

INTERSTATE COMMERCE COMMISSION

WASHINGTON

INVESTIGATION NO. 2460

THE MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE
RAILWAY COMPANY

REPORT IN RE ACCIDENT

AT WATKINS, MINN., ON

NOVEMBER 11, 1940

SUMMARY

Railroad: Minneapolis, St. Paul & Sault Ste. Marie
Date: November 11, 1940.
Location: Watkins, Minn.
Kind of accident: Head-end collision
Trains involved: Freight : Passenger
Train numbers: 77 : 106
Engine numbers: 480 : 714
Consist: 15 cars, caboose : 3 cars
Speed: Standing : 15-25 m. p. h.
Operation: Timetable, train orders, and manual
block system for passenger train
following passenger train
Track: Single; tangent; 0.07 percent
ascending grade eastward
Weather: Blizzard
Time: 3:55 p. m.
Casualties: 2 killed; 19 injured
Cause: Accident caused by failure to control
speed of superior train properly
when approaching meeting point.

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2460

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

THE MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE
RAILWAY COMPANY

January 23, 1941

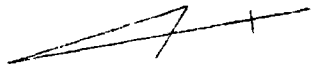
Accident at Watkins, Minn., on November 11, 1940, caused by
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REPORT OF THE COMMISSION

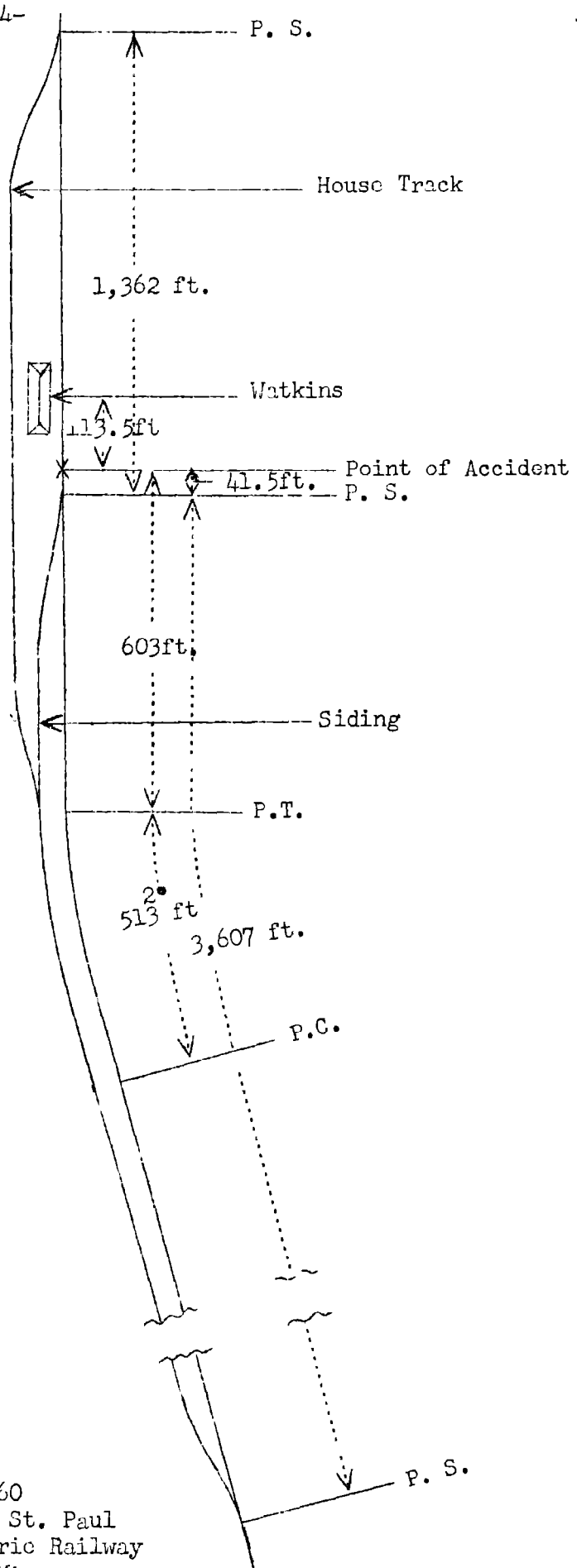
PATTERSON, Commissioner:

On November 11, 1940, there was a head-end collision between a passenger train and a freight train on the Minneapolis, St. Paul & Sault Ste. Marie Railway at Watkins, Minn., which resulted in the death of 2 employees and the injury of 11 passengers, 2 railway-mail clerks and 6 employees. The investigation of this accident was made in conjunction with a representative of the Railroad and Warehouse Commission of Minnesota.

