Inv-2259

INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT OF THE DIRECTOR

BUREAU OF SAFETY

ACCIDENT ON THE

LOUISVILLE & NASHVILLE RAILROAD

PATIO, KY.

MARCH 10, 1938.

INVESTIGATION NO. 2259

SUMMARY

Inv-2259

Railroad:	Louisville & Nashville	
Date:	March 10, 1938	
Location:	Patio, Ky.	
Kind of accident:	Rear-end collision	
Trains involved:	Freight	:Passenger
Train numbers:	74	:2
Engine numbers:	1416-1902	:83
Speed:	5-8 m.p.h.	:25-35 m.p.h.
Consist:	96 cars and caboose	:5 cars
Track:	5^{o} curve; 0.33 percent ascending grade	
Weather:	Clear	
Time:	9:25 p.m.	
Casualties:	2 killed and 10 injured	
Cause:	Failure of second-class train to provide rear-end protection after having failed to clear the schedule of a first-class train.	

Inv-2259

April 13, 1938

To the Commission:

On March 10, 1938, there was a rear-end collision between a freight train and a passenger train on the Louisville & Nashville Railroad at Patio, Ky., which resulted in the death of two employees, and the injury of six passengers, two railway mail clerks, one express messenger, and one employee.

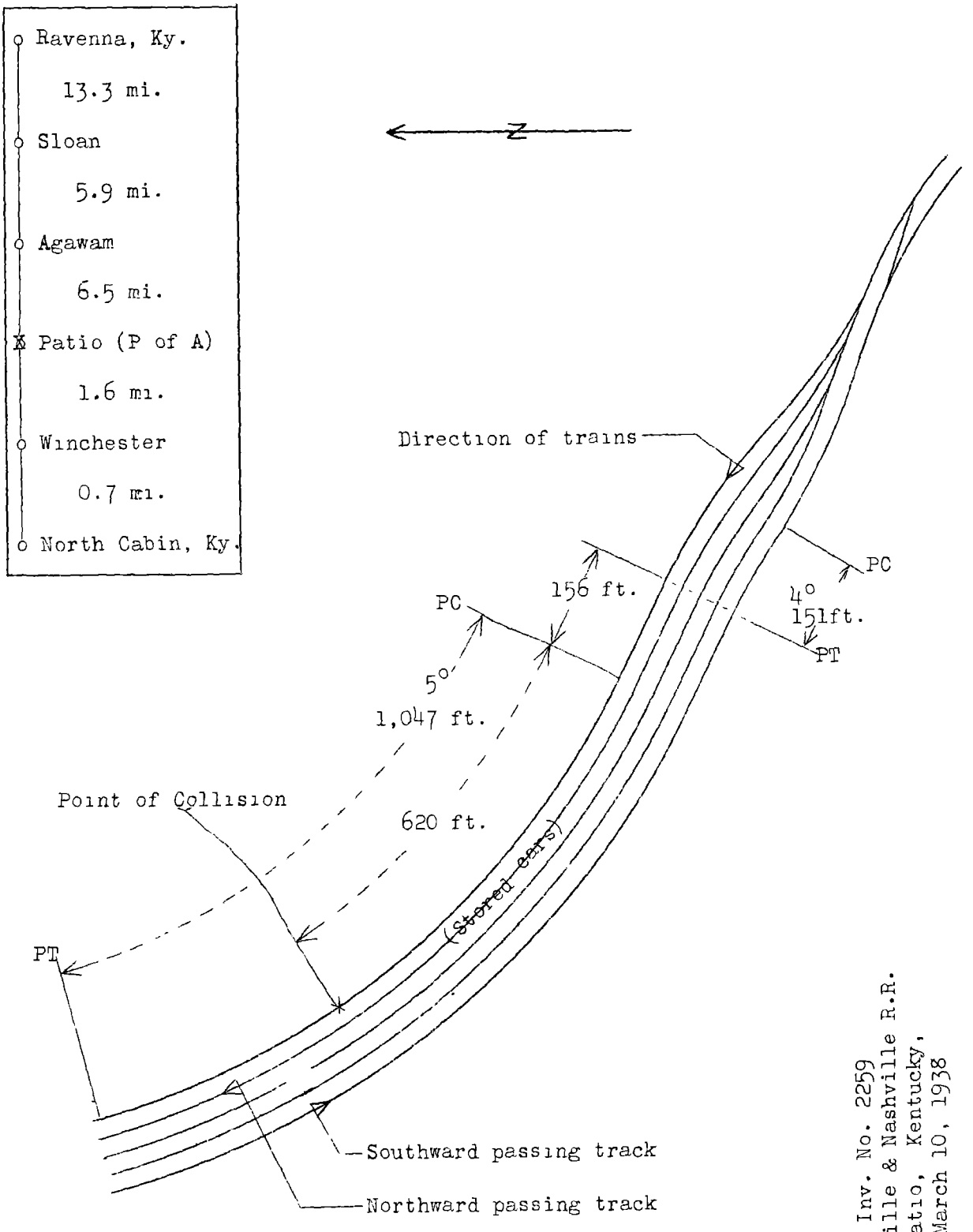
Location and method of operation

This accident occurred on that part of the Eastern Kentucky Division which extends between Ravenna and North Cabin, Ky., a distance of 28 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, no block system being in use. The accident occurred on the main track, within yard limits, at a point approximately 3,000 feet south of the interlocking tower at Patio. Approaching this point from the south there is a 4° curve to the left 151 feet in length, followed by 156 feet of tangent track, and then a compound curve with a maximum curvature of 5° to the right 1,047 feet in length; the accident occurred 620 feet north of the south end of this curve where the curvature is 5°. Approaching the point of accident the gradient averages about 0.35 percent ascending for northward trains for a distance of about 2 miles.

In this locality four tracks parallel the main track on the west; the northward passing track is next to the main track, its south switch being approximately 4,250 feet south of Patio tower, while the southward passing track is farthest from the main track and its south switch is approximately 4,475 feet south of Patio tower. At the time of the accident the northward passing track was occupied by stock cars, and north-bound trains were not permitted to use the southward passing track except by train order or under protection of flagman.

