

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT NO. 3344
MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE
RAILROAD COMPANY
IN RE ACCIDENT
AT PAYNESVILLE, MINN., ON
JULY 13, 1950

SUMMARY

Date: July 13, 1950

Railroad: Minneapolis, St. Paul & Sault
Ste. Marie

Location: Paynesville, Minn.

Kind of accident: Side collision

Trains involved: Freight : Passenger

Train numbers: 90 : Second 3

Engine numbers: Diesel-electric : 4001
units 205B and
205A

Consists: 105 cars, caboose : 10 cars

Estimated speeds: Standing : 30 m. p. h.

Operation: Timetable and train orders, and
manual block system for passenger
trains following passenger trains

Track: Single; tangent; 0.59 percent
descending grade westward

Weather: Clear

Time: 3:05 a. m.

Casualties: 18 injured

Cause: Failure to make proper delivery of
train order

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3344

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

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE RAILROAD COMPANY

September 12, 1950

Accident at Paynesville, Minn., on July 13, 1950, caused by
failure to make proper delivery of a train order.

REPORT OF THE COMMISSION¹

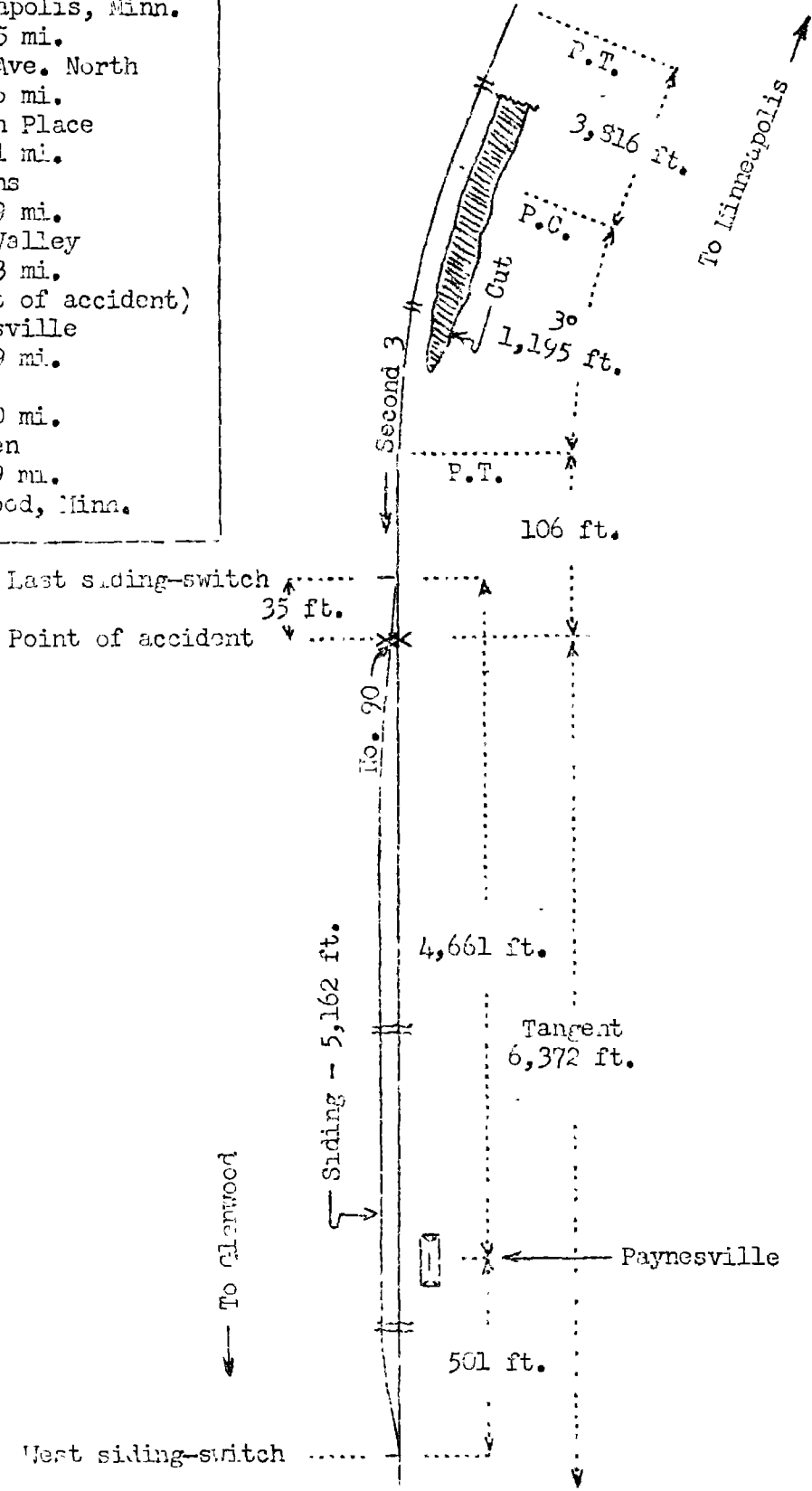
PATTERSON, Commissioner:

