

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 3260
UNION RAILROAD COMPANY
REPORT IN RE ACCIDENT
AT BESSEMER, PA., ON
JUNE 17, 1949

SUMMARY

Date: June 17, 1949

Railroad: Union

Location: Bessemer, Pa.

Kind of accident: Head-end collision

Equipment involved: Engine with cars : Engine with cars

Engine numbers: Diesel-electric : 172
unit 513

Consists: 6 cars : 4 cars

Estimated speeds: 3 m. p. h. : 3 m. p. h.

Operation: Operating rules; yard limits

Track: Yard track; 17°30' curve; 1.96
percent ascending grade westward

Weather: Raining

Time: 9:35 a. m.

Casualties: 2 injured

Cause: Failure to provide adequate operating
rules for the movements involved

Recommendation: It is recommended that the Union
Railroad Company provide adequate
protection for the safe operation
of opposing movements on yard
tracks

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 3260

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

UNION RAILROAD COMPANY

August 24, 1949

Accident at Bessemer, Pa., on June 17, 1949, caused by
failure to provide adequate operating rules for
the movements involved.

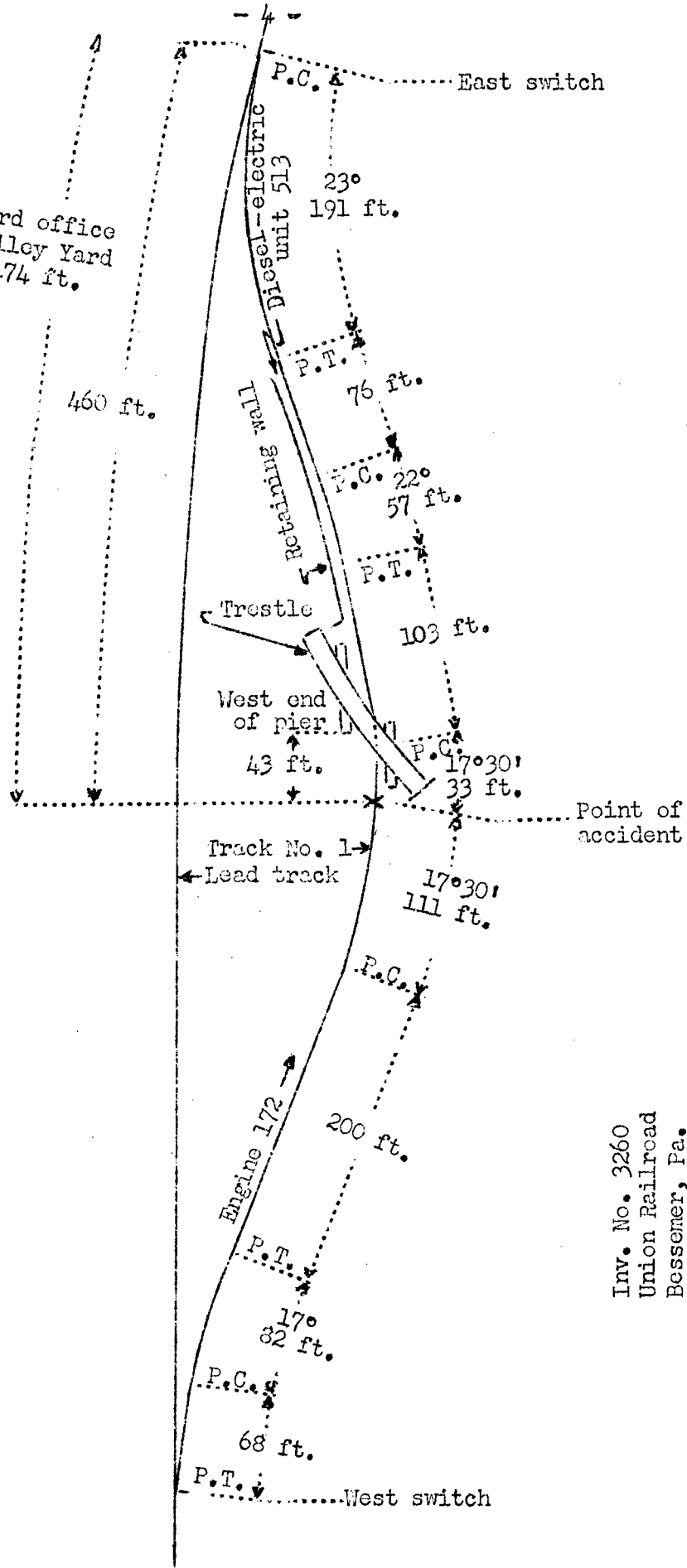
REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On June 17, 1949, there was a head-end collision
between two yard engines on the Union Railroad at Bessemer,
Pa., which resulted in the injury of two employees.

