

National Transportation Safety Board

Washington, D. C. 20594

Safety Recommendation

LDG R-609E

Date: October 24, 1988

In reply refer to: R-88-68

Mr. Robert Claypool
President
GATX Terminals Corporation
120 S. Riverside Plaza
Chicago, Illinois 60606-3943

On September 8, 1987, a New Orleans Terminal (NOT) crew moved six tank cars of butadiene from the NOT's Oliver Yard in New Orleans, Louisiana, and at 7:35 p.m. placed them on track 3 of the CSX Transportation's (CSXT) Terminal Junction Interchange Yard (interchange yard) for delivery to the CSXT. About 1:50 a.m. on September 9, 1987, butadiene leaking from one of the tank cars was ignited and the resulting flames rising about 100 feet into the air engulfed both bridge spans of Interstate 10. The fire receded to the leaking tank car where it burned beneath the tank car until 1:55 p.m. on September 10, 1987. During the emergency, more than 200 city blocks were evacuated affecting 800 to 1,000 residents.¹

Shippers and persons performing loading functions for shippers normally do not maintain technical engineering staff to determine if packaging, especially cargo tanks and tank cars, meet Department of Transportation (DOT) construction specification requirements. Instead, they rely on markings on packagings and on the representations of persons offering packagings to determine if packagings meet DOT requirements. The DOT, in apparent recognition of shipper reliance on persons providing packagings, prohibits anyone from representing, marking, or certifying a packaging as meeting DOT requirements unless the packaging is manufactured, fabricated, marked, maintained, reconditioned, repaired, or retested in accordance with DOT requirements (Title 49 Code of Federal Regulations 172.2(c)).

While several parties had opportunities to inspect tank car GATX 55996, the tank car from which the butadiene leaked, and to determine if the tank car met DOT requirements before it was filled with butadiene at Goodhope, Louisiana, only the tank car owner(s) could be expected realistically to have had the opportunity to determine that the tank car it had purchased as a DOT specification 114J340W tank

¹For more detailed information, read Hazardous Materials/Railroad Accident Report--*Butadiene Release and Fire from GATX 55996 at the CSX Terminal Junction Interchange, New Orleans, Louisiana, September 8, 1987* (NTSB/HZM-88/01).

car did, in fact, meet the DOT specification requirements. By failing to compare the tank car it purchased to the tank car manufacturer's drawings of the tank car, General American Transportation Corporation (GATC) was unable to identify discrepancies in the manway assembly and gasket specifications before providing it to Mitsui & Company (USA) Inc. for use in the transportation of hazardous materials.

Instead of inspecting the tank car to ensure that it met all specification requirements, GATC contractually shifted inspection responsibility to the lessee, relied on the lessee to identify any safety deficiencies after it received the tank car, and required the lessee to report any defect promptly to GATC. However, neither lessees nor persons performing loading operations for shippers have the capability to compare tank car construction drawings and material specifications to tank cars provided them by lessors. Instead, they must rely on tank car markings and representations made by the lessors. Tank car users must rely on tank car markings and representations that tank cars meet DOT specification requirements. It is apparent, due to the absence of any Association of American Railroads (AAR) requirements, that tank car owners, in particular North American Tank Car Corporation, Phillips 66, and GATC, need to ensure that all tank cars are inspected thoroughly and determined to meet DOT specification and AAR certification requirements before providing the tank cars to lessees as DOT specification tank cars. Had GATC done so, the fact that the bottom manway did not comply with the AAR-approved drawing would have been discovered and GATC then would not have purchased the bottom manway tank cars from Phillips 66. Also, Phillips 66 then would have known of the noncomplying tank cars and it would have had to keep them out of service until appropriate modifications were made.

Finally, in accordance with normal operating procedures, personnel inspected tank car GATX 55996 both before and after the car was loaded with butadiene. During the preloading inspection of the tank car, GATX Terminal (GATXT) personnel relied on information provided by markings on the tank car to determine that it met DOT requirements for butadiene. The terminal personnel did not inspect the bottom manway assembly because they were not aware of the tank car's unusual construction and because the terminal inspection checklist did not specifically address tank cars with bottom manway openings. However, even had the terminal personnel opened the manway jacket housing closure during its inspections of the car, it is not certain that the gasket, at this time, was sufficiently displaced to have caused an inspector to reject the car. While it is possible that the manway closure gasket was displaced to some extent before loading the tank car, there is no evidence to suggest how far the gasket may have been displaced or if the severity of any displacement could have been recognized during a visual inspection. Nonetheless, the Safety Board believes that it is necessary that GATXT inspection procedures be revised to ensure that tank car inspectors visually inspect all gaskets and closure assemblies to ensure that all tank car openings are secured properly.

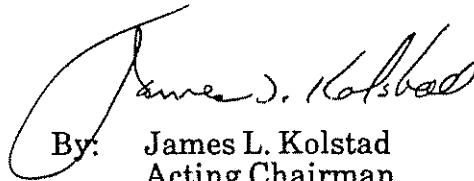
Therefore, the National Transportation Safety Board recommends that the GATX Terminals Corporation:

Revise inspection procedures to ensure that tank car inspectors inspect all accessible gasket and closure assemblies to determine that all tank car openings are secured properly before allowing them to be placed into transportation. (Class II, Priority Action) (R-88-68)

Also as a result of its investigation, the Safety Board issued Safety Recommendations I-88-3 and -4 and R-88-55 to the city of New Orleans, R-88-56 and -57 to Norfolk Southern, I-88-5 to the New Orleans Public Service, Inc., R-88-58 through -64 to the Federal Railroad Administration, R-88-65 to the General American Transportation Corporation, R-88-66 and -67 to the Mitsui & Company (USA) Inc., I-88-6 to the Research and Special Programs Administration, R-88-69 to the National League of Cities, and R-88-70 to the National Governors' Association.

The National Transportation Safety Board is an independent Federal agency with the statutory responsibility "... to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations" (Public Law 93-633). The Safety Board is vitally interested in any action taken as a result of its safety recommendations. Therefore, it would appreciate a response from you regarding action taken or contemplated with respect to the recommendation in this letter. Please refer to Safety Recommendation R-88-68 in your reply.

KOLSTAD, Acting Chairman, and BURNETT, NALL, and DICKINSON, Members, concurred in this recommendation. LAUBER, Member, did not participate.


By: James L. Kolstad
Acting Chairman