On July 13, 1950, there was a side collision between a freight train and a passenger train on the Minneapolis, St. Paul & Sault Ste. Marie Railroad at Paynesville, Minn., which resulted in the injury of 16 passengers, 1 Pullman employee and 1 train-service employee. This accident was investigated in conjunction with a representative of the Minnesota Railroad and Warehouse Commission.

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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.
- | 1.5 mi.
- 14th Ave. North
- | 1.6 mi.
- Camden Place
- | 63.1 mi.
- Watkins
- | 6.9 mi.
- Eden Valley
- | 9.3 mi.
- X (Point of accident)
- | Paynesville
- | 6.9 mi.
- Regal
- | 15.0 mi.
- Proton
- | 15.9 mi.
- Glenwood, Minn.



Report No. 3344
 Minneapolis, St. Paul & Sault Ste. Marie Railroad
 Paynesville, Minn.
 July 13, 1950

Location of Accident and Method of Operation

This accident occurred on that part of the Minnesota Division extending between Glenwood and 14th Ave. North, Minneapolis, Minn., 118.7 miles. In the vicinity of the point of accident this is a single-track line, over which trains are operated by timetable and train orders, and by a manual-block system for passenger trains following passenger trains. At Paynesville, 37.8 miles east of Glenwood, a siding 5,162 feet in length parallels the main track on the north. The west and the east switches of the siding are, respectively, 501 feet west and 4,661 feet east of the station. The accident occurred on the turnout at the east end of the siding at a point 35 feet west of the switch. From the west the main track is tangent 6,372 feet to the point of accident and 106 feet eastward. From the east there are, in succession, a tangent 3,816 feet in length, a 3° curve to the left 1,195 feet, and the tangent on which the accident occurred. Between points 2,475 feet and 775 feet east of the point of accident the track is laid in a cut, the sides of which rise to a maximum height of 10 feet above the level of the tops of the rails. At the point of accident the track is laid on a fill approximately 5 feet in height. The grade is 0.59 percent descending westward at the point of accident.

This carrier's operating rules read in part as follows:

S-71. A train is superior to another train by right, class or direction.

Right is conferred by train order; class and direction by time-table.

Right is superior to class * * *

* * *

S-72. Trains of the first class are superior to those of the second; * * *

* * *

86. Unless otherwise provided, an inferior train must be clear at the time a superior train in the same direction is due to leave the next station in the rear where time is shown.

S-87. An inferior train must keep out of the way of opposing superior trains and failing to clear the main track by the time required by rule must be protected as prescribed by Rule 99.

* * *

S-89. At meeting points, the inferior train must take the siding and clear the time of the superior train not less than five minutes, * * *

* * *

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, * * *

* * *

The front of the train must be protected in the same way when necessary by the forward brakeman, fireman, or other competent employe.

* * *

208. * * *

* * *

A train order must not be sent to a superior train at the meeting or waiting point if it can be avoided. When an order is so sent, the fact will be stated in the order and special precautions must be taken to insure safety.

S-208 (A). A train advanced to a station where the opposing train receives the order at the meeting or waiting point must approach that station expecting to find the train receiving the order on the main track and where conditions require, the train advanced must protect against the opposing train as prescribed by Rule 99.

