

**EMERGENCY ORDER  
No. 15**

[4910-06]

**DEPARTMENT OF TRANSPORTATION  
Federal Railroad Administration**

**[FRA Emergency Order No. 15]**

**FLORIDA EAST COAST RAILWAY COMPANY**

**Emergency Order Requiring Use of Train Borne  
Audible Warning Devices**

The Federal Railroad Administration (FRA) of the United States Department of Transportation has determined that public safety compels issuance of this Emergency Order requiring that the Florida East Coast Railway Company (FEC) sound audible warning devices on lead locomotives of trains approaching public highway-rail grade crossings, and that FEC revoke any operating rules bulletins that restrict the use of these devices at such crossings.

**Authority**

Authority to enforce Federal railroad safety laws has been delegated by the Secretary of Transportation to the Federal Railroad Administrator. 49 CFR § 1.49. The FEC is a "railroad" subject to FRA's safety jurisdiction pursuant to the Federal Railroad Safety Act of 1970, 45 U.S.C. §§ 421, 431(e), 438. FRA is authorized to issue emergency orders where an unsafe condition or practice creates "an emergency situation involving a hazard of death or injury." These orders may immediately impose "such restrictions or prohibitions as may be necessary to bring about the abatement of such emergency situation." 45 U.S.C. § 432(a).

**Background**

FRA has long identified the train borne audible warning device, commonly referred to as a train whistle, as an important feature in the safe operation of a train. One use of these whistles has been to complement other warning devices to promote safety at highway-rail grade crossings. FRA locomotive safety regulations require that each lead locomotive of a train be equipped with a device that can produce a minimum sound level in the direction of travel. 49 CFR § 229.129. FRA's Railroad Noise Emission Standards, based on standards issued by the Environmental Protection Agency, specifically exempt audible warning devices such as "horns, whistles, or bells when operated for the purpose of safety." 49 CFR § 210.3(b)(3).

Grade crossing collisions between trains and motor vehicles differ in severity from those that occur on the highways. A crash at a highway-rail crossing is eleven times more likely to result in a fatality, and five and a half times more likely to result in a disabling injury than a collision between two motor vehicles. Approximately 700 lives are lost and 2,400 people seriously injured each year in grade crossing accidents nationwide.

In addition to the threat to motorists, highway-rail crossing accidents can result in death and injury to railroad employees, particularly in collisions with large trucks or other heavy equipment. Collisions and emergency applications of train brakes greatly increase the risk of derailment and consequent injury or death to rail passengers and train crew. Moreover, the presence of hazardous material in the train consist or truck cargo can endanger anyone near the right-of-way.

A highway-rail grade crossing presents a unique traffic environment for motorists, and many drivers do not cross railroad tracks often enough to be familiar with the warning devices designed for their safety. More than 50 percent of highway-rail collisions occur at crossings equipped with bells, flashing lights, or gates. The train whistle enhances the safety effect of these other devices by giving the motorists an indication of a train's proximity.

Motorists are often unaware that trains cannot stop as quickly as motor vehicles to avoid a collision. It takes a 100 car train traveling 30 miles per hour approximately half a mile to come to a stop. At fifty miles per hour that train's stopping distance increases to one and a third miles. The average freight locomotive weighs between 140 and 200 tons, compared to the average car weight of approximately 1 to 2 tons. Any motor vehicle, even a large truck, would be crushed when colliding with the force of a moving train.

In response to the risks of death or injury at grade crossings, FRA will soon initiate a proceeding to collect nationwide data on highway-rail grade crossing safety, including the effect of the use of train borne audible warning devices.

#### The Florida Whistle Ban

Effective July 1, 1984, a Florida statute authorized counties and municipalities to restrict the nighttime sounding of train whistles on trains operated by intrastate railroads. The law authorizes local governments to ban the use of train borne audible warning devices between the hours of 10 p.m. and 6 a.m. by trains approaching highway-rail crossings that are equipped with train-activated flashing lights, bells, crossing gates,

and highway signs indicating that train whistles will not be sounded at night. Fla. Stat. § 351.03(4)(a) (1984). Since enactment of this law, at least eight counties and twelve cities have passed whistle ban ordinances. As detailed below, the result has been an alarming increase in highway-rail grade crossing accidents, with a concomitant increase in fatalities and injuries.

