

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT NO. 3718
THE PENNSYLVANIA RAILROAD COMPANY
IN RE ACCIDENT
AT BLAIRSVILLE, PA., ON
OCTOBER 31, 1956

- 2 -

SUMMARY

Date: October 31, 1956

Railroad: Pennsylvania

Location: Blairsville, Pa.

Kind of accident: Head-end collision

Equipment involved: Track motor-car : Locomotive
with trailer : with caboose

Train number: : Extra 9452 East

Locomotive number: : Diesel-electric
units 9452A and
9452B

Consist: : Caboose

Estimated speeds: 15 m. p. h. : 20 m. p. h.

Operation: Movements with current of traffic by
signal indications; movements against
current of traffic by train orders
and manual block-signal system

Tracks: Double; 1° curve; 0.34 percent
ascending grade westward

Weather: Clear

Time: 3:20 p. m.

Casualties: 1 killed; 5 injured

Cause: Train being admitted to a block which
was occupied by opposing track motor-
car

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT NO. 3718

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

THE PENNSYLVANIA RAILROAD COMPANY

December 19, 1956

Accident at Blairsville, Pa., on October 31, 1956, caused
by a train being admitted to a block which was
occupied by an opposing track motor-car.

REPORT OF THE COMMISSION¹

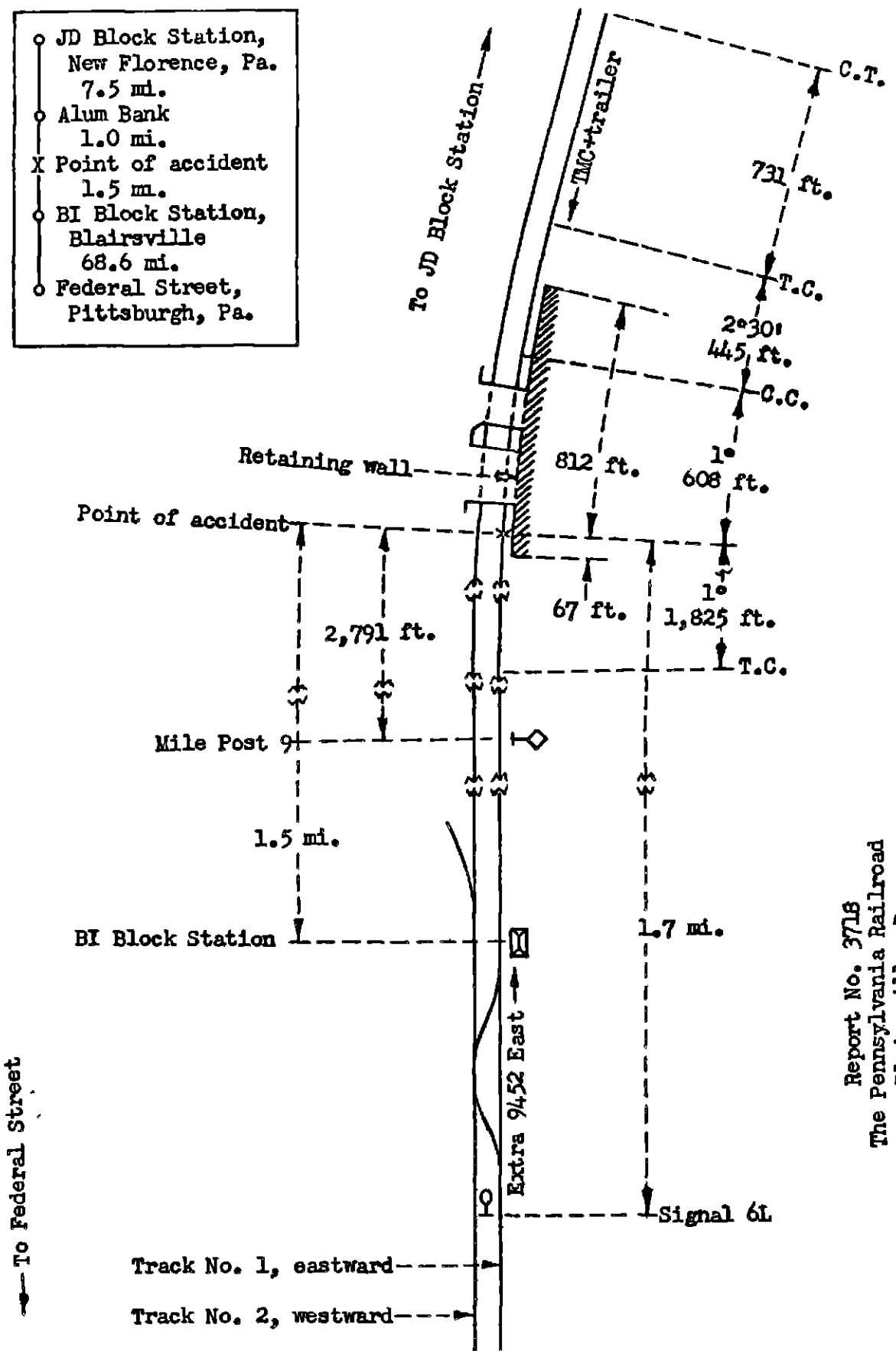
CLARKE, Commissioner:

On October 31, 1956, there was a head-end collision between a track motor-car with trailer and a locomotive with caboose on the Pennsylvania Railroad at Blairsville, Pa., which resulted in the death of one maintenance-of-way employee, and the injury of five maintenance-of-way employees. This accident was investigated in conjunction with a representative of the Pennsylvania Public Utility Commission.

1

Under authority of Section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Clarke for consideration and disposition.

- JD Block Station,
New Florence, Pa.
7.5 mi.
- Alum Bank
1.0 mi.
- X Point of accident
1.5 mi.
- BI Block Station,
Blairsville
68.6 mi.
- Federal Street,
Pittsburgh, Pa.



Report No. 3718
 The Pennsylvania Railroad
 Blairsville, Pa.
 October 31, 1956

Location of Accident and Method of Operation

This accident occurred on that part of the Pittsburgh Region extending between JD, near New Florence, Pa., and Federal Street, Pittsburgh, Pa., 78.6 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 automatic cab-signal indications. There are no wayside signals except at interlockings. Trains moving against the current of traffic are operated by train orders and a manual block-signal system. The main tracks from south to north are designated as No. 1, eastward, and No. 2, westward. The accident occurred on track No. 1 at a point 8.5 miles west of JD and 1.5 miles east of BI Block station, Blairsville. From the east there is a tangent 731 feet in length and a compound curve to the left consisting of a 2°30' curve 445 feet and a 1° curve 608 feet to the point of accident and 1,825 feet westward. The grade is 0.34 percent ascending westward at the point of accident.

Two overhead bridges cross the main tracks a short distance east of the point of accident. A concrete retaining wall south of the tracks extends between points 812 feet east and 67 feet west of the point of accident. The distance between the wall and the center-line of track No. 1 varies between 8 feet 2 inches and 9 feet 1 inch. The wall is 18 feet 5 inches in height. Because of curvature of the track, this wall materially restricts the range of vision between opposing movements on track No. 1.

A tool house used by a maintenance-of-way force is located on the south side of the tracks at Mile Post 9, 2,791 feet west of the point of accident. The motor-car set-off at the tool house provides access to track No. 1 only.

Interlocking signal 6L, governing east-bound movements from track No. 2 to track No. 1 at BI, is located 1.7 miles west of the point of accident. This signal is of the position-light type. The aspect applicable to this investigation and the corresponding indication and name are as follows:

<u>Aspect</u>	<u>Indication</u>	<u>Name</u>
Two white lights in diagonal position to the left	Proceed at Restricted speed	Restricting

Interlocking limits at BI extend between signal 6L and a point 1,619 feet east of that signal. The interlocking is of the electro-pneumatic type. A panel-type blocking device is located above the operator's desk in the interlocking station. The panel of this device shows the track layout of the interlocking and is provided with turn buttons on the main tracks at the interlocking limits. The face of each button bears the outline of an arrow. When a button is in normal position, the arrow points in the direction of the current of traffic on that track. When a button is turned to other than normal position, a signal cannot be displayed for a movement through the interlocking to the track for which the button is provided. Special instructions provide that when an operator receives a train order to hold trains clear of a track he must, before the order is made complete, operate the turn button so that a signal cannot be displayed for movement to that track.

