

Inv-2280

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT OF THE DIRECTOR
BUREAU OF SAFETY

ACCIDENT ON THE
PENNSYLVANIA RAILROAD

CLEVELAND, OHIO

JUNE 25, 1938.

INVESTIGATION NO. 2280

SUMMARY

Inv-2280

Railroad: Pennsylvania
Date: June 25, 1938
Location: Cleveland, Ohio
Kind of accident: Rear-end collision
Trains involved: Freight : Light Engine
Train numbers: Extra 4475 : Extra 8236
Engine numbers: 4475 - 6856 : 8236
Consist: Caboose :
Speed: 5 m.p.h. : 5 to 15 m.p.h.
Operation: Timetable, train orders and automatic
block-signal system.
Track: Double; 2°45' curve left, 0.78 percent
descending
Weather: Raining
Time: 9.25 p.m.
Casualties: 4 injured
Cause: Failure properly to protect leading
train, and failure of following train
to obey signal rules.

Inv-2280

July 8, 1938.

To the Commission:

On June 25, 1938, there was a rear-end collision between two engines coupled to a caboose, and a light engine, on the Pennsylvania Railroad, at Cleveland, Ohio, which resulted in the injury of four employees.

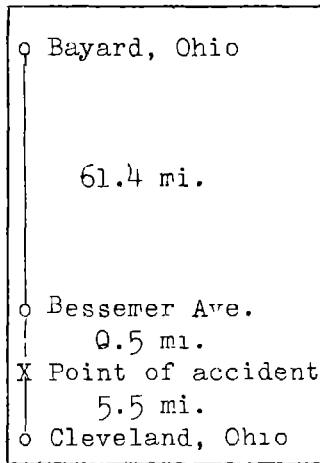
Location and method of operation

The accident occurred on that part of the Cleveland Division which extends between Cleveland and Bayard, Ohio, a distance of 67.4 miles. In the vicinity of the point of accident this is a double-track line over which trains are operated by timetable, train orders and an automatic block-signal system. The main tracks are numbered south to north, No. 1, the eastward track, and No. 2, the westward track. South of No. 1 track, and north of No. 2 track, running tracks known as No. 4 main, and No. 3 main, respectively, parallel the main tracks, and there are other yard tracks to both the north and the south of the four tracks mentioned above. The accident occurred on No. 2 track at a point about 115 feet east of signal 1175 which is of the position-light type. Approaching this point from the east the track is tangent for 2,238 feet, then there is a $1^{\circ}42'$ curve to the right 1140.7 feet long, followed by 496.7 feet of tangent track and then a $2^{\circ}45'$ curve to the left which extends 523.7 feet to the point of accident, and for a distance of 280 feet beyond. Between these points the grade ranges from 0.72 percent to 0.78 percent descending and is 0.78 percent at the point of accident.

At Bessemer Avenue, located about 2630 feet east of signal 1175, there is an arrangement of hand-thrown cross-over switches which are operated by a switchtender upon authority from the train dispatcher.

At the time of the accident the eastward main track, the running track immediately north of track 2, and the running track immediately south of track 1 were clear. Under those conditions the view of the point of collision from the engine-man's side of an engine backing up was restricted to 1,073 feet, while from the fireman's side the point of accident was visible only while the engine was between points 1,348 and 1,148 feet east thereof.

Bessemer Avenue



PC

- ← No. 3 Main
- ← No. 2 Westward Main
- ← No. 1 Eastward Main
- ← No. 4 Main

1°42'
1,141 ft.

Direction of trains

PT

497 ft.

PC

524 ft.

2°45'
803 ft.

Point of accident

Signal 1175

115 ft.

PT

Inv. No. 2280
Pennsylvania Railroad
Cleveland, Ohio
June 25, 1938

Rule 505e of the transportation rules provides, in part, that a train must not enter a block between block signals without permission from the signalman, and after receiving such permission may proceed as prescribed by rule 509. Rule 509 provides in part, that on two or more tracks a train may proceed not to exceed 15 miles per hour expecting to find a train in the block, broken rail, obstruction or switch not properly set.

Rule 99 reads in part:

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 provide full protection, placing two torpedoes, and when necessary, in addition, displaying lighted fusees.