In August 1990, FRA issued a study of the effect of the Florida train whistle ban through 1989. The study compared the FEC's post-ban accident record at crossings subject to a ban with four control groups to determine the impact of the ban and to eliminate variables that may otherwise have affected the results. The study indicated a strong correlation between nighttime bans and the number of accidents at highway-rail crossings subject to bans.

Using the first control group, a comparison of FEC's pre-ban and post-ban accident records was made. FRA found a 195 percent increase in accidents. Based on the experience of the other control groups and the pre-ban trend, it was estimated that 49 post-ban accidents would have been expected. In fact, however, 115 post-ban accidents occurred, which is an increase of 167 percent over the number that would have been consistent with the pre-ban trend, leaving 66 crossing accidents statistically unexplained. Nineteen people died and fifty-nine people were injured in the 115 crossing incidents after establishment of the bans. Proportionally, at least 11 of the fatalities and 34 of the injuries can be attributed to the 66 unexplained accidents.

With the second control group comparison, FRA determined that the pre- and post-ban daytime accident rates remained virtually unchanged for the same highway-rail crossings at which the whistle ban was in effect during nighttime hours.

The third control group showed that at the 89 FEC crossings where the bans were not imposed, the number of nighttime accidents increased by only 23 percent.

Finally, FRA compared the 1984 through 1989 accident record of the FEC, which is required to comply with local whistle sounding ordinances, with that of the parallel rail line of CSX Transportation Company (CSX), which is not subject to such ordinances because it operates interstate. By December 31, 1989, 511 of the FEC's 600 gate-equipped crossings were affected by whistle bans. Accident data from the same period was available for 224 similarly equipped CSX crossings in the 6 counties in which both railroads operate. FRA found that FEC's nighttime accident rate at impacted crossings increased 195 percent after whistle bans were imposed. At similarly equipped CSX crossings, the number of accidents increased 67 percent.

The only identifiable difference between the crossings subject to the ban and the control groups was the whistle ban itself. Malfunctioning of safety controls at grade crossings would affect both daytime and nighttime accidents rates. An increase in rail traffic might account for a partial increase, but the average annual locomotive miles reported by the FEC increased only 22.3 percent during the period studied. Increased use of highways should also have resulted in higher accident rates at CSX crossings, at crossings in daytime, and at crossings unaffected by the bans.

In August of 1990, in an effort to develop further information and to advise local authorities of the risks apparently posed by the ordinances, FRA provided copies of its study to officials of each county and municipality with bans in effect, to the Florida Department of Transportation, and to fifteen members of the state legislature. No county or municipality acted to repeal or modify its whistle ban ordinance in light of the report. The Florida state legislature also did not act in response to FRA's findings. In fact, the number of FEC highway-rail crossings subject to the ban actually increased to 537.

