INTERSTATE COMMERCE COMMISSION

WASHINGTON

INVESTIGATION NO. 2770

THE MINNEAPOLIS & ST. LOUIS RAILROAD COMPANY

REPORT IN RE ACCIDENT

NEAR SEARSBORO, IOWA, ON

JANUARY 31, 1944

SUMMARY

Railroad:	Minneapolis & St. Louis	
Date:	January 31, 1944	
Location:	Searsboro, Iowa	
Kind of accident:	Rear-end collision	
Trains involved:	Freight	: Freight
Train numbers:	Extra 330 East	: 96
Engine numbers:	330	: 629, 606
Consist:	38 cars, caboose	: 73 cars, caboose
Estimated speed:	Standing	: 15 m. p. h.
Operation:	Timetable and train orders	
Track:	Single; tangent; 0.40 percent descending grade eastward	
Weather:	Clear	
Time:	2:50 p. m.	
Casualties:	1 killed; 4 injured	
Cause:	Failure to provide adequate protection for preceding train	
Recommendation:	That the Minneapolis & St. Louis Railroad Company establish an adequate block system on the line on which this accident occurred	

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2770

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS UNDER THE ACCIDENT REPORTS ACT OF MAY 6, 1910.

THE MINNEAPOLIS & ST. LOUIS RAILROAD COMPANY

February 24, 1944.

Accident near Searsboro, Iowa, on January 31, 1944, caused by failure to provide adequate protection for the preceding train.

REPORT OF THE COMMISSION[1]

PATTERSON, Chairman:

On January 31, 1944, there was a rear-end collision between two freight trains on the Minneapolis & St. Louis Railroad near Searsboro, Iowa, which resulted in the death of one employee, and the injury of four employees. This accident was investigated in conjunction with a representative of the Iowa State Commerce Commission.

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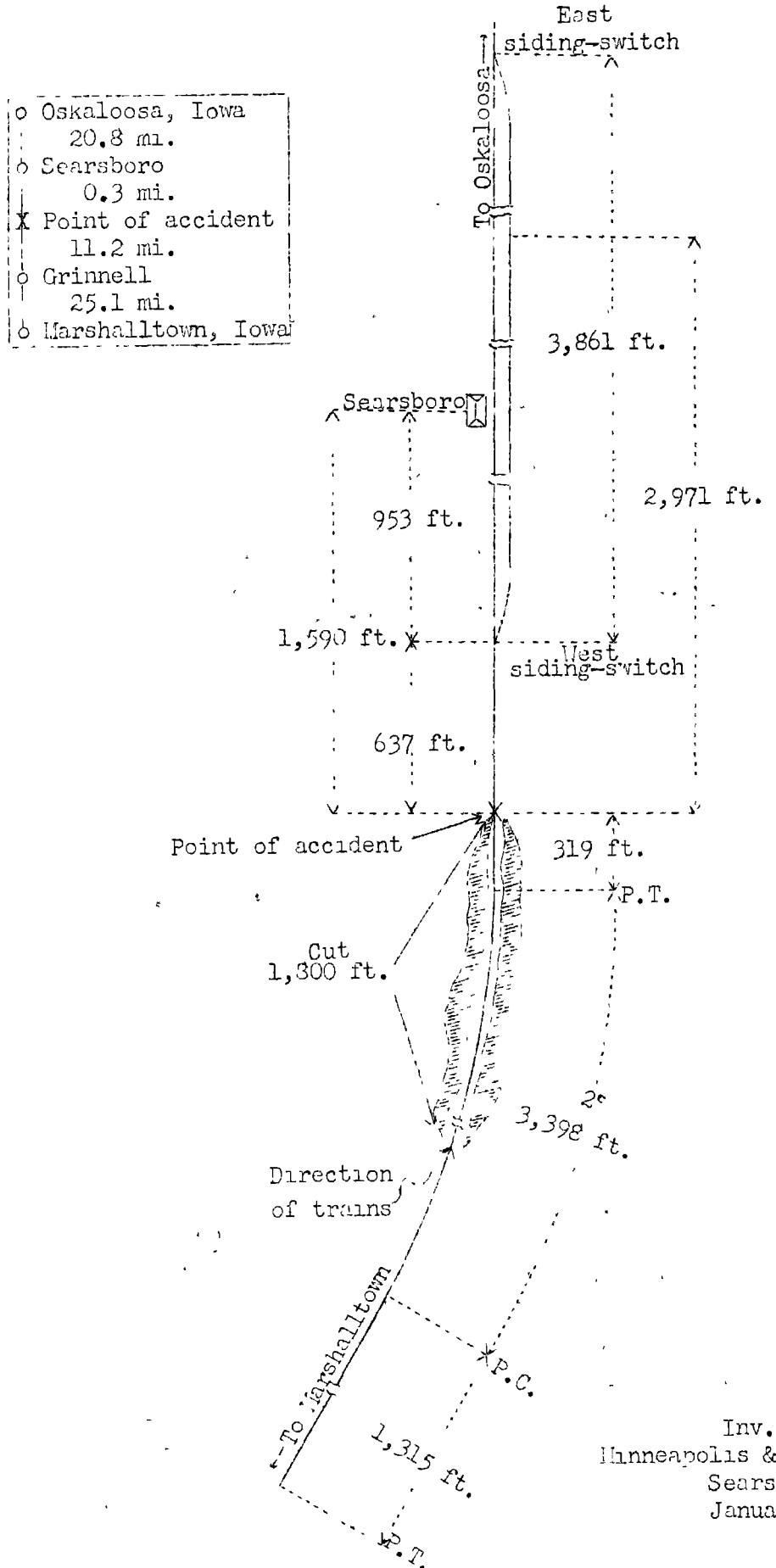
[1]Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Chairman Patterson for consideration and disposition.



