INTERSTATE COMMERCE COMMISSION

WASHINGTON

INVESTIGATION NO. 3243

LEHIGH VALLEY RAILROAD COMPANY

REPORT IN RE ACCIDENT

AT ROCHESTER JCT., N. Y., ON

APRIL 6, 1949

SUMMARY

Date:	April 6, 1949	
Railroad:	Lehigh Valley	
Location:	Rochester Jct., N. Y.	
Kind of accident:	Collision	
Trains involved:	Freight	: Freight
Train numbers:	Extra 128 West	: Extra 510 East
Engine numbers:	Diesel-electric unit 128	: Diesel-electric units 510, 525, 515 and 514
Equipment involved:	Diesel-electric unit, and 2 cars	: Diesel-electric units, and 2 cars
Speeds:	2 m. p. h.	: 7 m. p. h.
Operation:	Rules governing movement on auxiliary track	
Track:	Auxiliary track; tangent; level	
Weather:	Misting	
Time:	5:25 a. m.	
Casualties:	1 killed	
Cause:	Failure properly to control switching movement	

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 3243

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

LEHIGH VALLEY RAILROAD COMPANY

June 10, 1949

Accident at Rochester Jct., N. Y., on April 6, 1949, caused by failure properly to control a switching movement.

REPORT OF THE COMMISSION[1]

PATTERSON, Commissioner:

On April 6, 1949, there was a collision between an engine pulling cars and an engine pushing cars on an auxiliary track of the Lehigh Valley Railroad at Rochester Jct., N. Y., which resulted in the death of one employee.

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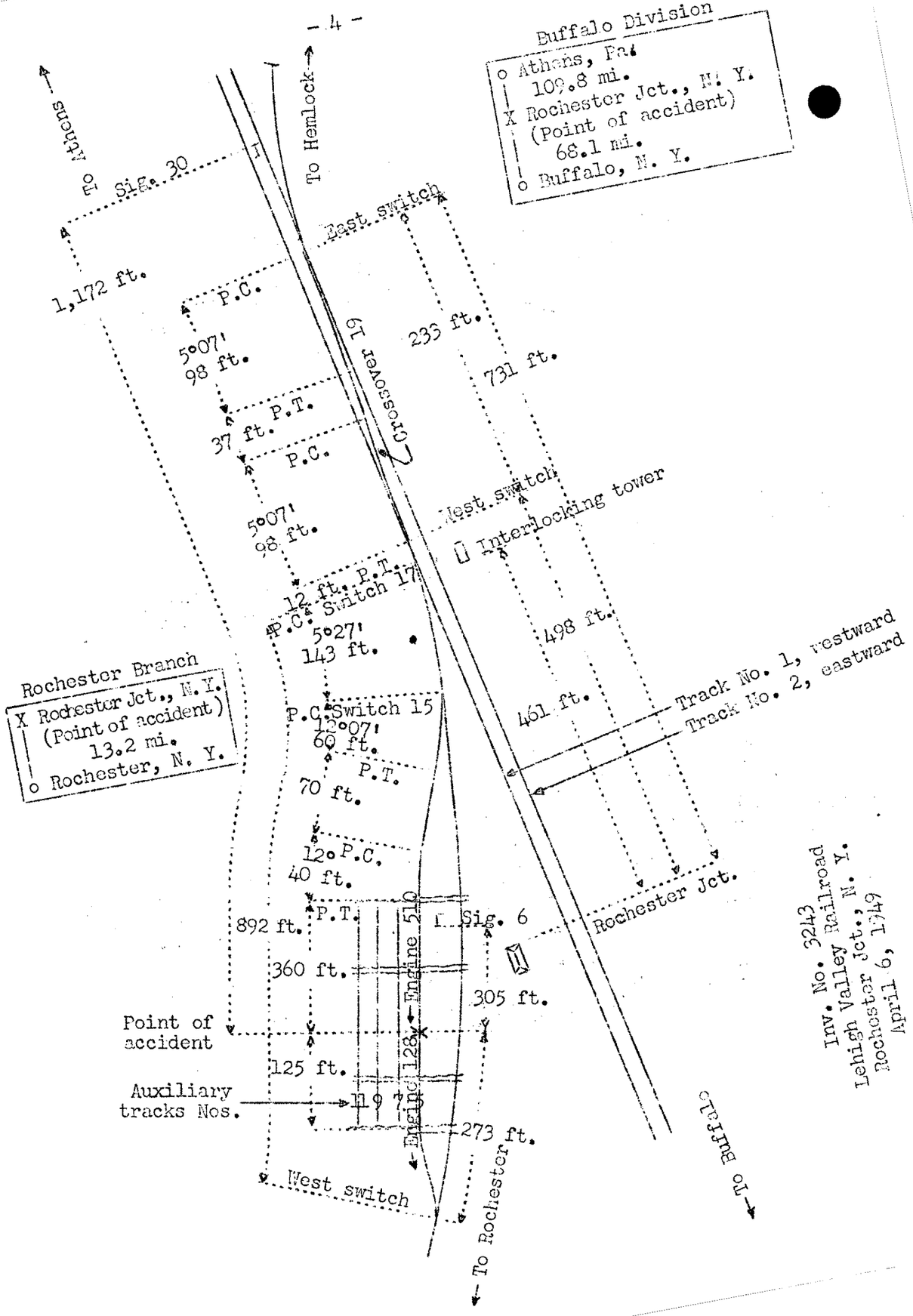
[1] Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.



