INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT NO. 5454

THE PENNSYLVANIA RAILROAD COMPANY

IN RE ACCIDENT

NEAR LINDEN, PA., ON

MARCH 20, 1952

SUMMARY

Date:	March 20, 1952	
Railroad:	Pennsylvania	
Location:	Linden, Pa.	
Kind of accident:	Rear-end collision	
Trains involved:	Freight	: Freight
Train numbers:	Extra 6907 East	: Extra 4410 East
Engine numbers:	6907	: 4410
Consists:	103 cars, caboose	: 36 cars, caboose
Estimated speeds:	Standing	: 20 m. p. h.
Operation:	Signal indications	
Tracks:	Double; tangent, 0.04 percent descending grade eastward	
Weather:	Foggy	
Time:	4:35 a. m.	
Casualties:	1 killed; 3 injured	
Cause:	Failure to operate following train in accordance with signal indications	

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3454

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

THE PENNSYLVANIA RAILROAD COMPANY

April 21, 1952

Accident near Linden, Pa., on March 20, 1952, caused by failure to operate the following train in accordance with signal indications.

REPORT OF THE COMMISSION[1]

PATTERSON, Commissioner:

On March 20, 1952, there was a rear-end collision between two freight trains on the Pennsylvania Railroad near Linden, Pa., which resulted in the death of one employee, and the injury of three employees. This accident was investigated in conjunction with a representative of the Pennsylvania Public Utility Commission.

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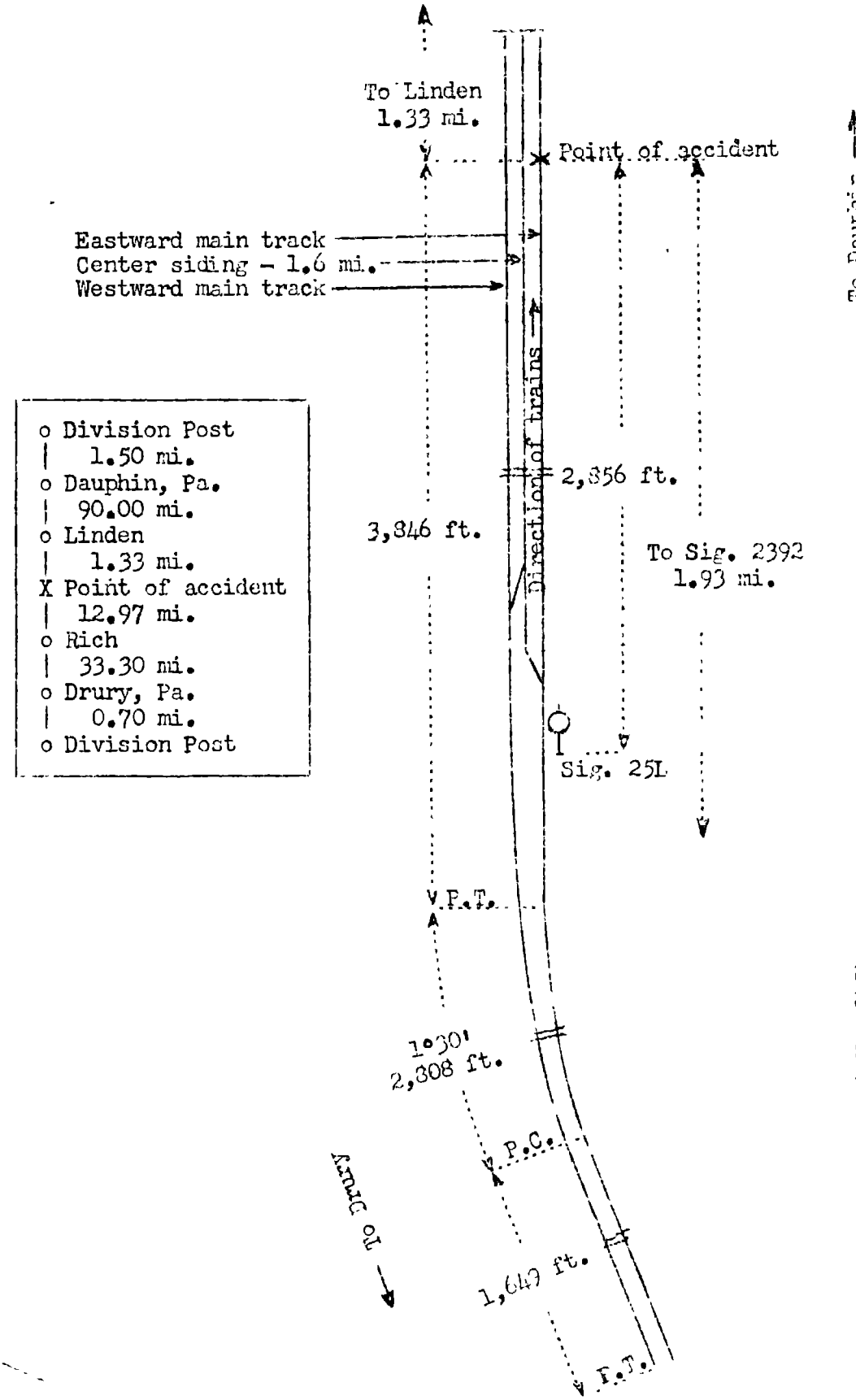
[1] Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.