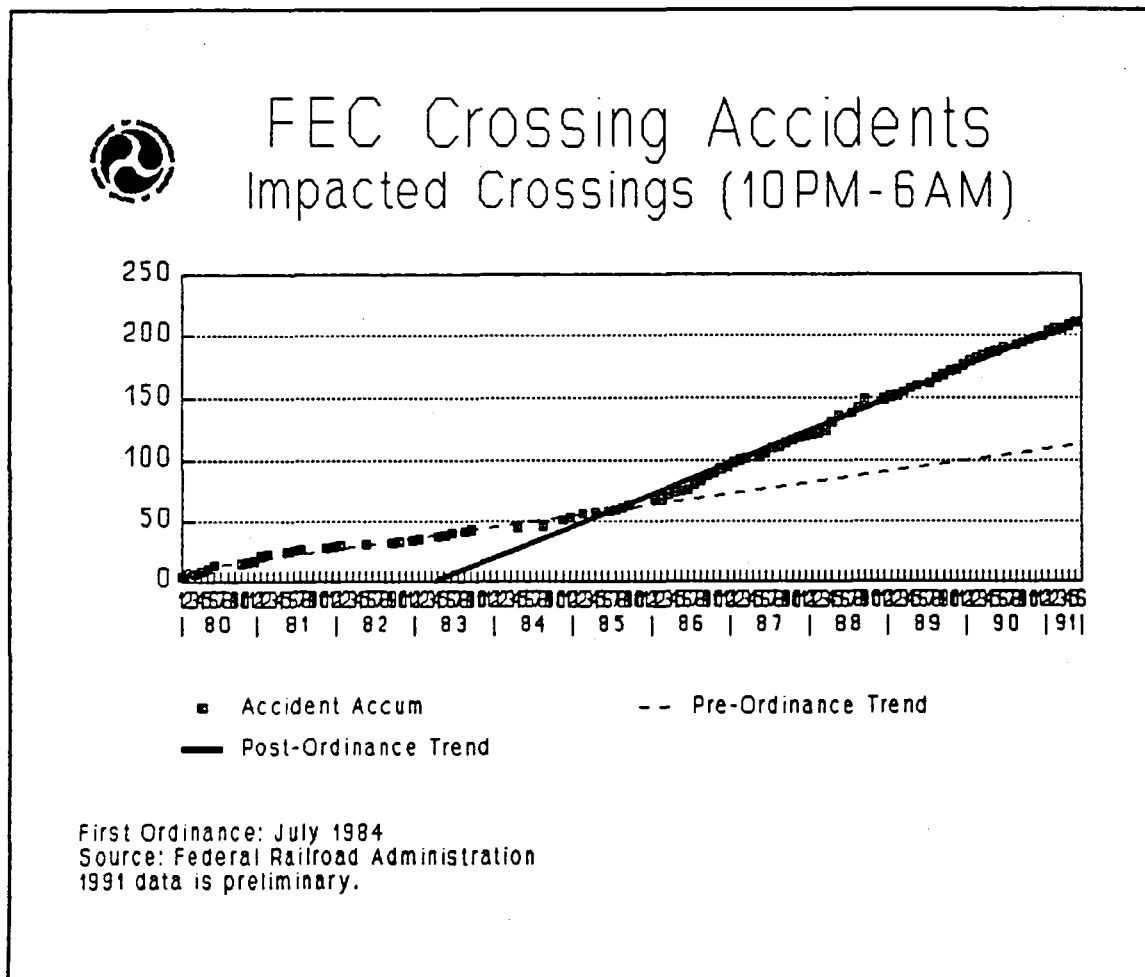
Nor, so far as FRA has been advised, did state and local authorities take other actions to compensate for the hazard introduced by the whistle bans, such as increased law enforcement, installation of immovable highway dividers, grade separation at high traffic crossings, or closure of low use crossings.

FRA has continued to monitor accident data for FEC crossings. Analysis of the 1990 data shows a continuation of the post-ban trend. There were 23 nighttime accidents at crossings subject to bans, but only one accident at the FEC's remaining 65 grade crossings. The 55 highway-rail crossing accidents reported by the FEC resulted in 15 deaths and 20 injuries. Six of these fatalities and seven injuries occurred at crossings during the ban period of 10 p.m. to 6 a.m.

In 13 of the nighttime accidents at crossings subject to the bans, the highway vehicle went around or through the gate. In the other ten, the highway user failed to clear the crossing prior to the train's arrival, suggesting the motorists were unaware of the proximity of the train.

Preliminary 1991 data for the first six months of the year shows six fatalities and six injuries at whistle ban crossings during nighttime hours. The accumulation of nighttime accidents at crossings subject to the bans in the post-ban period, illustrated below, did not abate during the first six

months of 1991. The trend line of accumulated accidents since July 1984 still reflects a major divergence from the pre-ban trend.



The Florida ban confuses the public's understanding of grade crossing warning devices. The local ordinances require that intrastate railroads comply with whistle bans while interstate carriers are exempt. This distinction means, for example, that at a CSX grade crossing, locomotive borne audible warning devices are used, but at a similar FEC crossing a short distance away, these devices are not sounded. Motorists will not know whether or not they can expect to hear a train whistle when a train nears a highway-rail crossing. This confusion is further compounded by the existence of whistle ban ordinances in certain counties and municipalities and their absence in others.

FRA is concerned with issues of noise pollution. As noted, FRA enforces noise control regulations on the railroad industry. While the sound of a train whistle can be disturbing to people who live by highway-rail crossings, that same warning note can save lives. The FEC's alarming post-ban grade crossing accident record mandates FRA action despite the inconvenience to people living near the railroad right-of-way.

