DEPARTMENT OF TRANSPORTATION
Federal Railroad Administration

[FRA Emergency Order No. 23, Notice No. 1]

Emergency Order To Prohibit the Continued Use of Certain Railroad Tank Cars Equipped With a Truck Bolster Bearing Either Association of American Railroads (AAR) Identification Number B-2410 and National Castings of Mexico (NCM) Pattern Number 52122 or AAR Identification Number B-2409 and NCM Pattern Number 52202

The Federal Railroad Administration (FRA) of the United States Department of Transportation (DOT) has determined that public safety compels the issuance of this Emergency Order directing all persons, including, but not limited to owners, shippers, consignees, and railroads, to discontinue the loading and transportation of any railroad tank car with an original built date of 1995, 1996, 1997, or 1998 and stenciled with DOT specification and the packaging requirements of the commodity table at 49 CFR 172.101, amplified in Part 173 identifying it as capable of transporting hazardous material; that is equipped with a truck bolster bearing either (1) AAR Identification Number B-2410 and NCM Pattern Number 52122 or (2) AAR Identification Number B-2409 and NCM Pattern Number 52202, until each of the described bolsters is removed from the car and replaced with a bolster of suitable design and manufacture.

Authority

Authority to enforce the Federal railroad safety laws has been delegated by the Secretary of Transportation to the Federal Railroad Administrator. 49 CFR 1.49. The laws apply to all railroads (except self-contained urban rapid transit) and convey on FRA the authority to issue rules and orders covering every area of railroad safety. 49 U.S.C. 20102 and 20103. FRA is authorized to issue emergency orders where ``an unsafe condition or practice * * * causes an emergency situation involving a hazard of death or personal injury." 49 U.S.C. 20104. These orders may impose such ``restrictions and prohibitions * * * that may be necessary to abate the situation." (Id.) Any person who violates such an order is subject to civil penalties (49 U.S.C. 21301) and injunctive relief (49 U.S.C. 20112). FRA also enforces the hazardous materials transportation laws. 49 U.S.C. 5101 et seq; 49 CFR 1.49.

Background

On December 24, 2002, FRA issued Safety Advisory 2002-03, which identified a problem with potentially defective NCM truck bolsters bearing both AAR Identification Number B-2410 and NCM Pattern Number 52122, which are used in 263,000-pound and 286,000-pound gross rail load freight cars. See 67 FR 79686-87 (December 30, 2002). In that advisory, FRA referenced AAR Maintenance Advisory MA-81 and AAR Early Warning Letters EW-5191, EW-5191-S1, and EW-5191-S2 indicating that there were as many as 15,000 freight cars in revenue service that may be equipped with the NCM bolsters.

Subsequent to the publication of the Safety Advisory, FRA was made aware of second series of bolsters, bearing both AAR Identification Number B-2409 and NCM Pattern Number 52202,

which pose a similar safety hazard. The NCM bolsters with NCM Pattern Number 52202 were also referenced in AAR Early Warning Letters EW-5194, EW-5195, EW-5196, and EW-5197.

During March 2003, the AAR conducted fatigue testing under AAR

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Specification M-202-97 (7 loading blocks of 100,000 cycles) on 19 randomly selected bolsters from the NCM-Sahagun facility at the AAR Transportation Test Center, Inc., (TTCI) in Pueblo, CO. Of the 19 randomly selected bolsters tested, 18 broke under test for a failure rate of 94.7%. In addition to quality control defects (welding and grinding), there were casting defects, hot tears, sand inclusions, and porosity in all tested bolsters. The bolsters under test failed at the end transition radius, and catastrophic failures occurred at lightening holes under the center bowl on the bottom half of the bolsters in tension. These test results indicated that subject bolsters were much more likely to fail in service than other normal bolsters.

On March 31, 2003, the AAR issued the Industry Safety Action Plan (the Plan) for dealing with the orderly inspection and removal of these potentially defective truck bolsters based on a unique risk assessment matrix which included hazardous material commodity classification, mileage (utilization), loading factor/impact, and original equipment manufacturer bolster supply. The Plan divided cars with defective truck bolsters into three classes:

- Group I, Hazardous Materials Tank Cars;
- Group II, Coal Cars and Mill Gondolas; and
- Group III, All Other Cars.

The Plan, approved and implemented by AAR's Technical Services Working Committee (TSWC), provided the following proactive safety measures:

1. Tank car owners must complete bolster replacements on 20% of their hazardous material cars no later than May 31, 2003, and a minimum of 20% per month thereafter, with 100% replacement no later than September 30, 2003.

2. Mill gondola and coal cars (subject to vertical loading impacts) must have bolsters either replaced or requalified (via radiographic inspection) no later than December 31, 2003.