Inv. No. 3243
Lehigh Valley Railroad
Rochester Jct., N. Y.
April 6, 1949

Location of Accident and Method of Operation

This accident occurred on that part of the Rochester Branch extending between Rochester Jct. and Rochester, N. Y., 13.2 miles, a single-track line, over which trains are operated by timetable, train orders and an automatic block-signal system. Within interlocking limits at Rochester Jct., the Rochester Branch intersects that part of the Buffalo Division extending between Buffalo, N. Y., and Athens, Pa., 177.9 miles, a double-track line, over which trains moving with the current of traffic are operated by signal indications. From north to south the main tracks are designated as No. 1, westward, and No. 2, eastward. A trailing-point crossover, designated as crossover 19, is 233 feet long, and connects tracks Nos. 1 and 2. The east and the west switches are, respectively, 731 feet and 498 feet east of the station. The Rochester Branch main track connects with track No. 1 at switch 17, located 12 feet west of the west switch of crossover 19. Immediately north of the Rochester Branch main track and parallel to it, 4 auxiliary tracks, numbered from south to north as 5, 7, 9, and 11, comprise a classification yard. The east switch of track 5, designated as switch 15, and the west switches of this track are, respectively, 143 and 892 feet west of switch 17. This track is 433 feet in length between the clearance points. The switches of crossover 19 and switches 17 and 15 are mechanically operated from the interlocking machine in the tower, located 461 feet east of the station. The accident occurred on auxiliary track 5 at a point 273 feet east of its west switch. From the east starting at the east switch of crossover 19, thence through crossover 19, switch 17, switch 15, and on track 5 to the point of accident, there are, in succession, a 5°07' curve to the right 98 feet, a tangent 37 feet, a 5°07' curve to the left 98 feet, a tangent 12 feet, a 5°27' curve to the right 143 feet, a 12°07' curve to the right 60 feet, a tangent 70 feet, a 12° curve to the left 40 feet, then a tangent 306 feet to the point of accident and 125 feet beyond. The grade is level.

Interlocking signal 30, governing west-bound movements from main track No. 2 through crossover 19 and switches 17 and 15, and interlocking signal 6, governing east-bound movements over the same route from auxiliary track 5, are located, respectively, 1,172 and 305 feet east of the point of accident. They are dwarf semaphore-type signals, and each displays two aspects. Normally, these signals indicate Stop. The involved night aspects, and corresponding indications and names of these signals are as follows:

Signal	Aspect	Indication	Name
30	Yellow	Proceed at restricted speed.	Restricting.
6	Purple	Stop.	Stop.

These signals are controlled from the interlocking machine, and are so arranged that, when the switches of crossover 19 and switches 17 and 15 are reversed, the operator can cause signal 30 to indicate Restricting for movement from track No. 2 to auxiliary track 5, provided that signal 6 indicates Stop. For movements from auxiliary track 5 to track No. 2, the operator can cause signal 6 to indicate Restricting, if switches 15, 17, and both switches of crossover 19 are reversed and signal 30 indicates Stop.

