

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT NO. 3338
CENTRAL RAILROAD COMPANY OF PENNSYLVANIA
IN RE ACCIDENT
NEAR MAUCH CHUNK, PA., ON
JULY 5, 1950

SUMMARY

Date: July 5, 1950

Railroad: Central Railroad Company of
Pennsylvania

Location: Mauch Chunk, Pa.

Kind of accident: Head-end collision

Equipment involved: Freight train : Track motor-car
M-110 and
trailer

Train number: Extra 1540 West :

Engine number: Diesel-electric :
unit 1540

Consist: Caboose :

Estimated speeds: 28 m. p. h. : 10 m. p. h.

Operation: Timetable, train orders and
automatic block-signal system

Track: Double; 5° curve; 0.65 percent
ascending grade westward

Weather: Raining

Time: 2 p. m.

Casualties: 1 killed; 12 injured

Cause: Track motor-car occupying main track
without proper authority

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3338

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

CENTRAL RAILROAD COMPANY OF PENNSYLVANIA

August 31, 1950

Accident near Mauch Chunk, Pa., on July 5, 1950, caused
by a track motor-car occupying the main track without
proper authority.

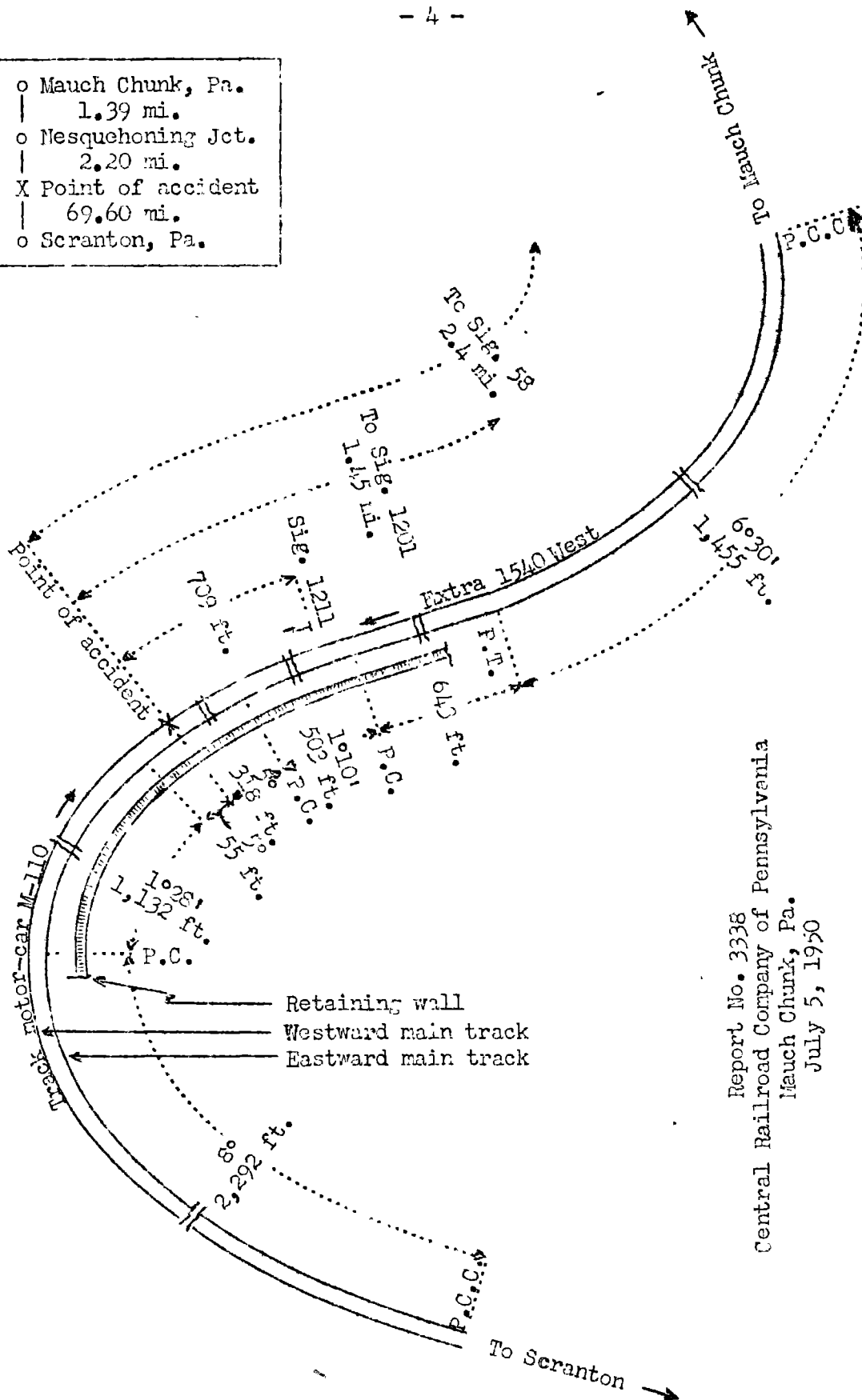
REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On July 5, 1950, there was a head-end collision between a freight train and a track motor-car on the line of the Central Railroad Company of Pennsylvania near Mauch Chunk, Pa., which resulted in the death of 1 maintenance-of-way employee and the injury of 12 maintenance-of-way employees.