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

Movement of Track Cars

80. Track cars will run as track car extras, in charge of drivers, governed by rules and special instructions applying to track cars and by the same rules and special instructions as apply to trains other than passenger trains, except as otherwise herein provided. * * *

On tracks governed by Block Signal System Rules, track car extras will run without train orders by verbal permission of the operator in charge of the portions of the track to be used. Operator must not permit track car extras to * * * enter a track of assigned direction and proceed against the current of traffic unless so authorized by the Superintendent Transportation, and then only when the portion of the track to be used is clear of opposing trains and track car extras, and signals governing opposing movements display Stop and their levers are blocked by standard blocking devices.

Manual Block Signal System

317. * * *

Before admitting a train other than a passenger train to a block, the operator in charge of the block station or block-limit station at the entrance of the block must know that the block is clear of opposing trains and of passenger trains, and that no opposing train or no passenger train has been given permission or a signal to enter the block. Signals governing opposing movements, where provided, must display Stop-signal * * *

Automatic Block Signal System

D-508. * * * when a train is operated against the current of traffic, manual block signal system rules must be observed * * *

The maximum authorized speed for freight trains is 50 miles per hour, but it is restricted to 35 miles per hour on the curve on which the accident occurred. The maximum authorized speed for track motor-cars towing trailers is 15 miles per hour.

Description of Accident

At 3:07 p. m. a track foreman in charge of track motor-car 7968 received permission and block authority from the operator at BI to operate the track motor-car on track No. 1 from Alum Bank, 2.5 miles east of BI, to Mile Post 9. The track motor-car, operating as Track Car Extra 7968 West and towing a trailer, departed west-bound from Alum Bank on track No. 1 at 3:08 p. m., according to the dispatcher's record of the movement of trains. The track motor-car was occupied by the track foreman, an assistant track foreman, and four trackmen. While it was moving at an estimated speed of 15 miles per hour it collided with Extra 9452 East at a point 1.5 miles east of BI.

Extra 9452 East, an east-bound train, consisted of Diesel-electric units 9452A and 9452B, coupled in multiple-unit control, and a caboose. This train departed from a point on track No. 2 immediately west of signal 6L at 3:15 p. m. It passed signal 6L, which indicated Proceed-at-restricted-speed, and crossed from track No. 2 to track No. 1 within interlocking limits at BI. After the train cleared the interlocking limits, the indication of the cab signal changed to Proceed-approaching-next-signal-at-medium-speed. While the train was moving at an estimated speed of 20 miles per hour it collided with the track motor-car.

The track motor-car and the trailer were moved eastward a distance of 209 feet to the point at which the front end of Extra 9452 East stopped. They were demolished.

One of the trackmen who was on the track motor-car was killed. The foreman, the assistant foreman, and three trackmen were injured.

The weather was clear at the time of the accident, which occurred about 3:20 p. m.

Track motor-car 7968 was powered by a 4-cylinder 17-horsepower engine and was equipped with a four-speed transmission. It was provided with a metal top, weighed 1,500 pounds, and had seating capacity for eight persons. The trailer was constructed with a flat wooden deck. Both the track motor-car and the trailer were insulated to prevent the shunting of track circuits.

During the 30-day period preceding the day of the accident the average daily movement in the vicinity of the point of accident was 30.8 trains and 3.1 track motor-cars.

Discussion

The rules of this carrier provide that track motor-cars will run as track car extras and, unless otherwise provided, will be governed by the rules and special instructions which apply to trains other than passenger trains. Within block-signal system territory track car extras run without train orders by verbal permission of the operator in charge of the portion of the track to be used. Operators must not permit a track car extra to move against the current of traffic unless authorized by the superintendent transportation and then only when the portion of the track to be used is clear of opposing trains, signals governing opposing movements indicate Stop, and the levers controlling the signals are blocked by standard blocking devices. The rules also provide that when trains are moved against the current of traffic manual block-signal system rules must be observed.