Report No. 3454
Pennsylvania Railroad
Linden, Pa.
March 20, 1952

Location of Accident and Method of Operation

This accident occurred on that part of the Susquehanna Division extending between Division Post, near Drury, and Division Post, near Dauphin, Pa., 139.8 miles. In the vicinity of the point of accident this is a double-track line, over which trains moving with the current of traffic are operated by signal indications. The accident occurred on the eastward main track at a point 46.27 miles east of Drury and 1.33 miles west of the interlocking station at Linden. From the west there are, in succession, a tangent 1,649 feet in length, a 1°30' curve to the right 2,808 feet, and a tangent 3,846 feet to the point of accident and a considerable distance eastward. The grade for east-bound trains varies between 0.04 percent and 0.14 percent descending throughout a distance of 1 mile immediately west of the point of accident, and it is 0.04 percent descending at that point.

Automatic signal 2592 and semi-automatic signal 25L, governing east-bound movements on the eastward main track, are located, respectively, 1.33 miles and 2,856 feet west of the point of accident. These signals are of the position-light type. Signal 2592 is approach lighted, and signal 25L is continuously lighted. Aspects applicable to this investigation and the corresponding indications and names are as follows:

Signal	Aspect	Indication	Name
2592	Three amber lights in diagonal position to the right.	Proceed prepared to stop at next signal. Train exceeding Medium speed must at once reduce to that speed.	Approach.
25L	Three amber lights in horizontal position.	Stop.	Stop-signal.

Signal 25L is controlled from the interlocking station at Linden. The controlling circuits are so arranged that when the block of signal 2592 is unoccupied and the block of signal 25L is occupied, with lever 25 in normal position, signal 2592 indicates Approach and signal 25L indicates Stop.

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

DEFINITIONS

Medium Speed--Not exceeding one-half the speed authorized for passenger trains but not exceeding 30 miles per hour.

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.

34. Immediately upon seeing a fixed signal all members of engine and train crew must, when practicable, communicate to each other by its name the indication of each signal affecting the movement of their train or engine.

35. The following signals will be used by flagmen:

* * *

Night signals--A red light, torpedoes and fusees.

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

* * *

Note--When trains are operating under automatic block signal system rules, the requirements of Rule 99, in so far as protection against following trains is concerned, will have been complied with when full protection is afforded against trains moving at Restricted speed.

The maximum authorized speed for freight trains is 45 miles per hour.