When signal ***, has been given to the flagman and safety to the train will permit, he may return. When the conditions require he will leave the torpedoes and a lighted fusee.

Conductors and enginemen are responsible for the protection of their trains.

Flagman's signals:

Night signals - A red light,
A white light,
Torpedoes and fusees.

It was raining at the time of the accident which occurred about 9:25 p.m.

Description

Extra 4475 consisted of a caboose and engines 4475 and 6856, and was in charge of Conductor Evanoff and Enginemen Illig and O'Leary, respectively. Both engines were headed east, with engine 4475 east and engine 6856 west of the caboose. According to the block record, this train entered upon No. 2 track at Bessemer Avenue at 9:18 p.m. and proceeded westward on that track to a point just east of signal 1175 where it was delayed for several minutes. After restarting, it had moved a distance of about 120 feet and had attained a speed of about 5 miles per hour when it was struck by Extra 8236.

Extra 8236 consisted of light engine 8236, and was in charge of Engineman Aungst. According to the block record, this engine, headed east, entered upon No. 2 track at Bessemer Avenue at 9:23 p.m. It moved westward along No. 2 track, and at a point about 115 feet east of signal 1175 it struck the rear

end of Extra 4475 at about 9:25 p.m. while traveling at a speed estimated at from 5 to 15 miles per hour.

The only part of the equipment to be derailed was the west truck of the caboose. Engine 6856 broke away from the caboose and ran a distance of about 150 feet. Damage to the equipment was slight. The employees injured were the conductor, two brakemen of Extra 4475, and the fireman of Extra 8236.

Summary of evidence

Conductor Evanoff, of Extra 4475, stated that the head brakeman piloted engine 4475 from the enginehouse and backed on to a caboose that had already been switched out. When pusher engine 6856 coupled to the other end of the caboose he asked for and received permission from the operator at Erie Crossing to use the main track. The switches were handled by the switchtender, and they left Bessemer Avenue on track 2 at 9:15 p.m. At that time it was raining slightly. It was then discovered that there were no torpedoes or fuses on the caboose and hence it would be necessary to obtain some from the yard office which was located close to No. 2 track and slightly east of signal 1175. When the stop at the yard office was made, signal 1175 was displaying a clear indication. The flagman went back with red and white lights but without torpedoes or fuses. It required about 6 or 7 minutes to obtain the necessary supplies, and when they were ready to leave, the engineman of the leading engine whistled off but did not call in the flagman. At that time the flagman was about 5 or 6 car lengths back of the rear end. At the time the collision occurred the conductor was in the caboose and did not know how far they had moved, or how fast they were moving. He had no knowledge that engine 8236 was approaching. The right marker light on engine 4475 was burning when they entered the main track, but he had not seen the other marker.

The statement of Engineman O'Leary, of engine 6856, agreed with that of Conductor Evanoff with regard to movements prior to the time of the collision. He also stated that after leaving the yard office they had moved about two engine lengths, and had attained a speed of about 5 miles per hour at the time of the collision.

Engineman Illig, of engine 4475, which was the rear engine during the westward movement, stated that after his engine picked up the caboose, the air was cut into the caboose, and he operated the air brakes during the movement to the yard office. After the accident the marker light on the pilot of his engine was still burning. He had not seen engine 8236 approach. After they stopped he saw the flagman go back with red and white lights.

Fireman Kenyon, of engine 6856, stated that both before stopping at the yard office and when leaving that point, signal 1175 was displaying a clear indication. As he was on the outside of the curve he was unable to see anything to the rear of the train. He did not notice any cars on the eastward main track or on No. 4 main track as they moved from Bessemer Avenue to the yard office.

Fireman Frak, of engine 4475, stated that before leaving the enginehouse he made sure that his engine was supplied with proper flagging equipment. After the accident he examined the markers on the head end of his engine, which was the rear end of the train, and found that they were still burning but the red lantern was broken. He did not notice any light on the leading end of engine 8236.