The cars occupying the northward siding materially restricted the view of the enginemen on north-bound trains, and the range of vision was further obstructed by the walls of a series of cuts through which the tracks are laid.

At Patio trains on the Eastern Kentucky Division cross the Cincinnati Division and in so doing move over 1.1 miles of that Division between Patio tower and North Cabin. At this point,



Inv. No. 2259
Louisville & Nashville R.R.
Patio, Kentucky,
March 10, 1938

certain trains of the Eastern Kentucky Division, also are diverted to the Cincinnati Division; the freight train involved was one of these interdivisional runs, while the passenger train was an Eastern Kentucky Division train.

Rules 86, 93, 99, 99(d) and 99(j) of the rules for the government of the transportation department read in whole or in part as follows:

> 86. Unless otherwise provided, an inferior train must clear the time of a superior train, in the same direction not less than five minutes; but must be clear at the time a first-class train, in the same direction, is due to leave the next station in the rear where time is shown.
>
> 93. Within yard limits the main track may be used, clearing the time of first-class trains.***.
>
> 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. At a point one-fourth of a mile from the rear of his train, he will place one torpedo on the rail; continuing back to a distance of not less than one-half mile from the rear of his train, he will place two torpedoes on the rail one rail length apart. If on descending grade, or the view is obscured by curve, weather conditions, or in any other manner, he must go as much farther as may be necessary to reach a point where he is absolutely sure he can be seen by a train at a sufficient distance in which to stop.
>
> When the two torpedoes have been placed at the proper distance, he may then return to the single torpedo, where he must remain until any approaching train has been stopped, or he is recalled by the whistle of his engine; but if an approaching train is within sight or hearing he must remain until it arrives. When he comes in he will remove the one torpedo nearest his train, leaving a lighted red fusee upright between the rails at the point where the one torpedo is removed.
>
> 99(d) 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 night, or by day, when the view

is obscured, lighted fusees must be thrown off at proper intervals.

