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DEPARTMENT OF TRANSPORTATION

*Billie*

Federal Railroad Administration

[FRA Emergency Order No. 10]

CONSOLIDATED RAIL CORPORATION;

BLACK ROCK BRANCH

EMERGENCY ORDER  
No. 10

Emergency Order Forbidding Movement of Hazardous Materials

The Federal Railroad Administration (FRA), Department of Transportation, has determined that considerations of public safety necessitate the issuance of an emergency order prohibiting the further movement of placarded hazardous materials cars over the Black Rock Branch, a segment of Consolidated Rail Corporation (Conrail) track in the Buffalo Division which connects Bison Yard (at Milepost 389.7) and Black Rock Yard (at Milepost 399.3).

Located within the city of Buffalo, New York, this branch consists of about 9.7 miles of double track, much of it elevated to a height of 20 feet to accommodate the six major three- or four-lane streets over which it passes. Approximately 50,000 people live within one-quarter mile of the track. Within that area are approximately 15 schools and one hospital. A nursing home with 255 patients is located 100 yards from the track. Among the factories in the vicinity are American Brass with 500 to 700 workers, a Chevrolet plant with 300 to 500 workers, and a large industrial park at Elmwood Street with 5,000 to 6,000 workers.

An average of 14 trains, many 100 cars long, operate daily on the Black Rock Branch, carrying a total of 10.3 million gross tons per year.<sup>1/</sup> It is a principal freight route reaching Canadian points via the International Bridge over the Niagara River. Both the Norfolk & Western Railway Company

1/ According to the dispatcher's Daily Record of Train Movements.

(N&W) and the Chesapeake & Ohio Railway Company (C&O) operate trains over the Black Rock Branch under trackage rights arrangements.

In the course of operations, large amounts of hazardous materials are transported. According to Conrail records, two cars of nitroguanidine, a Class A high explosive, were interchanged during the week of October 23, 1978, from the Canadian National Railway to Conrail and transported over the Black Rock Branch to Bison Yard. During that week there were also movements of one chlorine car and 24 cars of liquified petroleum gas.<sup>2/</sup> In addition, Conrail records showed one car of organic peroxide, an unstable oxidizer which is extremely hazardous, and at least five cars of ammonium nitrate, the oxidizer involved in the 1947 Texas City disaster. Other hazardous materials among the shipments included phosphorus (a flammable solid), xylene (a flammable liquid), and carbolic acid (Poison B).<sup>3/</sup> A total of 54 cars containing hazardous materials were moved on this branch during the week of October 23.

On October 23, 1978, in response to a complaint, an FRA inspector began inspections of the Black Rock Branch. His first inspection on that date revealed over 67 violations of the FRA Track Safety Standards in only one-half mile of track. There were 40 instances of defective joint ties, i.e., defective ties at the point where rail sections are joined together by joint bars, a normally weaker part of the track structure, made even more so by the defective ties. In addition, FRA found two defective tie conditions affecting cross level, four areas where the distance between nondefective

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<sup>2/</sup> Chlorine is classified as a nonflammable gas. Liquified petroleum gas is a flammable gas. Both have been involved in recent tragic derailments. At Youngstown, Florida, on February 26, 1978, eight persons were killed when they were overcome by chlorine gas fumes from a punctured tank car. A few days earlier, on February 23, 1978, 15 persons died and 60 were injured in Waverly, Tennessee, when tank cars carrying liquified petroleum gas exploded and burned.

<sup>3/</sup> Hazard class under DOT hazardous materials regulations.

ties exceeded the minimal standards for Class I track, 20 joints with loose or insufficient bolts, and one rail with a two-foot long, vertical split head. (See Appendix A).

The FRA inspector returned for a second inspection on October 24, 1978. Approximately five miles were walked, and conditions found to be representative of other areas inspected by riding in a specially designed track inspection vehicle. The October 24th inspection revealed numerous defects, especially at critical points in the track structure: defective ties on the bridges and highway overpasses, other defects on an elevated grade, and defective ties under a frog (a track component used where rails intersect) which caused the frog to break. The fifty-eight defects noted were only a small sampling of the actual number of defects present along the line.

The FRA inspector noted 11 locations where tie conditions were far below FRA's minimum standards, which prescribe the maximum allowable distance between nondefective ties as 100 inches. The inspector found single violations involving distances of 172, 191, 220, 221, and 255 inches. These defects often occurred at points such as frogs, switches, and bridges, which are subjected to greater than normal stress. In the worst example, the frog was floating and not spiked to the ties. Likewise, there were 18 instances of defective joint ties.

In addition to numerous areas of noncompliance with cross-tie regulations, there were five areas of wide gage, <sup>4/</sup> including one location of 4 feet 11 1/4 inch gage, which is 2 3/4 inches beyond standard and 1 1/2 inch wider than the

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<sup>4/</sup> Track gage is defined as the distance between the inside faces of the rail heads, measured at a point 5/8 inch below the top of the rail head. Standard gage is 4 feet 8 1/2 inches. The Track Safety Standards permit gage to widen to 4 feet 9 3/4 inches before a defect is considered to exist. Gage wider than 4 feet 9 3/4 inches usually indicates a lack of sufficient lateral support for the rail, and greatly increases the possibility of a derailment due to car or locomotive wheels dropping between the rails.

maximum permitted by the Track Safety Standards for any movement of trains. In addition, one broken rail and two broken frogs were found, which also pose a danger of derailment. (See Appendix B.)

The nature and degree of nearly all of the defects noted during these inspections are such that each presents a definite possibility of a derailment resulting solely from that defect. The locations of many of the defects increase the probability that a derailed car or locomotive would completely leave the track structure and possibly roll down the side of the embankment.

