

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT NO. 3449

THE DELAWARE, LACKAWANNA AND WESTERN
RAILROAD COMPANY

IN RE ACCIDENT

AT HOBOKEN, N. J., ON

JANUARY 24, 1952

SUMMARY

Date: January 24, 1952

Railroad: Delaware, Lackawanna and Western

Location: Hoboken, N. J.

Kind of accident: Head-end collision

Equipment involved: Passenger train : Cut of multiple-unit cars

Train number: 1031 :

Engine number: 1137 :

Consists: 4 cars : 7 multiple-unit cars

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

Operation: Interlocking

Track: Station track; tangent; 0.22 percent descending grade eastward

Weather: Clear

Time: 1:57 p. m.

Casualties: 1 killed; 3 injured

Cause: Cut of multiple-unit cars moving out of control

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3449

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

THE DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

March 19, 1952

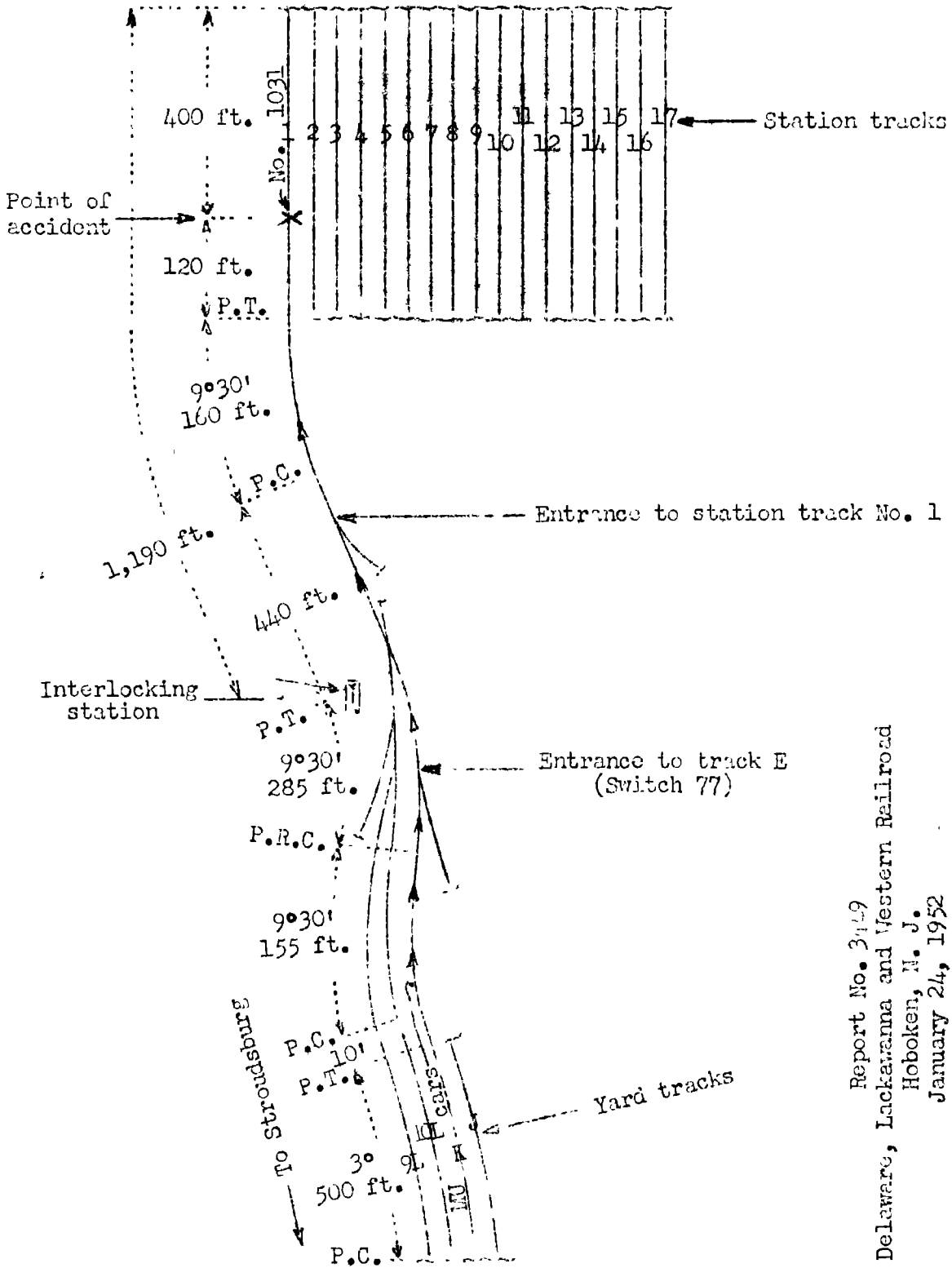
Accident at Hoboken, N. J., on January 24, 1952, caused
by a cut of multiple-unit cars moving out of control.

REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On January 24, 1952, there was a head-end collision between a passenger train and a cut of multiple-unit cars on the Delaware, Lackawanna and Western Railroad at Hoboken, N. J., which resulted in the death of one employee, and the injury of three passengers. This accident was investigated in conjunction with a representative of the Department of Public Utilities of the State of New Jersey.

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. 3449
Delaware, Lackawanna and Western Railroad
Hoboken, N. J.
January 24, 1952

Location of Accident and Method of Operation

This accident occurred on that part of the Morris and Essex Division extending between Hoboken, N. J., and Stroudsburg, Pa., 81.56 miles. Trains are operated over the main tracks by timetable, train orders and an automatic block-signal system. At Hoboken there are 17 station tracks, designated from north to south, successively, as tracks Nos. 1 to 17. Station track No. 1 is 750 feet in length and connects with track E. At a point 525 feet westward track E connects with yard track K at interlocked switch 77. This switch is trailing-point for east-bound movements. All routes over these tracks are interlocked and movements are governed by signal indications. The interlocking station is located north of track E and 1,190 feet west of the east end of station track No. 1. A catenary system is provided for the electric propulsion of trains. The accident occurred on station track No. 1 at a point 400 feet from the east end of the track. From the west on yard track K over track E to the east end of station track No. 1 there are, in succession, a 3° curve to the left 500 feet in length, a tangent 10 feet, a 9°30' curve to the right 155 feet, a 9°30' curve to the left 285 feet, a tangent 440 feet, a 9°30' curve to the right 160 feet, and a tangent 120 feet to the point of accident and 400 feet eastward. The grade for east-bound movements varies between level and 0.7 percent descending throughout a distance of about 1,700 feet immediately west of the point of accident and is 0.22 percent descending at that point.

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

13. EMERGENCY SIGNALS AT INTERLOCKING STATIONS * * *

(Whistle or Horn)

The signals prescribed are illustrated by "o" for short sounds; "—" for longer sounds.

| Sound. | Indication. |
|-----------|---|
| (a) _____ | All trains within interlocking limits stop immediately. |

* * *

This carrier's safety rules governing employees of the mechanical department read in part as follows:

2070. (a) Employees who are required to work on cars or engines at places other than protected repair tracks, shops or enginehouses, must protect themselves with properly displayed blue flags in day time and with blue lights during night time. No engine or car must be coupled onto or moved while these signals are displayed.

* * *

In the vicinity of the point of accident the maximum authorized speed for passenger trains was 15 miles per hour.

Description of Accident

No. 1031, a west-bound first-class passenger train, consisted of engine 1137, one baggage-mail car, and three coaches, in the order named. These cars were of all-steel construction. This train was scheduled to depart from Hoboken at 2 p. m. While this train was standing on station track No. 1 the front end was struck by a cut of multiple-unit cars about 1:57 p. m.

Seven multiple-unit passenger cars were assembled on yard track K about 12:55 p. m. From east to west this cut of cars consisted of motor-car 2577, trailers 2342 and 2352, motor-car 2579, trailer 2211, motor-car 2620, and trailer 2513. These cars were of all-steel construction. While electrical repairs were being made to motor-car 2579, the cut of multiple-unit cars moved eastward, proceeded over track E, entered station track No. 1, and while moving at an estimated speed of 10 miles per hour it struck the front end of No. 1031.

No. 1031 was moved eastward about 12 feet to the bumping-block at the east end of the track. None of the equipment of No. 1031 was derailed. The engine and the first car were slightly damaged. The front truck of the first multiple-unit car was derailed to the south. This car was badly damaged.

A car inspector who was performing work on No. 1031 was killed.

The weather was clear at the time of the accident, which occurred about 1:57 p. m.

Discussion

Multiple-unit motor-cars and trailers of this carrier are assembled in units. A unit consists of a motor-car and one or two trailer permanently coupled. The coupling is made permanent by bolting the uncoupling levers between the multiple-unit cars involved in such manner that the uncoupling levers cannot be operated.