213. "Complete" must not be given to a train order for delivery to an inferior train until the order has been repeated or the "X" response sent by the operator who receives the order for the superior train.

219. An operator must not repeat or give the "X" response to a train order restricting the superiority of a train which has been cleared or after the engine has passed the train-order signal displaying proceed indication * * * until he has obtained the signatures of the conductor and engineer to the train order.

220. Train orders once in effect continue so until fulfilled, superseded or annulled. * * *

* * *

220 (B). Each train order must be delivered by the operator to the train addressed, unless the order is annulled by the train dispatcher.

* * *

221 (C). * * *

When a restricting train order is issued to a train after clearance has been delivered, in addition to complying with Rule 219, operator must take up and destroy all clearances that have been delivered to that train at that station and a new one must be issued showing the numbers of all orders delivered that train at that station.

* * *

FORMS OF TRAIN ORDERS.

S-A.

Fixing Meeting Points for Opposing Trains.

(1.) No 1 meet No 2 at B.

* * *

Trains receiving these orders will run with respect to each other to the designated points and there meet in the manner prescribed by the rules.

L.

Annuling an Order.

(1.) Order No 10 is annulled.

* * *

The maximum authorized speeds were 55 miles per hour for passenger trains and 45 miles per hour for freight trains.

Description of Accident

No. 90, an east-bound second-class freight train, consisted of Diesel-electric units 205B and 205A, coupled in multiple-unit control, 101 cars and a caboose. At Glenwood the crew received copies of train order No. 142 reading as follows:

Second 3 take siding and
meet No 90 Eng 205 at
Eden Valley

Eden Valley is located 9.5 miles east of Paynesville. This train departed from Glenwood at 11:35 p. m., July 12, 4 hours 35 minutes late. At Brooten, 15.9 miles east of Glenwood, three cars were added to the train. The train departed from Brooten at 12:51 a. m., July 13, 5 hours 24 minutes late, and arrived at Paynesville at 1:40 a. m. The engineer received a Clearance Form A indicating that there were no train orders for his train at Paynesville. After one car was added to the train, the train entered the siding and stopped about 2:10 a. m. with the front end of the first Diesel-electric unit 35 feet west of the east switch of the siding. At 2:12 a. m. the operator at Paynesville received train order No. 24 reading as follows:

Order No 142 of July 12th is
annulled

This train order was addressed to the conductor and the engineer of No. 90, but it was not delivered to the engineer. About 3:05 a. m. the front end of No. 90 was struck by Second 3.

Second 3, a west-bound first-class passenger train, consisted of engine 4001, one coach and nine sleeping cars, in the order named. All cars were of all-steel construction. At Camden Place, 79.3 miles east of Paynesville, the crew received copies of train order No. 142. This train passed Camden Place at 12:49 a. m., 2 hours 4 minutes late. At Watkins, 16.2 miles east of Paynesville, the crew received copies of train order No. 24. The train passed Watkins at 2:41 a. m., 2 hours 30 minutes late, and while moving at a speed of about 30 miles per hour it struck the front end of No. 90.

The Diesel-electric units of No. 90 were moved westward 140 feet. The first unit was derailed and stopped with its front end on the main track and its rear end on the siding. The second unit was raised off its trucks, and it stopped in line with the siding. Both units were badly damaged. The first car was derailed to the north and was badly damaged, and the second, third and fourth cars were demolished. The engine of Second 3 stopped at an angle of about 45 degrees to the track, with the rear end south of the track and the front end against the first Diesel-electric unit of No. 90. The tender remained coupled to the engine and stopped south of and in line with the track, and leaned to the south at an angle of about 15 degrees. The engine and the tender were badly damaged. The first car was derailed, and stopped in line with the track, with the front end against the rear end of the tender. The front end of the car was crushed inward a distance of about 10 feet. The other cars were slightly damaged but were not derailed.

The engineer of Second 3 was injured.

The weather was clear at the time of the accident, which occurred about 3:05 a. m.