### Preemption

This Emergency Order addresses the same subject matter addressed by the Florida statute and the county and municipal ordinances and, therefore, pursuant to section 205 of the Federal Railroad Safety Act of 1970, 45 U.S.C. § 434, preempts state and local requirements pertaining to the sounding of train borne audible warning devices at the highway-rail crossings of the FEC.

### Finding and Order

Based on FRA's investigation, I have determined that, given the unsafe conditions at highway-rail grade crossings over which motorists cross the FEC in the State of Florida, the continued failure of the FEC to sound its train borne audible warning devices at night as provided in its operating rules creates an emergency involving a hazard of death or injury to persons. Accordingly, pursuant to the authority of section 203 of the Federal Railroad Safety Act of 1970, 45 U.S.C. § 432, delegated to me by the Secretary of Transportation (49 CFR § 1.49(m)), it is ORDERED, effective 10 p.m., July 26, 1991:

That the Florida East Coast Railway Company shall sound its train borne audible warning devices whenever a train approaches a public highway-rail grade crossing, consistent with its operating rules. The pattern of the sounding will be two long notes, a short note, and one long note of the whistle. This pattern can be repeated or the last sound prolonged until the lead locomotive has passed through the crossing.

That the Florida East Coast Railway Company shall revoke any operating rules bulletin that restricts the sounding of train borne audible warning devices on trains approaching highway-rail grade crossings.

### Relief

The FEC may obtain relief from this Order by either of the following:

1. By filing a written notification with the Docket Clerk, Federal Railroad Administration, that a highway-rail crossing, or any number of highway-rail crossings, is no longer subject to a municipal or county ordinance that would limit the sounding of train borne audible warning devices. Such filing must include a written representation that the railroad has revoked any restrictive operating rules bulletins and will continue to retain in force its operating rule requiring sounding of locomotive audible warning devices.
2. By filing in writing with the Docket Clerk, Federal Railroad Administration, evidence that sufficient safety measures are planned at a highway-rail crossing, or any number of highway-rail crossings, to alleviate the risk of injury and death created by the failure to use train borne audible warning devices. The measures to be taken at each crossing must be specifically identified, and supported with safety data and/or engineering studies that demonstrate that the planned measures will be effective and will be in place within thirty days of FRA approval of the plans.

Within thirty days of receipt of the notice described in paragraph 2, above, FRA will review the measures planned for each identified highway-rail crossing and evaluate the safety improvements and supporting documentation. FRA will then make a written finding whether the Order will be lifted, in whole or in part. If FRA does not lift the Order, the written response will specifically describe what additional measures need to be taken to abate the hazard. If FRA lifts the Order, this lifting will take effect on the date the planned crossing measures are completed and begin functioning.

### Penalties

Each train movement in violation of this Order shall subject the respondent committing such violation to a civil penalty of up to \$20,000. 45 U.S.C. §§ 432, 438. FRA may, through the Attorney General, also seek injunctive relief to enforce this order. 45 U.S.C. § 439.

### Notice

This Emergency Order was hand delivered to the Florida East Coast Railway Company on July 26, 1991. In addition, copies were provided this day by mail or facsimile to the Governor of Florida, the Florida Department of Transportation, St. Johns County, St. Lucie County, Brevard County, Indian River County, Martin County, Palm Beach County, County of Ft. Lauderdale, Dade County, and the cities and towns of Jacksonville, St. Augustine, Ormond Beach, Holly Hill, Daytona Beach, South Daytona, Port Orange, New Smyrna Beach, Malabar, Edgewater, Melbourne, Palm Bay, Titusville, Cocoa, Rockledge, Vero Beach, Sebastian, Fort Pierce, Stuart, Riviera Beach, West Palm Beach, Tequesta, Boynton Beach, Delray Beach, Hypoluxo, North Palm Beach, Lantana, Lake Worth, Boca Raton, Deerfield Beach, Pompano Beach, Oakland Park, Wilton Manors, Fort Lauderdale, Dania, Hollywood, and Hallandale.

### Review

Opportunity for formal review of this Emergency Order will be provided in accordance with section 203(b) of the Federal Railroad Safety Act of 1970, 45 U.S.C. § 432(b), and section 554 of Title 5 of the United States Code. Administrative procedures governing such review are found 49 CFR Part 211 (see § 211.47, .71-.75).

Issued in Washington, D.C., on July 26, 1991.



Gilbert E. Carmichael  
Administrator