Inv. No. 2770
Minneapolis & St. Louis Railroad
Searsboro, Iowa
January 31, 1944

Location of Accident and Method of Operation

This accident occurred on that part of the Tenth District which extends between Marshalltown and Oskaloosa, Iowa, 57.4 miles. This was a single-track line over which trains were operated by timetable and train orders. There was no block system in use. The accident occurred 1,590 feet west of the station at Searsboro. From the west there were, in succession, a tangent 1,315 feet in length, a 2° curve to the left 3,398 feet and a tangent 319 feet to the point of accident and 2,971 feet beyond. Throughout a distance of 2 miles immediately west of Searsboro and a considerable distance eastward the grade for east-bound trains varied between 0.70 and 0.39 percent descending, and at the point of accident it was 0.40 percent descending.

At Searsboro a siding 3,861 feet long paralleled the main track on the south. The west switch of this siding was 953 feet west of the station.

Operating rules read in part as follows:

11. A train finding a fusee burning on or near its track must stop and extinguish the fusee, and then proceed with caution prepared to stop short of train or obstruction.

14. Engine and Motor Whistle Signals.

Note--The signals prescribed are illustrated by "o" for short sounds; "___" for longer sounds. * * *

SOUND.	INDICATION.
* * *	
(c) ___ o o o	Flagman protect rear of train.
(d) ___ ___ ___ ___	Flagman may return from west, as prescribed by Rule 99.
* * *	

15. The explosion of one torpedo is a signal to stop; the explosion of two not more than 200 feet apart is a signal to reduce speed and look out for a stop signal.

35. The following signals will be used by flagmen:

Day signals--A red flag,
Torpedoes and
Fusees.

* * *

85. * * *

* * * extra trains may pass and run ahead of 2d and 3d class trains and extra trains, * * *.

* * *

91. Unless some form of block signals is used, trains in the same direction must keep at least five minutes apart, except in closing up at stations. * * *

99. When a train stops under circumstances in which it may be overtaken by another train, the flagman must go back immediately with flagman's signals a sufficient distance to insure full protection.

99-b. To insure full protection flagman must take into consideration weather conditions, locality, such as grades and curvature; time, as to whether day or night, and any other condition that may affect the proper flagging and stopping of an approaching train.

99-c. Ordinarily flagman should go back at least one-half mile (15 telegraph poles) and place one torpedo on each rail opposite each other so as to make one explosion; and then go back a further distance of one-half mile (15 telegraph poles) and place two torpedoes, 60 feet apart (2 rail lengths) on the engineer's side, then return to point where first torpedoes were placed and remain there until the approaching train has been flagged or he has been recalled.

99-e. * * *

If a following train is in sight or hearing before the flagman has reached a point insuring full protection, he must at once place two torpedoes on the rail opposite each other, and at night or in obscure weather or if the view is obscured, he will, in addition, display a lighted fusee and continue towards the approaching train displaying stop signals until they are answered.

99-f. Flagmen are expected to use good judgment in increasing or decreasing the above distances; also in the use of torpedoes, never taking it for granted that enginemen's attention can be attracted by a flag only, by reason of its being daylight.

99-j. When a train is moving under circumstances in which it may be overtaken by another train, the flagman must take such action as may be necessary to insure full protection. By day, as well as by night when the view is obscured, lighted fusees must be thrown off at frequent intervals.

99-m. In the event the flagman or rear brakeman is not immediately available, some member of the crew must go back immediately and protect the train.

The maximum authorized speed for freight trains was 35 miles per hour on tangents and 25 miles per hour on curves.

Description of Accident

Extra 330 East, an east-bound freight train, consisted of engine 330, 38 cars and a caboose. This train departed from Grinnell, 11.5 miles west of Searsboro and the last open office west of Searsboro, at 1:28 p. m., and stopped at Searsboro at 2:30 p. m., with the rear end standing 637 feet west of the west siding-switch. About 20 minutes later the rear end was struck by No. 96.