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.

- o Mauch Chunk, Pa.
- | 1.39 mi.
- o Nesquehoning Jct.
- | 2.20 mi.
- X Point of accident
- | 69.60 mi.
- o Scranton, Pa.



Report No. 3338
Central Railroad Company of Pennsylvania
Mauch Chunk, Pa.
July 5, 1950

Location of Accident and Method of Operation

This accident occurred on that part of the railroad extending between Mauch Chunk and Scranton, Pa., 73.19 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 timetable, train orders and an automatic block-signal system. The accident occurred on the westward main track at a point 3.59 miles west of Mauch Chunk and 2.2 miles west of the interlocking station at Nesquehoning Jct. From the east there are, in succession, a compound curve to the right, having a maximum curvature of $6^{\circ}30'$, 1,455 feet in length, a tangent 643 feet, a $1^{\circ}10'$ curve to the left 503 feet, and a 5° curve to the left 318 feet to the point of accident and 55 feet westward. From the west there are, in succession, a compound curve to the right, having a maximum curvature of 8° , 2,992 feet in length, a $1^{\circ}28'$ curve to the right 1,132 feet, and the curve on which the accident occurred. At the point of accident the grade is 0.65 percent ascending westward.

In the vicinity of the point of accident a line of the Lehigh Valley Railroad parallels the tracks of the Central Railroad Company of Pennsylvania on the south. A stone retaining wall between the two railroads rises to a height of 8 feet 6 inches above the level of the tops of the rails of the Central Railroad Company of Pennsylvania, and is located 24 feet south of the center-line of the westward track.

Semi-automatic signal 58, governing west-bound movements from Mauch Chunk yard through the routes of Nesquehoning Jct. interlocking, and automatic signals 1201 and 1211, governing west-bound movements on the westward main track, are located, respectively, 2.4 miles, 1.45 miles, and 709 feet east of the point of accident. These signals are of the one-arm upper-quadrant semaphore type, and each displays three aspects. The aspects applicable to this investigation and the corresponding indications and names are as follows:

<u>Signal</u>	<u>Aspect</u>	<u>Indication</u>	<u>Name</u>
58	Vertical	Proceed; slow speed within interlocking limits.	Slow-clear.
1201) 1211)	Vertical	Proceed.	Clear.

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

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 * * *

* * *

The front of the train must be protected in the same way when necessary by the head trainman or fireman.

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. * * *

* * *

231. Except as provided in Rule 238, outside of yard limits track cars must not be placed or operated on the main track, nor moved from one main track to another unless authorized by train dispatcher on Form 49.

233. Form 49 does not relieve track car crews from complying with Rule 99.

234. After Form 49 has been transmitted, the employe receiving it must repeat it at once from the manifold copy to the train dispatcher * * *. When the form has been repeated correctly, the response "O.K." and the time will be given by the train dispatcher * * *. The employe receiving this response will then insert the time O.K. on the form.

Form 49 must be read by driver to the occupants of the car before it is acted upon, and when received by an operator the form must be read by the driver to the operator.