99(j) Enginemen are required, before coming to a stop at unusual points, and at usual stopping points when it is known by the engineman that his train will be delayed, to sound the whistle signal prescribed by Rule 14(c). Failure of the engineman to sound this signal will in no manner relieve conductor and flagman from protecting the train. (Rule 14(c) is one long and three short blasts on the engine whistle, requiring that flagman protect rear of train.)

It was clear and dark at the time of the accident, which occurred about 9:25 p.m.

Description

No. 74, a north-bound second-class train, consisted of 96 loaded coal cars and caboose, (6,859 tons), hauled by engines 1416 and 1902, of the 2-8-2 type, and was in charge of Conductor Hughes and Enginemen Rebers and Tierney. This train left Ravenna at 6:55 p.m., according to the train sheet, 4 hours 10 minutes late, stopped at Sloan, 13.3 miles distant, to meet No. 47, and also at Patio, 12.4 miles farther north, where it arrived at the water crane at 9:16 p.m. After water had been taken by the second engine the train was started forward and had traveled a distance of about 20 car lengths and attained a speed of 4 to 8 miles per hour when the caboose was struck by No. 2.

No. 2, a north-bound first-class train, consisted of one baggage car, one baggage mail car, and three coaches, in the order named, all of steel construction, hauled by engine 83, and was in charge of Conductor Barnett and Engineer [illegible]. This train left Ravenna at 8:[illegible] p.m., according to the train sheet, 3 minutes late, and while approaching Patio tower at a speed of about 25 to 35 miles per hour, it collided with the rear of No. 74.

The caboose and two rear cars and the south truck of the third rear car of No. 74 were derailed down the side of a fill; the caboose was telescoped its entire length and the wreckage caught fire. Engine 83 and its tender, and the north truck of the first car of No. 2 were derailed; the engine and tender stopped on their right sides, east of the track, badly damaged. The employees killed were the conductor and the flagman of No. 74; the employee injured was the engineman of No. 2.

Summary of evidence

Engineman Rekers, of lead engine 1416 of No. 74, stated that at Ravenna he received copy of train order No. 58, Form 31, containing instructions to meet No. 47 at Sloan. After the air brakes were tested by the car inspectors No. 74 departed from Ravenna and arrived at Sloan at 7:35 p.m., where both engines were uncoupled and water was taken on both engines; the engines were then recoupled to the train and waited until 8:23 p.m. for No. 47, Engineman Rekers then whistled in the flag and the train departed; it passed Agawam about 8:44 p.m., and at 9:16 p.m. it arrived at Patio where the engineman of the second engine signalled by whistle that it would be necessary to replenish the water supply on his engine. As a result a stop was made at the water crane where about 3 minutes were consumed in taking water; because of complaints concerning whistling at this point no flagman was whistled out. In order to start the train it was found necessary to take slack but the train had moved about 20 car lengths and had attained a speed of about 4 or 5 miles per hour when the air brakes were applied in emergency as a result of the accident. Engineman Rekers stated that he understood that in order to comply with the requirements of rule 86 it was necessary for his train to clear No. 2 at the time that train was due to leave the last station in the rear where time was shown, in this case 9:12 p.m., and in the event of failure to do so to protect in accordance with rule 99. As he approached Agawam he had No. 2 in mind but he thought there was time properly to clear that train at Patio; however, the train dragged heavily after leaving Agawam and several minutes more than usual were consumed in covering the distance between Agawam and Patio. He had figured on getting through Patio without stopping for water. He knew that the northward passing track at Patio was blocked with stored cars, and also that the use of the southward passing track was not permitted except under protection of a flagman. At Ravenna, Engineman Rekers compared orders and talked with Conductor Hughes but not to Flagman Johnson; the conductor appeared normal in every respect.

Engineman Tierney of the second engine stated that he figured on passing Patio and clearing No. 2 at North Cabin as it would be necessary to go only 1.1 miles farther and clearance could be effected with much less delay than at Patio. Leaving Agawam they had 28 minutes to reach Patio and this seemed sufficient, but due to the train dragging, several minutes more than usual were consumed between Agawam and Patio. Under circumstances such as these it is customary to clear at North Cabin. It was his intention to run the water crane at Patio but they did not get a clear signal through the interlocking

there and he saw a train ahead on the Cincinnati Division. Under these circumstances he feared that his train might be delayed to such an extent that there would be insufficient water to go to the next water tank, hence he decided to take water at Patio. It is not customary to whistle out a flag at Patio and on this occasion no flag was whistled out by either engineman; it was expected that the conductor and flagman would afford proper rear end protection.

