decisions by many parties, railroads bear most of the risks of an accident or incident during transportation. Ultimately, the railroad is responsible for moving trains and maintaining lines — no matter that the railroad would have declined a particular shipper’s request if it had the discretion to do so.

Railroads typically do not own the tank cars used to transport hazmat; rail shippers and leasing companies own the cars. In the past, the rail industry has advocated for tougher safety standards for tank cars to reduce the risks of accidents and incidents.

Shippers — not railroads — choose the origin and destination points on the railroad’s network between which hazmat moves. A railroad’s discretion in such circumstances is limited to choosing the routing between the origin and destination. To do so, Class I railroads use the Rail Corridor Risk Management System (RCRMS), a joint initiative between railroads and the government, to analyze and identify the safest and most secure routes.
Transporting Hazmat & Shipping Rates

The true costs of transporting hazmat are poorly reflected in rates. Railroads do not necessarily have the option to charge rates to recover all the associated costs of moving hazmat. The law governing common carrier rates limits the extent to which the costs involved in transporting hazmat are assigned to those movements. Railroads incur significant costs from their obligation to transport hazmat. For example, the risks of transporting hazmat require railroads to pay higher insurance premiums — and there is no market for insurance that would fully protect railroads, leaving them to bear uncompensated risks. Railroads must also make capital expenditures and pay for special operating procedures to implement federal safety laws and regulations.

In the past five years, the rail industry has made over $23 billion in annual investments for infrastructure and technological innovation, rigorous employee training, and community safety efforts — a meaningful share of which responds to the need to properly handle hazmat shipments. Rates for common carrier service must be “reasonable.” Although there are several methods the STB can use to assess whether a rate is reasonable, they do not adequately account for the full costs of transporting hazmat.

Problems With the Current Regulatory Scheme

The current regulatory scheme disserves the public. If the costs and risks of transporting hazmat were better incorporated into rates, then shippers would “make economically rational decisions concerning production, use, and shipping of hazardous materials,” according to one Harvard report.

For example, faced with increased rates for transporting hazmat that reflect the full costs and risks incurred, shippers might reduce their usage of such materials in favor of substitutes that pose fewer public safety risks. Moreover, the potential for a catastrophic event to bankrupt the railroad involved means that the public could wind up without adequate recovery or the harm caused by such an event. Over the years, the rail industry has advocated for common-sense regulatory solutions to these problems.

Timeline: Hazmat Safety Actions

- **AUG. 2009**: AAR begins to upgrade industry tank car standards that exceed the safety standards of U.S. Department of Transportation (DOT)-111 tank cars.

- **MAR. 2011**: AAR formally petitions the Pipeline and Hazardous Materials Safety Administration (PHMSA) and Transport Canada to implement tougher tank car specifications for DOT-111 tank cars used for crude oil and other hazmat.

- **AUG. 2011**: In the absence of any progress by the DOT and Transport Canada, the AAR Tank Car Committee adopts industry construction specifications for new tank cars, and the stronger CPC-1232 design becomes the standard for all tank cars built after October 2011.
• **AUG. 2013:** The freight rail industry responds to DOT Emergency Order No. 28 and Safety Advisory to further strengthen train operations on mainline tracks or sidings. AAR modifies industry best practices, making trains carrying 20 or more carloads of any hazmat subject to a speed restriction and other enhanced operating practices.

• **NOV. 2013:** AAR again urges DOT to improve federal tank car regulations and require all tank cars transporting flammable liquids, such as crude oil, to be retrofitted or phased out of crude service.

• **FEB. 2014:** The nation’s major freight railroads issue voluntary safety initiatives for the transportation of CBR, including new operating practices, including (1) Speed reductions for trains transporting crude oil, (2) Increased inspections of tracks on crude oil routes, (3) Route risk analysis for trains carrying more than 20 carloads of crude oil (a Key Crude Oil Train), (4) Two-way end of train devices or distributed power for Key Crude Oil Trains to provide faster braking, (5) Additional bearing defect detectors along routes carrying Key Crude Oil Trains, (6) Development of an emergency response inventory along routes carrying Key Crude Oil Trains, and (7) Stepped-up crude oil incident training for first responders. / DOT issues an Emergency Order on the classification and packaging of crude oil.