Operator, in effecting delivery of Form 49 by telephone to a track car, must give to the driver the complete form. The driver so receiving the form must read it to the operator, and sign it as "received by" _____; Driver Track Car No. _____. The operator will show on his office copy of the form the name of the driver to whom delivered by telephone and the time.

235. The train dispatcher must record the movement of all track cars, and instructions transmitted to drivers, time and by whom repeated, and name of track car driver.

236. * * * Drivers must remove track cars clear of the main track before time limit specified in Form 49. When practicable driver must immediately report to the train dispatcher * * * when track car is clear of main track * * *

237. After track has been reported clear to the train dispatcher * * *, the main track must not again be occupied by the track car unless again authorized by Form 49.

238. When unable to communicate with train dispatcher * * *, movement may be made when protected in both directions in accordance with Rule 99.

240. On main tracks outside of yard limits, opposing extra trains or track cars must not be permitted to enter the section of track occupied by a track car unless notified by train order to protect against such track car.

Form 49 reads as follows:

TRACK CAR ORDER NO. _____

To Driver Track Car No. _____ 19
At _____

After _____ M. _____ 19
track car No. _____ Run _____
to _____ on _____ track,
clearing regular, and protecting against following extra
trains.

This order is annulled at _____ M.

(Information Regarding Opposing Regular Trains)

Next regular train will be No. _____ Engine No. _____

(Information Regarding Following Trains)

Next regular train will be No. _____ Engine No. _____

Extra Will leave _____ For _____ About _____

_____ M.
_____ M.

Repeated by _____ Time O.K. _____ M.
Name _____

Instructions governing the maintenance-of-way department read in part as follows:

289. Only insulated cars shall be used where there are track circuits. * * *

Timetable general instructions read in part as follows:

6. TRAIN ORDERS, TRACK CAR ORDERS AND OTHER INSTRUCTIONS HANDLED BY TELEPHONE

Train orders, track car orders and other instructions will be handled over local telephone lines through signalmen or operators at nearest open office. * * *

* * *

Signalmen and operators will receive train orders, track car orders and other instructions from train dispatcher and transmit them to person asking for same. These must be repeated and names and occupations of employees exchanged * * *

* * *

The maximum authorized speeds were 30 miles per hour for freight trains and 15 miles per hour for track motor-cars with trailers.

Description of Accident

Extra 1540 West, a west-bound freight train, consisted of Diesel-electric unit 1540 and a caboose. This train departed from Mauch Chunk yard, passed signal 58, which indicated Proceed, and entered the westward main track at Nesquehoning Jct. at 1:51 p. m. It passed signals 1201 and 1211, each of which indicated Proceed, and while moving at a speed of 28 miles per hour it collided with track motor-car M-110 at a point 2.2 miles west of Nesquehoning Jct.

Track motor-car M-110, with a trailer in tow and occupied by a maintenance-of-way foreman, an assistant foreman, and 15 employees, departed east-bound on the westward main track from Mile Post 123, 3.57 miles west of Nesquehoning Jct., about 1:45 p. m., and while moving at a speed of about 10 miles per hour it collided with Extra 1540 West.

Extra 1540 West stopped with the front of the Diesel-electric unit 645 feet west of the point of accident. The front end of the Diesel-electric unit was slightly damaged. The track motor-car and the trailer, which were not derailed, were moved westward to the point where Extra 1540 West stopped. They were badly damaged.

One maintenance-of-way employee who was on the track motor-car was killed, and the foreman, the assistant foreman, and 10 maintenance-of-way employees were injured.

It was raining at the time of the accident, which occurred about 2 p. m.

Track motor-car M-110 was of the 4-wheel type, equipped with 4-wheel brakes, and powered by a 4-cylinder 36 horse-power gasoline motor. The body was of wooden construction with a steel underframe. It was fitted with a permanent wooden housing measuring 8 feet 9 inches in length, 5 feet 6 inches in width, and 6 feet 8 inches in height above the tops of the rails. The housing was provided with glass windshields in front and rear, and with three hinged doors on each side. Each door measured 20 inches in width and 4 feet 5 inches in height. A flat board 6 inches in width extended along each side of the car beneath the doors. There were seats for 13 persons, and 6 additional persons could be seated in the doorways. The car weighed 1,660 pounds. The trailer was of the 4-wheel type with a wooden deck 7 feet in length, 5 feet 9 inches in width, and 2 feet in height above the tops of the rails. 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 24.1 trains.