Fireman Kupper, of the lead engine, said that the usual running time from Agawam to Patio was 22 to 25 minutes and in this case he thought they had time to clear No. 2 at Patio. He looked at his watch at the south switch at Patio, located 171 feet south of the south yard limit board or 6,171 feet south of the point of accident, and it was then 9:10 p.m. After water was taken by the second engine at Patio, slack was taken and the train started moving at 9:20 p.m.

Operator Stickrod, who was on duty at Patio tower, stated that No. 74 entered the annunciator circuit, which extends to about 500 feet south of the south switch of the southward siding, at 9:09 or 9:10 p.m., and stopped for water at 9:18 p.m. Arrival at Patio was shown by him as 9:18 p.m.

Engineman Kinnaird, of No. 2, stated that two torpedoes were exploded at Sloan, but at Patio neither torpedoes, fusees, lights nor other flagging signals were encountered. He sounded the station signal on the engine whistle about 3/4 miles south of the point of accident. The speed of his train while rounding the curve through the cut was about 30 to 35 miles per hour and the first he saw of the caboose ahead was when it was about 150 to 200 feet away. He immediately applied the air brakes in emergency and when the collision occurred the speed was about 25 miles per hour. The air brakes worked properly, and the headlight was burning brightly. The door of the caboose of No. 74 was closed and there was no one on the rear platform; the markers were burning.

The statement of Fireman Spears corroborated that of Engineman Kinnaird in all essential details. Conductor Barnett and Flagman Pruett were back in the train when the accident occurred; the conductor placed the time of the accident as 9:25 p.m., and estimated the speed to have been about 30 to 35 miles per hour at that time.

Discussion

At Sloan both engines of No. 74 took water but after doing so were delayed about 45 minutes awaiting the arrival of No. 47. At Agawam about 28 minutes were available in which to clear No. 2 at Patio, and this seemed sufficient time, but after leaving Agawam the train became difficult to handle and several minutes

more were consumed in going to Patio than had been expected so that arrival at that point was not accomplished until 4 minutes after the time scheduled for No. 2 to leave Agawam. It then appeared that No. 2 might be cleared without delay by moving to North Cabin, or at least that less delay would result than by attempting to clear at Patio under the conditions existing there, hence the train proceeded on the main track past the siding switches at Patio. It had been the intention of both enginemen to run the water crane at Patio, but when the engineman of the second engine noticed that a slow speed indication was being displayed by the interlocking home signal and that there was a train ahead on the track they were about to use, he decided that it would be advisable for him to replenish the supply of water on his engine, and as a result a stop was made at the water crane. Three or four minutes were consumed in taking water and there was a short delay in getting the train started due to the necessity of taking slack, but the train was moving slowly when the accident occurred.

Approaching the siding switches at Patio at about 9:22 p.m., No. 2 did not encounter any flagging signals of any kind, and after the collision the bodies of the conductor and the flagman were found close to the wreckage of the caboose.

The enginemen of No. 74 did not whistle out a flagman at Patio as required by rule 99 (j); they stated that it is not customary to whistle at that point although no instructions to that effect have been given by officials of the company.

It is evident that the flag protection required by rule was not being given by the trainmen at the rear end of No. 74, but since both the conductor and the flagman were killed in the accident, the reason for their failure to do so cannot be learned.

During the 30-day period prior to the date of the accident an average of 17.03 trains per day were operated over this line.

Conclusion

This accident was caused by the failure of a second-class train to provide flag protection when occupying the main track on the time of a first-class train.

Recommendation

It is recommended that the responsible officials of this railroad give consideration to the advisability of installing a block-signal system on this line.

Respectfully submitted,

W. J. PATTERSON,

Director.