Discussion

When No. 90 arrived at Paynesville, the crew held copies of train order No. 142, which established Eden Valley as the meeting point between No. 90 and Second 3. At Brooten, the last open office west of Paynesville, the crew of No. 108, an east-bound first-class train, received copies of a train order which established Regal, 6.9 miles west of Paynesville, as the meeting point between No. 108 and Second 3. No. 108 was due to leave Paynesville at 2:20 a. m. After the crew of No. 108 received copies of this train order it was necessary either that No. 90 proceed to Eden Valley ahead of No. 108 or that the meeting point between No. 90 and Second 3 be changed from Eden Valley to Paynesville. No. 108 could not leave Regal until Second 3 arrived, and Second 3 could not arrive at Regal until after it had met No. 90.

No. 90 stopped on the main track at Paynesville with the front end of the train west of the west siding-switch. One car was added to the train, and the engineer received a Clearance Form A which indicated that there were no train orders for his train at that station. After the car was added to the train, the engineer considered that there was insufficient time to proceed beyond Paynesville and clear the time of No. 108

as prescribed by the rules. He instructed the front brakeman to line the switch for entry to the siding and to remain at the switch to give stop signals when the rear of the train was clear of the main track. He thought that his train might not clear on the siding and instructed the brakeman to notify the engineer of No. 108 to approach the east switch of the siding under control. The train then entered the siding and stopped with the rear end clear of the main track and the front end fouling the main track on the turnout at the east end of the siding.

The operator at Paynesville was not aware that No. 90 was entering the siding until the front end of the train passed the station. He then informed the train dispatcher, who instructed him to stop the train, but at that time the front end was a considerable distance east of the station. After the train stopped on the siding, the train dispatcher issued train order No. 24, which annulled the train order establishing a meeting point between No. 90 and Second 3. Under the rules, train order No. 24 could not be delivered to the crew of Second 3 until it had been signed by both the engineer and the conductor of No. 90. A considerable delay would have been incurred by the operator at Paynesville in obtaining the signature of the engineer. To avoid this delay, the train dispatcher instructed the operator that it would not be necessary for the engineer to sign the train order provided the conductor knew that the train was clear of the main track and would remain so. The operator obtained the signature of the conductor, and the train dispatcher then transmitted the train order to the operator at Watkins for delivery to the crew of Second 3. The conductor of No. 90 said that it was not unusual for a train of 108 cars to clear between the siding switches at Paynesville. He was not aware that the engineer had arranged with the front brakeman to protect the front end of the train against No. 108, and when the train stopped he assumed that the front end had stopped short of the fouling point at the east end of the siding.

Until after the accident occurred, the enginemen of No. 90 were not informed that train order No. 142 had been annulled or that a meeting point had been established at Regal between Second 3 and No. 108. After the train stopped, they remained in the vicinity of the front end of the train and maintained a lookout for the approach of No. 108. It was their intention to move their train westward and clear the main track at the east end of the siding after No. 108 passed the west end of the siding. The headlight of their train was lighted. They first became aware that a train was approaching from the east when they observed the reflection of the headlight of Second 3. The fireman immediately ran eastward and gave stop signals with a lighted fusee. He had reached a point about 350 feet east of the front of his train when Second 3 passed.

As Second 3 was approaching the point where the accident occurred the speed was about 55 miles per hour. The headlight was lighted brightly. The enginemen were maintaining a lookout ahead from their positions on the engine, and the members of the train crew were in various locations throughout the cars of the train. The brakes of this train had been tested and had functioned properly when used en route. After the crew received copies of train order No. 24, they understood that No. 90 was required either to clear the main track for their train or to provide flag protection. The fact that this train order was issued to No. 90 at Paynesville was not stated in the order, and the crew had no knowledge of the location of that train. Because of curvature of the track and vegetation along the sides of the cut, the reflection from the headlight of No. 90 and the stop signals given by the fireman of No. 90 were not visible from the engine of Second 3 until the train reached a point about 1,200 feet east of the point of accident. The fireman observed the stop signals and the headlight about the same time. He called a warning to the engineer, who immediately initiated an emergency application of the brakes. The speed of the train was reduced to about 30 miles per hour when the accident occurred.

Cause

It is found that this accident was caused by failure to make proper delivery of a train order.

Dated at Washington, D. C., this twelfth day of September, 1950.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.