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



○	Minneapolis, Minn.
○	15th Avenue North
	1.6 mi.
○	Camden Place
	18.2 mi.
○	Loretto
	34.3 mi.
○	South Haven
	5.2 mi.
○	Kimball
	5.4 mi.
⊗	Watkins
⊗	Point of Accident
	6.9 mi.
○	Eden Valley
	9.3 mi.
○	Paynesville
	37.8 mi.
○	Glenwood, Minn.



Inv-2460
 Minneapolis, St. Paul
 & Sault Ste. Marie Railway
 Watkins, Minn.
 November 11, 1940

Location and Method of Operation

This accident occurred on that part of the Minnesota Division designated as the First Subdivision which extends between Glenwood and 15th Avenue North, Minneapolis, Minn., a distance of 118.7 miles. In the vicinity of the point of accident this is a single-track line over which trains are operated by timetable, train orders, and a manual block system for a passenger train following a passenger train. At Watkins a siding 3,607 feet in length parallels the main track on the north; the accident occurred at a point 41.5 feet east of the east switch of this siding and 113.5 feet west of the station. As the point of accident is approached from the west there are, in succession, a tangent 6,075 feet in length, a 2°00' curve to the right 513 feet in length, and a tangent 603 feet to the point of accident. As the point of accident is approached from the east the track is tangent more than 1 mile. The grade for east-bound trains is 0.07 percent ascending at the point of accident. The switchstand involved is of the No. 6 High Star type, is located 6 feet 5 inches north of the north rail of the main track, and is equipped with a lamp and a single target. When the switch is lined for the main track the lamp displays a green lens, which is 4 inches in diameter. When the switch is lined for the siding the lamp displays a red lens, which is 4-1/2 inches in diameter, and an 18-inch circular target also is displayed. The centers of the lamp and the target are 7 feet and 5 feet 1-1/4 inches, respectively, above the tops of the ties.

At Watkins station a semaphore-type train-order signal is mounted on a mast located on the north side of the track. On this line train-order signals are used as block signals for trains requiring block indications.

Transportation rules read in whole or in part as follows:

14. Engine Whistle Signals

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

* * * .

* * * .

(n) o. Approaching meeting or waiting points. See Rule 90.

90. * * *.

Train must stop clear of the switch used by the train to be met in going on the siding.

The engineman of each train will give signal 14(n) at least one mile before reaching a meeting or waiting point. Should the engineman fail to give signal 14(n) as herein prescribed, the conductor must take immediate action to stop the train.

In the vicinity of the point of accident the maximum authorized speed for passenger trains is 55 miles per hour.

There was a blizzard at the time of the accident, which occurred about 3:55 p. m.

Description

No. 77, a west-bound third-class freight train, with Conductor Bradley and Engineman Terpenning in charge, consisted of engine 480, 4 loaded and 11 empty cars and a caboose. This train departed from Camden Place, 63.1 miles east of Watkins, at 8:10 a. m., according to the train sheet, 1 hour late. At Kimball, 5.4 miles east of Watkins, the crew received train order No. 72, Form 19, which read as follows:

No. 106 meet No. 77 at Watkins.

No. 77 departed from Kimball at 3:53 p. m., 5 hours 28 minutes late, stopped at Watkins at 3:52 p. m. to enter the east switch of the siding, and about 3 minutes later was struck by No. 106.

No. 106, an east-bound first-class passenger train, with Conductor Boore and Engineman Preston in charge, consisted of engine 714, one mail-express car, one baggage car and one coach, in the order named; all cars were of steel construction. This train departed from Glenwood, 54 miles west of Watkins, at 2:25 p. m., according to the train sheet, 1 hour 10 minutes late. At Paynesville, 16.2 miles west of Watkins, the crew received, among others, copies of train order No. 72, Form 31. This train departed from Paynesville at 3:51 p. m., 1 hour 16 minutes late, passed the east siding-switch at Watkins, where it was required to stop on the main track west of the fouling point to meet No. 77, and, while moving at a speed estimated to have been between 15 and 25 miles per hour, collided with No. 77.

The force of the impact moved No. 77 back a distance of 182 feet. The two engines were locked together but remained upright. The front end of each engine was badly damaged. The tender of each engine was loosened from its frame and raised at the rear, and the front ends telescoped the engine cabs. The engine truck of engine 480 was demolished. The first car of No. 77 telescoped the cistern of the tender a distance of 10 feet. The second and third cars were demolished. The front truck of the fourth car was derailed. All driving wheels and trailer wheels of engine 714 and the front truck of the tender were derailed. The front end of the first car of No. 106 was damaged.