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

DEFINITIONS

Speeds

* * *

Restricted Speed--Not exceeding 15 miles per hour, prepared to stop short of train, obstruction or switch not properly lined and to look out for broken rail.

Yard Speed--A speed that will permit stopping within one-half the range of vision.

18. Yard engines will display the headlight to the front and rear by night. When not provided with a headlight at the rear, a white light must be displayed.

103. When cars are pushed by an engine and the conditions require, a trainman must take a conspicuous position on the leading car; under such circumstances if signals from the trainmen cannot be received by the engine crew, the movement must be stopped immediately unless a brake valve and an alarm whistle on the leading car are being used.

628. Hand signals must not be used when the proper indication can be displayed by the interlocking signals. * * *

Timetable special instructions prescribe the maximum authorized speed for movement through the turnouts involved as 15 miles per hour.

Description of Accident

Extra 128 West, a west-bound freight train, consisted of engine 128, a road-switching type Diesel-electric unit, six cars and a caboose. After switching service in the vicinity of Rochester Jct. was performed, the caboose and four cars were placed on the Rochester Branch main track, with the caboose standing about 160 feet west of switch 15. Then the engine, with

two cars coupled at the east end, backed through the west switch into auxiliary track 5 and stopped about 4:30 a. m., with the engine 188 feet east of the west switch, and with the east end of the most easterly car 476 feet west of the east switch. About 5:25 a. m., while this movement was proceeding westward at a speed of 2 miles per hour, the most easterly car was struck by a switching movement which had entered auxiliary track 5 through switch 15.

Extra 510 East, an east-bound freight train, consisted of Diesel-electric units 510, 525, 515 and 514, coupled in that order and in multiple-unit control, 94 cars and a caboose. This train, moving on track No. 2, stopped at 5:19 a. m., with the front of the engine about 1,400 feet west of signal 30 and about opposite the west switch of auxiliary track 5. The engine and two cars were detached, proceeded eastward and stopped on track No. 2 east of signal 30. After the operator had lined the route, this movement then proceeded westward through crossover 19, switches 17 and 15, and entered auxiliary track 5 through switch 15. While proceeding on auxiliary track 5 at an estimated speed of 7 miles per hour, this movement collided with the most easterly car of the cut of cars coupled to engine 128.

Engine 128 was slightly damaged.

The fireman of engine 128 was killed.

It was misting at the time of the accident, which occurred about 5:25 a. m.

Diesel-electric engine 128 is of the road-switching type, and is provided with a control cab at one end, platforms at each end, and box-steps at each end of each platform. End-platform railings are provided, and side handholds applied vertically are arranged on each side of each step assembly. At the time of the accident the control cab of engine 128 was next to the cut of cars. The Diesel-electric units of Extra 510 East are provided with 24-RL brake equipment. At the time of the accident these units were coupled for multiple-unit control, and the brake valves and related rotair valves were arranged for control of these units from the front control compartment. The front rotair valve was in freight position, and the rear rotair valve was in freight-lap position. Under these conditions the controlled-emergency feature is in operation during emergency applications.

Discussion

The rules of this carrier governing movements within the interlocking limits at Rochester Jct. provide that movements authorized by a Restricting signal indication may be made at a speed not exceeding 15 miles per hour. The least restrictive of either interlocking signal 30 or interlocking signal 6 is Restricting. Movements governed by Restricting indications are

required to be so operated that they can be stopped short of other trains or obstructions. Outside of interlocking limits, movements on yard tracks are required to be so operated that they can be stopped within one-half of the range of vision. When cars are being pushed by an engine, a trainman must take a conspicuous position on the leading car. When signals from the trainman cannot be received by the engine crew, the movement must be stopped. Hand signals must not be used when the proper aspect can be displayed by the interlocking signals.