• **MAY 2014:** AAR forms a joint task force with the American Petroleum Institute (API) to examine components associated with moving CBR. / PHMSA and the Federal Railroad Association (FRA) issue a Safety Advisory discouraging the use of DOT-111 tank cars. DOT issues an Emergency Order requiring railroads to inform first responders about crude oil routes.
• **JUL. 2014:** AAR provides DOT with access to an inventory of emergency response resources available to respond to hazmat accidents. DOT issues a Notice of Proposed Rulemaking (NPRM) on tank car standards and an Advanced NPRM on oil spill response planning requirements. A three-day training course for first responders focused exclusively on CBR occurs at the Security and Emergency Response Training Center (SERTC) (an AAR subsidiary) in Pueblo, Colorado. More than 1,500 emergency responders receive classroom and in-field training in 2014 at the world-class facility.

• **SEP. 2014:** In comments to DOT’s proposed rules for regulating crude oil trains, AAR again calls for dramatically improved tank cars that carry crude oil and ethanol and proposes a comprehensive safety package, which includes thicker shells, thermal protection and appropriately-sized pressure relief devices. AAR advocates an aggressive retrofit or phase-out program for crude service tank cars.

• **OCT. 2014:** Roll-out begins of the rail industry-developed AskRail mobile app, which is an additional tool for emergency responders to access information about hazardous materials contained in rail cars when responding to an incident.

• **NOV. 2014:** SERTC launches web-based crude oil training for first responders.

• **JAN. 2015:** AAR further modifies industry best practices to increase commodity flow information provided to local emergency response agencies for all hazmat transported through their communities.

• **MAR. 2015:** AAR and API announce a new CBR safety course for first responders. The program, offered through the Transportation Community Awareness and Emergency Response (TRANSCAER) program, is in addition to specialized training offered to thousands of first responders by railroads in local communities at SERTC and through web-based training. AAR enhances the AskRail app.

• **APR. 2015:** PHMSA issues a Safety Advisory on emergency response information; FRA issues an Emergency Order on maximum speeds for CBR moving through certain highly populated areas; and FRA issues a Safety Advisory on brake and mechanical inspections for trains moving crude.

• **MAY 2015:** DOT issues a comprehensive final rule on tank car standards and operations for moving large volumes of flammable liquids by rail. PHMSA issues Transportation Rail Incident Preparedness and Response (TRIPR) training modules on best practices related to rail incidents involving flammable liquids.

• **JUL. 2015:** FRA further specifies requirements for railroad notifications to State Emergency Response Commissions concerning crude oil.

• **SEP. 2015:** DOT announces $5.9 million in first responder grants specific to crude oil incidents.
• **DEC. 2015:** Congress passes the FAST Act, which includes numerous provisions supported by the freight railroad industry related to rail safety generally, emergency response training and the safe transport of flammable liquids by rail. Among these are requirements for web-based training for emergency responders, emergency preparedness and training grants, specifications for real-time emergency response information, enhanced tank car standards and a mandatory phase-out schedule for older tank cars.

• **FEB. 2016:** The proposed rule on oil spill planning and information sharing for crude oil trains is revised based on FAST Act requirements and sent to the Office of Management and Budget (OMB) for review.

• **MAY 2016:** AAR urges DOT to adopt a thermal protection requirement for flammable liquid cars, which exceeds DOT’s current standard and which all thermal blanket manufacturers currently meet. The new standard would increase the amount of time flammable liquids could survive a pool fire and reduce the chance of thermal tears.

• **JUL. 2016:** DOT rejects AAR’s request to improve the standard for thermal protection based on a technicality.

• **AUG. 2016:** DOT issues a rule requiring thermal protection blankets per the FAST Act, but not requiring that they be as effective as the AAR had requested or manufacturers currently make.

• **SEPT. 2016:** AAR files comments to DOT’s NPRM on oil spill response plans seeking clarification on a variety of issues, including how close to navigable waters does a rail line have to be to require a plan and the definition of environmentally sensitive areas, among others.

• **DEC. 2016:** AskRail upgrades to allow access from any internet-ready device and provides additional information within the app, including DOT car types, the maximum capacity of the locomotive fuel tank and AAR’s Field Guide to Tank Cars.

• **APR. 2017:** AAR files comments to DOT’s advanced NPRM on real-time train consist information asking DOT to accept AskRail as the solution. AskRail provides emergency responders with information about what is in the entire train consist by entering one car or locomotive number.

• **DEC. 2017:** AskRail upgrades to allow a search by container number, GIS/Mapping including points of interest such as schools and hospitals, street-level views and part of the Emergency Response Guidebook.