The employees killed were the engineman and the fireman of No. 77 and the employees injured were the conductor and the brakeman of No. 77 and the engineman, the fireman, the baggage-man and the brakeman of No. 106.

Summary of Evidence

Front Brakeman Hamm, of No. 77, stated that at Kimball his crew received copies of train order No. 72 and he understood that No. 77 and No. 106 were to meet at Watkins and that No. 77 was to take siding. From Kimball to Watkins he was on the engine and observed that the engine crew had great difficulty in ascertaining their location until the engine reached the house-track switch located approximately 1,200 feet east of Watkins station; his engineman operated the train slowly from this switch to the east switch of the siding. The station building was used as a landmark for stopping the train short of the east siding-switch. The train stopped with the engine standing about 1 car length east of the siding switch and the brakeman went forward to open the switch. The switch was blocked with snow and, while he was clearing the snow from the switch points, he saw the headlight of No. 106 approaching; he had scarcely time enough to jump clear of the track before No. 106 passed him and collided with No. 77. He said that because of the severity of the storm he was unable either to see or to hear No. 106 approaching.

Conductor Bradley, of No. 77, stated that a terminal air-brake test was made at Shoreham, 65.4 miles east of Watkins, and the brakes were reported to be functioning properly. At Kimball he received a copy of train order No. 72. He understood that this order required No. 77 to enter the east siding-switch at Watkins. As his train approached the point where the accident occurred it moved at normal speed until it reached a point about 1 mile east of Watkins, and from that point to Watkins it moved at a low rate of speed. Because of blowing snow, visibility was restricted to about 3 car lengths. The accident occurred soon after his train stopped at Watkins.

Flagman Kelsey and Brakeman Brickson, of No. 77, corroborated the statement of their conductor.

Engineman Preston, of No. 106, stated that the air brakes on his train functioned properly en route. At Paynesville he received a copy of train order No. 72. He read the order to his conductor and understood that his train was required to stop on the main track west of the fouling point of the east siding-switch at Watkins if No. 77 was not in the clear. Because of a severe snowstorm he could not identify his location when stopping at stations en route. At a point about 4 miles west of Watkins the engine struck a snow drift and from that point to the point where the accident occurred he was unable to distinguish any landmark by which he could ascertain his location. Between Eden Valley, approximately 7 miles west of Watkins, and Watkins he consulted his watch frequently so that he could correlate time and speed in order to determine when his train was approaching Watkins. By these calculations he estimated that his train was approximately midway between the east and the west siding-switches at Watkins when he made a brake-pipe reduction of 10 or 12 pounds. The speed of his train was about 40 miles per hour and he had just risen to look out the front window when the accident occurred. He said that his train traversed the distance from Eden Valley to Watkins in about 1-1/2 minutes less than the usual running time and because of this he underestimated the distance. Since he was unaware that his train had passed the station mile-sign he did not sound whistle signal 14(n). He knew of no instance wherein a train was held in this territory by a positive block until an opposing train was clear of the main track; however, in this instance he advised the conductor at Paynesville to request the train dispatcher to hold No. 106 at the last station to the rear of a meeting point until the train to be met was clear on the siding but he received no reply from either the conductor or the train dispatcher. He knew of instances wherein trains were held until storm conditions cleared but in this instance he had no doubt of his ability to complete the trip successfully. He said that he had worked as an engineman on this subdivision 19 years and was thoroughly familiar with its physical characteristics. He was in good health prior to the accident. He had last been examined on operating rules on April 12, 1940.

Fireman Haskell, of No. 106, stated that a severe snowstorm had been in progress for about 14 hours and it was difficult to observe landmarks. After the train left Glenwood the engineman had difficulty in determining his location and overran station stops several times. At Paynesville train order No. 72 was delivered. The fireman understood that at Watkins their train was required to stop on the main track clear of the fouling point of the east siding-switch until No. 77 was into clear on

the siding. Approximately 4 miles west of Watkins his train encountered snow drifts and from that point to the point where the accident occurred he was unusually busy tending the fire and was unable to determine their location. When the train was approaching the point where the accident occurred the engineman had the front cab window open and was standing and maintaining a lookout ahead. The fireman said that the siding was covered with snow and he did not know when their train passed over the vest siding-switch. He thought that the brakes were applied just prior to the accident and that the speed of the train was 20 or 25 miles per hour.