Description of Accident

Extra 6907 East, an east-bound freight train, consisted of engine 6907, 103 cars and a caboose. This train passed Rich, 14.3 miles west of Linden and the last open office, at 3:29 a. m. and stopped on the eastward main track at 4 a. m. with the caboose standing 1.33 miles west of the interlocking station at Linden and 2,856 feet east of signal 25L. About 35 minutes later the rear end of the train was struck by Extra 4410 East.

Extra 4410 East, an east-bound freight train, consisted of engine 4410, 36 cars and a caboose. This train passed Rich at 4:08 a. m., passed signal 2392, which indicated Approach, passed signal 25L, which indicated Stop, passed the flagman of Extra 6907 East at a point 2,010 feet east of signal 25L, and while moving at a speed of about 20 miles per hour it struck the rear end of Extra 6907 East.

The caboose and the rear three cars of Extra 6907 East were derailed and stopped on or near the track. The caboose and the rear two cars were badly damaged, and the third car from the rear was somewhat damaged. The engine, the tender, and the first five cars of Extra 4410 East were derailed. The engine stopped on its left side, 120 feet east of the point of accident and 35 feet north of the eastward main track. The tender remained coupled to the engine. It stopped upright and across the eastward main track. The derailed cars stopped in various positions on or near the track. The engine, the tender, and the first two cars were badly damaged, and the third, fourth, and fifth cars were slightly damaged.

The engineer of Extra 4410 East was killed. The fireman and the front brakeman of Extra 4410 East and the conductor of Extra 6907 East were injured.

The weather was foggy at the time of the accident, which occurred about 4:35 a. m.

Discussion

After Extra 6907 East stopped at Linden the engine was detached and moved to a coaling station a short distance eastward. The front brakeman accompanied the engine, the conductor remained in the caboose, and the flagman proceeded westward to provide protection for the rear of the train. The flagman proceeded to a point about 845 feet west of the caboose and remained there until he observed the approach of Extra 4410 East. He did not place torpedoes on the rail. He said that fog restricted his range of vision to a distance of about 800 feet and that intermittently the marker lights of his caboose were visible to him. He estimated that the engine of Extra 4410 East was about 1,400 feet distant when he first observed the headlight. He immediately gave stop signals with a red lantern, but the signals were not acknowledged. He then lighted a red fusee and continued to give stop signals with the fusee until the engine of Extra 4410 East passed him. As the engine passed he called a warning to the enginemen. Neither the signals nor the warning were answered. The flagman thought that the brakes of Extra 4410 East were not applied and that the speed of the train was not reduced before the collision occurred.

As Extra 4410 East was approaching the point where the accident occurred the engineer and the front brakeman, who was firing the engine, were in the cab of the engine, the fireman was in the brakeman's booth on the tender, and the conductor and the flagman were in the caboose. The brakes of this train had been tested and had functioned properly when used en route. The speed was about 20 miles per hour. The front brakeman said that signal 2392 indicated Approach and that both he and the engineer called the indication. As the train was closely approaching signal 25L the front brakeman observed that this signal indicated Stop. He called the indication to the engineer, but the engineer did not respond and did not make a brake application. Soon afterward the front brakeman called another warning, but the engineer still did not respond. The front brakeman called a third warning immediately before the collision occurred. He said that the engineer was seated in his usual position until the accident occurred, but there was insufficient light in the cab to enable him to see the engineer distinctly. When the front of the train passed the flagman of Extra 6907 East, the fireman was returning from the brakeman's booth to the cab of the engine. He said he did not see the aspect of signal 25L or the signals of the flagman, but he did hear the flagman call a warning. Immediately afterward he observed the marker lights of Extra 6907 East ahead. The engineer was killed in the accident, and it could not be determined why the train was not operated in accordance with the signal indications.

Cause

It is found that this accident was caused by failure to operate the following train in accordance with signal indications.

Dated at Washington, D. C., this twenty-first day of April, 1952.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,

Secretary.