Flagman Webber, assigned to pusher engine 6856, stated that when his engine coupled to the caboose the air brakes were cut in. When it was discovered that there were no torpedoes or fuses in the caboose and that a stop at the yard office for supplies would be necessary, he was assigned to do the flagging. When they stopped at the yard office, he went back 2 or 3 car lengths with red and white lanterns but without fuses or torpedoes; it had not occurred to him to obtain this equipment from one of the locomotives. When he saw the brakeman returning to the caboose with the supplies he walked in and gave the engineman on the lead engine a proceed signal. While he was out flagging he did not see or hear anything approaching from the east. He noticed that the markers on engine 4475 were lighted, and that there were no cars standing on either the eastward main track or on No. 4 main track. He thought that if a fuse had been placed before returning to the caboose the accident might have been averted.

Brakeman Meifert, of Extra 4475, stated that he assisted in picking up the caboose, and before the helper engine coupled to the caboose, he turned one of the marker lights on the front end of engine 4475.

Engineman Aungst, of engine 8236, stated that shortly after 9:16 p.m. they left Bessemer Avenue with light engine 8236 backing up. Before entering the main track he received permission from the operator at Erie Crossing to do so. Between Bessemer Avenue and the point of accident, he was operating under a caution-slow speed indication, and in accordance with this indication he was running 15 miles per hour. When his engine was about 20 car lengths east of signal 1175 he saw that it was showing a clear indication and he called this indication to the fireman. When they were about 6 or 7 car lengths east of the extra he saw the marker and applied the brakes in emergency; just at that time

signal 1175 went to the stop-and-proceed position. The engine slowed down to some extent but the wheels began to slide on account of the wet rail, and they were still moving 5 to 7 miles per hour when the collision occurred. He did not see any flagman, nor did he encounter any torpedoes or fusees. When they left Bessemer Avenue the light on the rear of the tender was burning. There were no cars on the eastward main track or No. 4 main track in the vicinity of the point of accident.

Fireman Wear, of engine 8236, estimated the speed of his engine at 17 or 18 miles per hour between Bessemer Avenue and the point of collision. He and Flagman Klingensmith were on the seatbox on the left side of the engine, and on account of the curve to the right in the vicinity of the point of accident they were unable to see the rear end of Extra 4475. Flagman Klingensmith estimated the speed at 15 miles per hour between Bessemer Avenue and the point of accident. The engine seemed to skid when the engineman applied the brakes and the speed was reduced only slightly at the time of collision.

Switchtender Boring, who has charge of the switches at Bessemer Avenue, stated that Extra 4475 left there at 9:18 p.m., and engine 8236 left at 9:23 p.m. When engine 8236 came out on the main track the spotlight on the tender was not burning; he called the engineman's attention to that fact, and was certain that the light was lit when the engine left Bessemer Avenue.

Discussion

The evidence is to the effect that after Extra 4475 entered upon No. 2 track at Bessemer Avenue the flagman discovered that the caboose was not supplied with fusees or torpedoes. Because of this circumstance it became necessary to stop the train at the yard office, which was close to the main track and just east of signal 1175; when this stop was made the leading engine had not entered the block governed by signal 1175. The flagman who went back to protect the train stationed himself about three car lengths from the rear end, and when he saw the members of the crew returning with the supplies he returned to the train. As there were neither fusees nor torpedoes in the caboose, and as the flagman had not thought to secure such equipment from one of the locomotives, he was unable to leave either a torpedo or a fusee on the track, as required by rule 99, when he returned to his train.

During the movement of Extra 8236 westward from Bessemer Avenue to signal 1175, it was governed by rule 509 which permitted a maximum speed of 15 miles per hour; the highest estimate of the speed attained by this train between Bessemer Avenue and the point of collision was 17 miles per hour. However, rule 509 also requires that movements be made with the expectation of

finding a train in the block, broken rail, obstruction, or switch not properly set, and the fact that the collision occurred indicates that the rule was not fully obeyed.

No doubt the fact that signal 1175 was displaying a proceed indication misled the engineman of Extra 8236, and the further fact that due to a wet rail the engine drivers locked after the emergency application of the brakes probably had some bearing on the occurrence of the accident.

Had the requirements of rule 99 been carried out by the flagman of Extra 4475 it is probable the accident would have been averted.

Conclusion

This accident was caused by failure properly to protect the rear end of the leading train, and by failure of the following train to be operated in accordance with signal rules.

Respectfully submitted,

W. J. PATTERSON,

Director.