3. All other cars must either have bolsters replaced or requalified (via radiographic inspection) no later than April 1, 2004.

On November 18, 2003, FRA issued Safety Advisory 2003-03, which further outlined the scope and severity of the two defective bolster patterns manufactured by NCM between the period of 1995 and 1998. See 68 FR 65982-83 (November 24, 2003). The total estimated population of defective truck bolsters from both of these NCM patterns is 58,373 bolsters, which represents a population of approximately 30,000 freight cars which may be equipped. In Safety Advisory 2003-03, although FRA recognized that the timetables established in AAR's Industry

Safety Action Plan had not been met primarily due to the industry's not having a sufficient quantity of replacement bolsters, FRA recommended that railroads, manufacturers, and car owners make every attempt to adhere to the Plan as closely as possible. At the time that FRA issued Safety Advisory 2003-03, there had been no reported in-service bolster failures.

Recently, two in-service failures of the above-noted bolsters have occurred that have caused FRA to reconsider the industry's course of action. Both in-service failures occurred on cars other than tank cars carrying hazardous material. One in-service failure occurred on January 16, 2004, and resulted in the derailment of one car in a 135-car loaded coal train. This car could have caused serious damage to a bridge or track structure or both, and if it had been a tank car loaded with hazardous material and there was a release, the car could have potentially caused serious damage, injury, or death. The other in-service failure was discovered on January 14, 2004, and did not result in any derailment or injury. Concern has also been expressed that these wintertime temperatures and conditions may lead to accelerated brittle metal failure of the subject bolsters. At present a total of 442 tank cars are assigned to hazardous material service that have not yet had these defective truck bolsters removed and replaced despite the fact that the industry plan called for completing this task by September 30, 2003.

Finding and Order

Based on the information detailed in FRA Safety Advisories 2002-03 and 2003-03, the two recent in-service failures, and the fact that the timetable for replacing bolsters hazardous material tank cars as set forth in AAR's Industry Safety Action Plan has not been met, FRA believes that additional failures may be imminent and that it is in the interest of public safety to ensure that the industry take immediate steps to eliminate the potential hazards that could be caused by an in-service failure of such a bolster on a tank car carrying a hazardous material. Such a failure could cause derailment of the car, release of its contents, and serious injury or death. Accordingly, I find that an emergency situation involving a hazard of death or injury exists. Consequently, I hereby direct and order that no person may transport, offer for transportation, load, or continue in service any tank car with an original built date of 1995, 1996, 1997, or 1998 and stenciled with DOT specification and the packaging requirements of the commodity table at 49 CFR 172.101, amplified in Part 173; that is equipped with a truck bolster bearing either (1) AAR Identification Number B-2410 and NCM Pattern Number 52122 or (2) AAR Identification Number B-2409 and NCM Pattern Number 52202, until each of the described bolsters is removed from the car and replaced with a bolster of suitable design and manufacture, except as necessary to effectuate such removal and replacement. Railroads are permitted to haul such a car if necessary to effectuate such removal and replacement, but only to the nearest available location where the removal and replacement of the subject bolster can be made. If found empty do not reload the car in movement to the repair location.

Relief

Relief from this order will occur, for each affected tank car, when each of its subject bolsters has been replaced with a non-defective bolster. If persons subject to the order desire specific relief (e.g., permitting use of a defective car for a purpose other than necessary moving for

repair), such persons must submit a request for special approval in accordance with 49 CFR 211.55, which may be granted or denied by FRA's Associate Administrator for Safety.

Penalties

Any violation of this order shall subject the person committing the violation to a civil penalty of up to $22,000. See 49 U.S.C. 21301. FRA may, through the Attorney General, also seek injunctive relief to enforce this order. See 49 U.S.C. 20112.

Effective Date and Notice to Affected Persons

This Emergency Order shall take effect on April 30, 2004 and applies to each tank car with an original built date of 1995, 1996, 1997, or 1998 and stenciled with a STCC identifying it as capable of transporting hazardous material, that is equipped with any of the above-described NCM truck bolsters. Notice of this Emergency Order will be provided by publishing it in the Federal Register. A copy of this Emergency Order will also be sent by e-mail or facsimile to the AAR for distribution to its members.

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Review

Opportunity for formal review of this Emergency Order will be provided in accordance with 49 U.S.C. 20104(b) and 5 U.S.C. 554. Administrative procedures governing such review are found at 49 CFR part 211. See 49 CFR 211.47, 211.71, 211.73, 211.75, and 211.77.

Issued in Washington, DC on April 27, 2004.
Allan Rutter,

Federal Railroad Administrator.
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