Engine 128, with two cars coupled to its east end, stopped into clear at the west end of auxiliary track 5 about 4:30 a. m. The engineer of engine 128 said that about 5:25 a. m. one of the brakemen assigned to his crew gave a lamp signal for his engine to move westward. The engineer immediately opened the bell-ringer valve, then opened the throttle, and a speed of about 2 miles per hour had been attained when the east car of the cut of cars coupled to the east end of engine 128 was struck by the west car of the cut of cars coupled to engine 510. Before the collision occurred, the engineer of engine 128 was not aware that engine 510 was approaching on auxiliary track 5. At the time of the accident, the conductor of engine 128 was in the caboose, which was on the Rochester Branch main track, the flagman was between track 5 and the Rochester Branch main track, and the front brakeman was in the vicinity of the point where the accident occurred. The front brakeman said that when he saw cars being pushed rapidly westward on track 5 he gave a lamp signal for engine 128 to move westward. At the same time, the flagman of engine 128 was giving stop signals to the crew of engine 510 with a lighted lantern. At the time the collision occurred, the fireman of engine 128 was on the east end-platform of the engine. The force of the impact threw the fireman over the end-platform railing, and he was fatally injured.

The investigation disclosed that after engine 510, with two cars coupled to the west end of the fourth unit, stopped east of interlocking signal 30 the operator lined the route for movement from track No. 2, through crossover 19, switches 17 and 15, thence to auxiliary track 5. Then he reversed the lever controlling signal 30, which action caused that signal to indicate Restricting. When the movement started westward over this route, the front brakeman, who previously had alighted near the interlocking tower, proceeded westward on foot, between tracks Nos. 1 and 2, to station himself on the ground to give signals to the engineer, who was on the south side of the front compartment of the first unit. The front brakeman said that when he uncoupled the second car from the third car of his train he observed engine 128 and its cut of cars on track 5. When the most westerly car being pushed by engine 510 entered auxiliary track 5 the front brakeman gave a reduce-speed signal, and when the front end of the first Diesel-electric unit was a short distance east of signal 6 the front brakeman gave a signal to stop. Neither of these signals was obeyed. He then gave a

second signal to stop when the west end of the leading car was about 80 feet east of the cut of cars being pulled by engine 128. The engineer of Extra 510 East said that, as his engine was backing through crossover 19, the speed was about 10 miles per hour, and he was maintaining a lookout toward the west. When the front of the first unit was about 700 feet east of the point where the accident occurred, the front brakeman's lantern disappeared from the engineer's view and the engineer applied the brakes on the Diesel-electric units by use of the independent brake valve. Immediately afterward, the lantern appeared in his view, and the brakes were released. At this time the front brakeman gave a signal to continue in backward movement. The engineer said that when he observed the stop signals being given by the brakeman he placed the automatic brake valve in emergency position. He said that if the front brakeman had given a reduce-speed signal before he gave stop signals the movement could have been stopped within a distance of several feet. The front brakeman said that he had given a reduce-speed signal, but no action was taken by the engineer until he gave stop signals. The enginemen, and an assistant road foreman of engines who was in the control compartment, were not aware of an impending collision. At the time of the accident, the conductor of Extra 510 East was near the rear of the train, the swing brakeman was proceeding toward the front of the train, and the flagman was providing protection to the rear. Because of the numerous curves through the switches involved in the movement, the fireman and the assistant road foreman of engines were unable to see any of the lamp signals involved.

The investigation disclosed that it is a practice for the front brakeman to station himself in a favorable location on the ground, instead of on the leading car, and to give signals to the engineer from such location. Also, it is a practice to move into track 5 a distance sufficient only to place cars west of signal 6 and, after detaching set-off cars, to proceed eastward on authority of a hand signal from the operator, instead of moving into auxiliary track 5 to a point where the aspect of signal 6 can be seen. The length of the four Diesel-electric units plus the two freight cars is 299 feet 10 inches. When the collision occurred, the east end of the most easterly unit was 5 feet 2 inches west of signal 6.

All the surviving employees understood that when any portion of any movement enters a track where yard-speed is in effect, such movement must be so operated that it can be stopped within one-half the range of vision. In the instant case, the engineer of engine 510 was dependent upon signals from the front brakeman for proper control of the movement.

Cause

It is found that this accident was caused by failure properly to control a switching movement.

Dated at Washington, D. C., this tenth day of June, 1949.

By the Commission, Commissioner Patterson.

W. P. BARTEL,

(SEAL) Secretary.