HAZARDOUS MATERIALS RAIL SHIPMENTS

A Review of Emergency Response Information in Selected Train Documents

Why GAO Did This Study

In November 2012, a train derailed in Paulsboro, New Jersey, releasing about 20,000 gallons of vinyl chloride, a hazardous material. The National Transportation Safety Board (NTSB) found, among other issues, that the supplemental information in the train’s documents on responding to emergencies involving vinyl chloride was inconsistent with and less protective than emergency response guidance in the ERG. Congress included a provision in statute for GAO to evaluate the differences between the emergency response information carried by trains transporting hazardous materials and the ERG guidance. This report examines (1) what emergency response information is carried on trains by selected railroads transporting hazardous materials and how responders use it, and (2) how selected railroads’ supplemental emergency response information compares to information in the ERG.

GAO reviewed the ERG and other relevant literature and met with DOT and NTSB officials, among others. GAO interviewed all 7 larger Class I railroads and 11 smaller Class II and III railroads that carried hazardous materials in 2015. GAO compared the supplemental emergency response information with ERG information for 72 frequently shipped hazardous materials from a nonprobability sample of train documents provided by 10 of the 18 selected railroads.

What GAO Found

To help emergency responders safely handle rail accidents involving hazardous materials, selected railroads transporting hazardous materials typically carry two sources of information: the Department of Transportation’s (DOT) Emergency Response Guidebook (ERG) and information in the trains’ documents. Federal Hazardous Material Regulations require railroads and other hazardous material transporters to carry emergency response information that describes immediate hazards to health and risks of fire or explosion, among other things.

Representatives from all 18 railroads GAO interviewed told us that they carry the ERG on their trains. According to DOT officials, the ERG’s use is not required by regulation, but the rail industry views it as a national standard for emergency response information. Our review of selected train documents showed that they always have a basic description of each hazardous material being transported, including the identification number and proper shipping name, as well as an emergency response telephone number. Six of the 7 Class I railroads and 5 of the 11 selected Class II and III railroads also included emergency response information in these documents. According to four emergency response associations, in the first 30 minutes after a rail incident, emergency responders primarily use the train documents to locate and identify hazardous materials and use the ERG to identify potential response actions.

Emergency Response Information Used in the First 30 Minutes of a Rail Accident

Train documents or placards

Train documents contain information about what specific hazardous materials are on the train and their location, and may provide supplemental emergency response information for these materials beyond what is in the ERG. Responders may also read placards on the sides of rail cars to help identify hazardous materials.

Emergency Response Guidebook (ERG)

The ERG is a guide for first responders during the initial phase of a hazardous materials transportation incident. The ERG provides information on the characteristics of hazardous materials, potential health hazards, protective measures, and general concerns that a responder will face when trying to safely protect the community and environment.

GAO found that the emergency-response information in the ERG and the GAO-reviewed train documents of the selected railroads were generally similar, but differed somewhat in the level of specificity and type of information. For the 72 frequently shipped hazardous materials GAO selected, the train documents at times described hazards, mitigation measures, and protective-clothing requirements more specifically than the ERG. The ERG provided more detail on evacuation distances. However, for 6 selected hazardous materials, the recommended evacuation distances in the ERG differed from the supplemental emergency response information which is provided by the Association of American Railroads’ (AAR) Hazardous Materials Emergency Response Database. AAR decided in August 2016 to discontinue the database, removing the potential for discrepancies between the ERG and the supplemental emergency response information from AAR going forward.

What GAO Recommends

GAO is not making recommendations. DOT and NTSB provided technical comments, which GAO incorporated.

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