No. 96, an east-bound second-class freight train, consisted of engines 629 and 606, 73 cars and a caboose, in the order named. This train passed Grinnell at 2:30 p. m., 1 hour 30 minutes late, and while moving at an estimated speed of 15 miles per hour it struck Extra 330 East.

The caboose and the rear six cars of Extra 330, and both engines and the first seven cars of No. 96 were derailed and badly damaged.

Throughout a distance of 1,800 feet immediately west of the point of accident the track was laid in a cut, the banks of which rose to a maximum height of 18 feet. Because of the cut and track curvature, the view from an east-bound engine of the point where the accident occurred was restricted to 987 feet.

It was clear at the time of the accident, which occurred about 2:50 p. m.

The engineer of the second engine of No. 96 was killed. The engineer and the fireman of the first engine, the fireman of the second engine and the front brakeman of No. 96 were injured.

During the 30-day period preceding the day of the accident the average daily movement in the vicinity of the point of accident was 7.9 trains.

Discussion

The rules governing operation on this line provide that when a train is moving under circumstances in which it may be overtaken by another train the flagman must take such action as may be necessary to insure full protection. During the day when the view is obscured lighted fusees must be thrown off at proper intervals. When a train stops under circumstances in which it may be overtaken by another train the flagman must go back immediately a sufficient distance to insure full protection. At a point at least 1/2 mile to the rear, the flagman must place one torpedo on each rail, and 1 mile to the rear, must place two torpedoes 60 feet apart on the rail on the engineer's side, then he may return to the point where the first torpedoes were placed and remain there until the approaching train has been flagged or he has been recalled. If a train is seen or heard approaching before the flagman has reached the required flagging distance he must at once place two torpedoes on each rail and, if the view is obscured, display a lighted fusee, continue toward the approaching train and display stop signals until the signals are acknowledged. The surviving employees concerned in this investigation understood these requirements.

About 20 minutes after Extra 330 East stopped, it was struck by No. 96 at a point 637 feet west of the west siding-switch at Searsboro. No train order restricting the authority of No. 96 to proceed had been issued.

As No. 96 was approaching the point where the accident occurred the speed was 25 or 30 miles per hour. The train air-brake system was in the charge of the engineer of the first engine. The brakes had been tested and had functioned properly. The enginemen of each engine and the front brakeman, who was on the first engine, were maintaining a lookout ahead. No warning signal was seen or heard, and the first these employees knew of anything being wrong was when the fireman of the first engine and the front brakeman saw stop signals being given with a red flag about 500 feet distant. They called a warning to the engineer of the first engine, who immediately moved the brake valve to emergency position. The speed of No. 96 was about 15 miles per hour when the collision occurred.

As Extra 330 was approaching Searsboro the conductor dropped lighted 10-minute fusees at points about 3,300 feet and 2,400 feet west of the point where the train stopped. Soon after Extra 330 stopped, the engine and the first three cars were detached and the members of the crew, except the conductor, were engaged in setting off cars and switching.

When the train stopped, the conductor went back to provide flag protection, and had reached a point about 700 feet west of the rear of his train when he heard a train approaching from the west. He proceeded toward the approaching train and had reached a point about 900 feet to the rear of his train, where he was giving stop signals with a red flag when the engines of No. 96 passed him. After the conductor had proceeded westward about 400 feet he could not see the rear of his train, because of the banks of the cut and track curvature. He expected his train to be moved east of the west siding-switch within a few minutes after it stopped, and protection was not required for his train while occupying the main track between the siding switches under the provisions of the station-limit rule. It was stated by members of a section force who were in the vicinity of the points where lighted fusees were dropped from the rear of the preceding train west of Searsboro that these fusees had burned out prior to the time No. 96 passed.

On this line trains were being operated by timetable and train orders only. The only provisions for spacing following trains was by the time-interval method enforced by operators at open stations, and by burning fusees dropped by flagmen. The rules required that the following train be spaced at least 5 minutes behind the preceding train. In this case the preceding train departed from Grinnell, 11.5 miles west of Searsboro and the last open office, 1 hour 2 minutes before the following train departed from Grinnell. Unless the following train received flagging signals, there was no provision that prevented this train from moving at the maximum authorized speed of 35 miles per hour on tangents and 25 miles per hour on sharp curves until it reached the west siding-switch at Searsboro. Since the burning fusees dropped from the preceding train had been consumed before the following train passed their locations, and since the rear end of the preceding train was standing 637 feet west of the west siding-switch, flag protection furnished by the crew of the first train was the only method remaining to safeguard the movement of these trains. If an adequate block system had been in use, the crew of the following train would have received definite information that the preceding train was occupying the main track, and this accident would have been averted.

Cause

It is found that this accident was caused by failure to provide adequate protection for the preceding train.

Recommendation

It is recommended that the Minneapolis & St. Louis Railroad Company establish an adequate block system on the line on which this accident occurred.

Dated at Washington, D. C., this twenty-fourth day of February, 1944.

By the Commission, Chairman Patterson.

W. P. BARTEL,

(SEAL)

Secretary.