Conductor Boore, of No. 100, stated that a terminal air-brake test was made at Enderlin, N. Dak., 130.2 miles west of Watkins, and the brakes functioned properly en route. At Barrett, 32.3 miles west of Glenwood, he wired the chief dispatcher that his train was being delayed because of difficulty in locating stations in the storm. At Glenwood he advised the chief dispatcher that No. 100 should be held at Glenwood because of the severe snowstorm. He received a message from the superintendent which read "Will not tie up at Glenwood." At Paynesville he received train order No. 72, which he delivered to the engineman, who read it to him; both understood that their train was required to stop clear of the fouling point of the east siding-switch at Watkins to meet No. 77. Between Eden Valley and Watkins the conductor was in the rear end of the rear car. Because of the snowstorm he was unable to distinguish any landmark or to determine the location of his train. The speed was 50 or 60 miles per hour when the brakes were applied, but was reduced to 15 or 20 miles per hour at the time of the collision, which occurred at 3:55 p. m. Because of the noise of the storm he could not hear engine whistle signals. When his train was approaching Watkins he did not hear the whistle signal sounded for the meeting point but when the brakes were applied he thought it was in preparation for stopping. He said that the usual running time of 11 minutes was used between Eden Valley and Watkins. He was thoroughly familiar with the physical characteristics of the road.

The statement of Brakeman Culp, of No. 106, corroborated the statement of his conductor.

Agent-Operator Drey, on duty at Watkins, stated that he received a copy of train order No. 72 and understood its provisions. No. 77 arrived at 3:52 p. m. and the engine stopped at a point about 1 rail length east of the east siding-switch. The collision occurred about 3 minutes later. He said that when No. 77 arrived he could see the engine about 2 car lengths only.

General Master Mechanic Buscher stated that he arrived at the scene approximately 9 hours after the accident occurred. He examined the engine of No. 106 and found both brake valves in running position and the throttle closed.

Superintendent Cross stated that after the message was received from Conductor Boore advising that No. 106 should tie up at Glenwood, a check of the weather conditions made at various places on the division disclosed that a severe snowstorm was in progress; however, there was no indication that the snow was drifting sufficiently to stall a train; therefore, Conductor Boore was advised to proceed. He did not receive a similar request from any other train on the division.

According to data furnished by the railroad, during the 30-day period prior to the occurrence of the accident the average daily movement over the line involved was 12 trains.

Discussion

According to the evidence, No. 77 had stopped with the front end of its engine 41.5 feet east of the east siding-switch and had stood at that point about 3 minutes when No. 106, moving at a speed of 15 to 25 miles per hour, collided with No. 77.

Under the provisions of a meet order issued to the crews of the trains involved, No. 77 was required to take siding at Watkins and No. 106 was required not to pass the fouling point of the east siding-switch until No. 77 was in the clear on the siding. All members of both crews understood these provisions. Before No. 77 could enter the siding it was necessary that the front brakeman clear snow from the switch points and the brakeman was thus engaged when he saw No. 106 approaching only a few feet distant.

A blizzard was in progress as the trains approached Watkins and in the vicinity of the point where the accident occurred visibility was restricted to a distance of only 150 or 200 feet. No. 106 struck a large snow drift at a point about 4 miles west of Watkins and from that point to the point where the accident occurred the engineman and the fireman were unable to determine the location of their train. Throughout the last 7 miles traversed the members of the train crew were unable to determine the location of the train. No. 106 passed the west siding-switch at Watkins without any member of the crew being aware of it. Because of being covered with snow the rails of the siding were not visible. The meeting-point whistle signal was not sounded by the engineman; he was attempting to correlate the time consumed and the distance to determine his location and did not realize that he was covering the distance between Eden Valley and Watkins

in 1-1/2 minutes less than normal running time. This resulted in No. 106 being considerably nearer the east switch than the engineman estimated. Because of the noise of the storm, the members of the train crew could not hear whistle signals. When speed was reduced as the train neared Watkins, the conductor thought preparations were being made to stop short of the fouling point.

At Glenwood the conductor advised the train dispatcher by wire that No. 106 should be tied up at that station because of the severity of the snowstorm. After the weather was checked at several points on the line, and it was found that a severe snowstorm was in progress but that the snow was not drifting enough to stall a train, the superintendent instructed the conductor to proceed.

Cause

It is found that this accident was caused by failure to control the speed of the superior train properly when approaching a meeting point.

Dated at Washington, D. C., this twenty-third day of January, 1941.

By the Commission, Commissioner Patterson.

W. P. BARTEL,

Secretary.

(SEAL)