The nature of traffic on the Black Rock Branch presents a high probability of a serious derailment. An annual tonnage of 10.3 million gross tons per year, handled in an average of 14 trains per day, is far from inconsequential.

In fact, derailments on this line have occurred almost weekly. Carrier records for every month in 1977 except September showed a total of 40 derailments, 23 of which were listed as track-related. In six months of 1978, the total was 18, with ten described as track-related.

In response to the FRA inspection, which disclosed numerous serious track defects, Conrail issued on the evening of October 24, 1978, a general speed restriction, ordering speeds on all trains reduced to five miles per hour. Until then, Conrail had allowed light engines and engines with cabooses a higher speed limit of 10 miles per hour.<sup>5/</sup> Although expansion of the slow order was a positive step, its effectiveness was somewhat doubtful, given the evidence of noncompliance with the original order. (At 4:32 p.m., October 23, 1978, an FRA inspector observed a C&O train hauling 85 or more cars at about 10 to 13 miles per hour, in violation of the five mile per hour rule then in effect.)

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<sup>5/</sup> Bulletin Order No. 1 - S17 dated June 28, 1978.

On October 26, 1978, two days after the second inspection, FRA served Conrail in Buffalo with a Notice of Track Conditions, issued pursuant to 49 C.F.R. Part 216, informing the carrier that FRA had under consideration issuance of an emergency order removing the Black Rock Branch from service. The carrier has not undertaken action to remedy the problems in a timely manner.

In the meantime, despite the defect notice and the possibility of an emergency order, traffic in hazardous and other materials has continued as usual. Conrail has placed no restrictions of any kind on the movement of hazardous materials.

The derailment of a car containing hazardous material would pose a threat not only to train crews but to people living in the vicinity. For example, a number of backyards fronting on St. Lawrence Avenue border the embankment. Houses are as close as 60 feet from the foot of the slope. A derailment would also endanger motorists using the roads which cross underneath the line, students attending the various elementary and high schools nearby, patients in neighboring hospital and nursing facilities, and employees in neighboring factories. Far too many lives are at stake to allow continued shipment of hazardous cargo over the Black Rock Branch in its present deteriorated condition.

In light of the high risk that derailments will result in death or injury because of the release of hazardous materials, I have determined that the track defects on the Black Rock Branch operated by the Consolidated Rail Corporation between Bison Yard and Black Rock Yard, in Buffalo, New York, constitute an unsafe condition and create an emergency situation involving a hazard of death or injury to persons affected by the use of this line.

Therefore, 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 C.F.R. 1.49(n)), it is ordered:

1. That all transportation of railroad cars containing a material which is required to be placarded in accordance with Department of Transportation regulations, 49 CFR Parts 170-189 ("placarded hazardous materials"), over the Consolidated Rail Corporation's Black Rock Branch, between Bison Yard, at approximately milepost 389.7, and Black Rock Yard, at approximately milepost 399.3, in Buffalo, New York, shall cease not later than 12:01 a.m., November 3, 1978. However, any cars in transit over such track at that time may continue to their final terminal.
2. This order shall remain in effect until such track has been restored to compliance with Federal Railroad Administration standards for at least Class I track (49 CFR Part 213).
3. Transportation over such track of any car containing any hazardous material required to be placarded shall be and is prohibited by this order until the authorized designated official of the Consolidated Rail Corporation has certified that required repairs have been made and the track has been inspected by a representative of the Federal Railroad Administration. Subject to these procedures, service over the line may be restored incrementally.


A civil penalty of \$2,500 will be assessed for any violation of this order. (45 U.S.C. 438.)

Opportunity for formal review of this Emergency Order will be provided in accordance with section 203 of the Federal

Railroad Safety Act of 1970 (45 U.S.C. 432) and section 554 of Title 5 of the United States Code. Petition for such review must be submitted in writing to the Office of Chief Counsel, Federal Railroad Administration, Washington, D. C. 20590 in accordance with 49 CFR 216.25.

This order does not authorize the Consolidated Rail Corporation to transport cars which do not contain placarded hazardous materials, over track which is not in compliance with the Track Safety Standards. Any such operation may subject the Consolidated Rail Corporation to the imposition of penalties prescribed by the Federal Railroad Safety Act of 1970 (45 U.S.C. 438).

Issued in Washington, D. C., on November 2, 1978.

  
JOHN M. SULLIVAN  
Administrator

APPENDIX A

- Consolidated Rail Corporation -

October 23, 1978, Inspection of Black Rock Branch

Track inspected between Milepost 395.8 and Milesport 396.25

Number of  
Violations

49 CFR Part 213

40	joint tie defects (.109)
2	defective tie conditions affecting cross level (.63)
4	distance between nondefective ties exceeding 100 inches (.109)
2	missing joint bar bolts (.121)
18	loose bolt conditions (.121)
1	vertical split in rail head, two feet long (.113)



APPENDIX B

- Consolidated Rail Corporation -

October 24, 1978, Inspection of Black Rock Branch

Track inspected between Milepost 389.7 and Milepost 399.3

Number of Violations

49 CFR Part 213

5	gage defects(.53)
12	distance between nondefective ties exceeding 100 inches (.109)
1	alinement defect (.55)
18	joint tie defects(.109)
2	broken frogs(.137)
4	missing bolts (.121)
1	missing frog bolts (.133)
1	insufficient ballast (.103)
2	missing cotter pins (.133)
7	deviation exceeding allowable cross level (.63)
1	uniform profile exceeding allowable (.63)
1	incorrect holddown clearance (.139)
1	broken rail (.113)
1	vertical split head rail, 11 feet long (.113)
1	failure to inspect as required (.233)