Discussion

The rules of this carrier provide that track motor-cars must not be operated on the main track outside yard limits unless the movement is authorized by the train dispatcher on Form 49. At places other than open offices operators of track motor-cars must obtain Form 49 by telephone from the operator at the nearest open office. A Form 49 received by telephone must be written in full and repeated by the operator of a track motor-car, and he must read it to the other occupants of the

car before it is acted upon. After the movement of a track motor-car is authorized, opposing extra trains or track motor-cars must not be permitted to enter the section of track upon which the movement is authorized, unless notified by train order to protect against the track motor-car. The time of regular trains must be cleared.

On the day of the accident a maintenance-of-way force consisting of a foreman, an assistant foreman, and 15 employees was engaged in replacing ties on the westward main track west of Nesquehoning Jct. At 1:45 p. m. the foreman communicated with the operator at Nesquehoning Jct. from a telephone located near Mile Post 123, informed him that the maintenance-of-way force was ready to proceed to its headquarters at Mauch Chunk, and requested him to protect the movement of track motor-car M-110 on the westward main track from Mile Post 123 to Nesquehoning Jct. The operator replied that he would protect the movement. The track motor-car then was placed on the westward main track. Several stops were made to load tools and for employees to board the car. After the entire force had boarded the track motor-car it proceeded eastward, with a trailer in tow, at a speed of about 10 miles per hour. As it was moving on the curve on which the accident occurred, the occupant's view of a train approaching from the east was restricted to a distance of about 840 feet by the retaining wall south of the track. The occupants of the car were not expecting to meet an opposing train, and they did not observe the approach of Extra 1540 West until immediately before the collision occurred.

As Extra 1540 West was approaching the point where the accident occurred the enginemen were in their positions in the control compartment of the Diesel-electric unit, and the conductor, the front brakeman, and the flagman were in the caboose. The brakes of this train had been tested and had functioned properly. Signals 58, 1201, and 1211 indicated Proceed, and the members of the crew had no knowledge that the track ahead was occupied by the track motor-car. The control compartment of Diesel-electric unit 1540 is located behind the engine compartment, and after the train entered the curve on which the accident occurred the track ahead was not visible from the engineer's position in the control compartment. The retaining wall south of the track restricted the fireman's view of the track ahead to a distance of 482 feet. As the train closely approached the point where the accident occurred, the attention of the fireman was distracted momentarily, and the enginemen were not aware that the track was occupied by the track motor-car until the collision occurred.

The operator at Nesquehoning Jct. said that immediately after he arranged with the foreman of the maintenance-of-way force to protect the east-bound movement of track motor-car M-110 on the westward main track he received from the train dispatcher a Form 49 authorizing the movement of another track motor-car. Extra 1540 West approached as he was transmitting this form to the operator of the track motor-car. Before he lined the route for the movement of the train, it was necessary for him to ascertain from the signal maintainer, who was making adjustments to one of the switches of the interlocking, whether the switch could be operated. After obtaining permission to operate the switch, he lined the route for Extra 1540 West to pass through the interlocking en route to the westward main track. He did not remember that track motor-car M-110 was moving eastward on the westward main track until after Extra 1540 West had departed.

In the instant case both the foreman of the maintenance-of-way force and the operator at Nesquehoning Jct. understood the requirements of the rules. However, the foreman did not request that the movement of the track motor-car be authorized by the train dispatcher on Form 49, and the operator did not inform the train dispatcher of the proposed movement. The investigation disclosed that track motor-car M-110 was operated westward from Nesquehoning Jct. on June 28, 29, and 30 and July 3 and 5 under authority of Form 49. However, in each instance protection for the return trip was arranged orally between the operator of the track motor-car and the operator at Nesquehoning Jct. If the movement had been made in accordance with the rules, the train dispatcher would have restricted the movement of opposing trains by train order, the result of which would be that Extra 1540 West would have been held at Nesquehoning Jct. until track motor-car M-110 arrived at that station.

Cause

It is found that this accident was caused by a track motor-car occupying the main track without proper authority.

Dated at Washington, D. C., this thirty-first day of August, 1950.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. PARTEL,

Secretary.