The investigation disclosed that on the morning of the day of the accident seven multiple-unit cars were placed on yard track K. From east to west this cut of cars consisted of one three-car unit and two two-car units. The three-car unit and the adjacent two-car unit were detached and moved from yard track K. A trailer then was coupled to the more easterly end of the two cars remaining on yard track K. The air hose and the electrical jumpers between these cars were coupled by a car inspector assigned to perform this work in the yard. A motor-car was coupled to the rear end of a three-car unit consisting from east to west of a motor-car and two trailers. These four cars moved from the repair shop and were coupled to the east end of the three cars on track K. From east to west this cut of seven cars consisted of a unit of one motor-car and two trailers and two units each of one motor-car and one trailer. One pantograph of the motor-car of each unit was in contact with the overhead wire. Because the electrical equipment of the fourth car was not operating properly, a foreman and an electrician proceeded to yard track K to test and repair this motor-car. The foreman immediately disconnected the electrical jumpers between the third and the fourth cars. The jumpers between the fourth and the fifth cars already were disconnected. While testing the equipment the foreman lowered the pantograph of the fourth car on two occasions by operating the switch controlling the downward movement of the pantograph. After lowering the pantograph the second time he restored the switch to non-operating position. The pantographs of the first and third motor-cars were in contact with the overhead wire when the switch of the second motor-car was operated. During the tests the pantographs of the second motor-car were secured in down position with hooks provided for that purpose, the motors were disconnected from the controller, the controller was placed in operating position and the handle weighted to prevent the safety-control feature from operating. The tests were being made on the north side of the motor-car. During

this time a car inspector entered the control compartment of the first car. He started the air compressor and placed the brake valve in running position. He then proceeded westward on the north side and inspected the train line for air leakage. When he arrived at the fourth car the foreman instructed him not to couple the electrical jumpers. He then terminated his inspection of the cars and proceeded to another yard track. He said that he was not certain that he coupled the air hose between the fourth and fifth cars. The yardmaster notified an employee in the repair shop that a permanent coupling was required to be made between the fourth and fifth cars on yard track K. A machinist and an electrician proceeded to that track to perform the work. The foreman said that he did not observe these employees. The cut of cars began to move eastward immediately after the electrician coupled the battery and control jumpers between the fourth and fifth cars. The machinist said that the air hose between these cars were coupled when he arrived. Both the machinist and the electrician said that they thought the cars were being moved intentionally to another track. They boarded the fifth car but were not aware of anything being wrong until after the collision occurred. The foreman said that the doors of the last three cars were closed and he could not board the cars to take action to stop the movement.

The investigation disclosed that one pantograph of the motor-car of the first unit was in contact with the overhead wire. The air compressor of this motor-car was started and the brake valve moved to running position, which action released the brakes. The pantographs of the motor-car of the second unit were in down position, the motors were disconnected from the controller, but the controller was in operating position, the safety-control feature was made inoperative, and the switch controlling the downward movement of pantographs was in non-operating position. One pantograph of the motor-car of the third unit was in contact with the overhead wire. The air hose were coupled and the angle cocks were open between all cars. The electrical jumpers between the last four cars were coupled. Hand brakes were not set on any of the cars. When the air hose between the fourth and the fifth cars were connected and the brake valve on the first car moved to running position, the brakes on all cars were released. The electrical circuits were so arranged that the motors of the third unit were actuated from the controller of the motor-car of the second unit.

A leverman at the interlocking station observed the approach of the cut of multiple-unit cars and called it to the attention of the tower director. The tower director immediately sounded the stop signal on the interlocking station whistle. A leverman lined the switch for entry to station track No. 1 to avoid a side collision between the cut of multiple-unit cars and an east-bound passenger train moving on an adjacent track.

After the seven cars were assembled on yard track K, there were five employees who had three different duties to perform in preparing this equipment for use. Each duty was performed independently of the other, with the result that the equipment started its movement without anyone at the controls. Although a blue flag was not displayed while the repairs were being made, no other unit was coupled to the cut of cars and there was no intentional action by any employee to move these cars. It is the practice of employees of this carrier to lower the pantographs of each motor-car of a cut of cars coupled while they are performing work on one of the motor-cars. However, the carrier should take adequate measures to insure that such work is so coordinated that the action of one employee is not nullified by the action of another employee.

Cause

It is found that this accident was caused by a cut of multiple-unit cars moving out of control.

Dated at Washington, D. C., this nineteenth day of March, 1952.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.