About 3:05 p. m. on the day of the accident the track foreman called the operator at BI from Alum Bank and requested permission to operate his track motor-car and trailer on track No. 1 from Alum Bank to the tool house at Mile Post 9. The operator requested authority for the movement from the train dispatcher. The train dispatcher transmitted a message addressed to the operator reading as follows:

Track Car Extra 7968 West may proceed on No. 1 track Alum Bank to Mile Post 9

The operator repeated the message to the dispatcher. He then gave the track foreman permission and block authority to proceed to Mile Post 9. The message was repeated at 3:07 p. m., and the operator entered Track Car Extra 7968 West on his block record as departing from Alum Bank at 3:08 p. m. He did not block the signal levers or operate the panel-type blocking device to prevent a signal from being displayed for an east-bound movement on track No. 1, and he said that during his conversation with the train dispatcher the use of the blocking device was not mentioned. After the operator talked with the track foreman, Extra 9452 East moved through the interlocking from a yard track to a point on track No. 2 west of signal 6L. The operator then informed the train dispatcher that the train was ready to depart. The dispatcher instructed him to permit it to proceed. The operator lined the route for the train to cross from track No. 2 to track No. 1, and the train departed at 3:15 p. m. Until after the accident occurred it did not occur to the operator that he had given the track foreman permission and block authority to move westward on track No. 1.

The train dispatcher said that when he transmitted the message authorizing the movement of Track Car Extra 7968 West he transmitted a symbol indicating "Blocking device applied," and that when the operator at BI repeated the message he also repeated this symbol. The dispatcher underscored each word and figure of the message in his train-order book as the operator repeated it. Inspection of the train-order book disclosed that the symbol indicating "Blocking device applied" followed the address of the message and that this symbol had been underscored. The dispatcher said that at the time the operator informed him that Extra 9452 East was ready to depart he was aware that track motor-car 7968 had been authorized to move westward from Alum Bank on track No. 1. He said that when he told the operator to permit Extra 9452 East to proceed he expected that the operator would permit the train to proceed after the track motor-car was reported clear of the track.

Track Car Extra 7968 West was being operated over track No. 1 from Alum Bank to Mile Post 9 so that it could be set off the track at the motor-car set-off at the tool house. As this car was approaching the point where the accident occurred the speed was about 15 miles per hour, as estimated by the foreman. The foreman was operating the car. He said that because of curvature of the track he was unable to see Extra 9452 East until the train was a distance which he thought was about 500 feet west of the track motor-car. When he first saw the train he assumed that it was moving on track No. 2. He then saw that the train was on track No. 1, and he applied the brakes and warned the other employees to jump from the car. The collision occurred almost immediately afterward.

As Extra 9452 East was approaching the point where the accident occurred the enginemen and the conductor were maintaining a lookout ahead from the control compartment at the front of the locomotive. The front brakeman and the flagman were on the rear platform of the caboose. The headlight was lighted. When the locomotive reached a point from which the track motor-car was visible from the left side of the control compartment the fireman saw the car and called a warning. The engineer immediately made an emergency application of the brakes. The fireman thought that at this time the track motor-car was about 225 feet distant. The conductor estimated that the distance was about 450 feet. The engineer said that the speed was approximately 20 miles per hour when he made the brake application and that it was not materially reduced before the collision occurred.

At interlockings on this line blocking devices are provided which, when used, will prevent an operator from inadvertently lining a route to a track which is to be held clear of trains. If a blocking device had been applied in the instant case, when the operator attempted to line the route for Extra 9452 East he would have been reminded that east-bound trains were to be held clear of track No. 1.

During the past 10 years the Commission has investigated 65 collisions, including the present case, in which track motor-cars were involved. These accidents resulted in the death of 91 persons and the injury of 190 persons.

- 11 -

Cause

This accident was caused by a train being admitted to a block which was occupied by an opposing track motor-car.

Dated at Washington, D. C., this nineteenth day of December, 1956.

By the Commission, Commissioner Clarke.

(SEAL)

HAROLD D. McCOY,
Secretary.