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

To yard office
at Valley Yard
2,474 ft.



Inv. No. 3260
Union Railroad
Bessemer, Pa.
June 17, 1949

Location of Accident and Method of Operation

This accident occurred in the Valley Yard of the Union Railroad and the Carnegie-Illinois Steel Corporation at Bessemer. Train and engine movements in Valley Yard are under the jurisdiction of the Union Railroad, and are governed by the operating rules of this carrier. The track on which the accident occurred, hereinafter referred to as track No. 1, is 921 feet in length and at the point of accident is about 125 feet south of a lead track which extends westward from Valley Yard. Track No. 1 is connected at each end to the lead track. The east and the west switches of track No. 1 are located, respectively, 2,014 feet and 2,924 feet west of the yard office at Valley Yard. The accident occurred 460 feet west of the east switch. From the east there are, in succession, a 23° curve to the left 191 feet in length, a tangent 76 feet, a 22° curve to the right 57 feet, a tangent 103 feet, and a 17°30' curve to the right extending 33 feet to the point of accident and 111 feet westward. From the west there are, in succession, a tangent 68 feet in length, a 17° curve to the right 82 feet, a tangent 200 feet, and the curve on which the accident occurred. From the east the grade varies between 0.07 percent and 0.80 percent ascending westward a distance of 321 feet, then it is 0.51 percent descending 100 feet, and 1.96 percent ascending 39 feet to the point of accident. From the west the grade is 0.42 percent ascending eastward a distance of 100 feet, then it varies between 1.96 percent and 2.74 percent descending 361 feet to the point of accident.

Operating rules of the Union Railroad read in part as follows:

Movement of Trains

96. All operations, except those controlled by Interlocking and Automatic Block Signals, are conducted under yard limit rules which require that all movements of engines and cars shall proceed under control, prepared to stop within range of vision.

* * *

98. Within yards, * * *, all trains and engines have equal authority of movement and must proceed as the way is seen to be clear.

* * *

Description of Accident

Diesel-electric unit 513, headed westward and pulling six cars, entered track No. 1 at the east switch and was moving westward at a speed of about 3 miles per hour when it collided with engine 172 at a point 460 feet west of the east switch.

Engine 172, headed westward and pulling four cars, entered track No. 1 at the west switch and was moving eastward at a speed of about 3 miles per hour when it collided with Diesel-electric unit 513.

The front truck of Diesel-electric unit 513 was derailed. The front of this unit was badly damaged.

Engine 172 and its tender were derailed. They stopped upright and parallel to the track. The tender was badly damaged.

The conductor and the front brakeman of engine 172 were injured.

It was raining at the time of the accident, which occurred at 9:35 a. m.

Diesel-electric unit 513 is a 0-4-4-0 switcher type. It is equipped with No. 14-EL brake equipment. The control compartment is located at the rear of the unit. Engine 172 is a 0-6-0 type, and is equipped with No. 6-ET brake equipment.

Discussion

Engine 172 and Diesel-electric unit 513 were operated over track No. 1 because that portion of the lead track between the switches of track No. 1 was occupied by cars. Engine 172 moved from the lead track to track No. 1 at the west switch, and Diesel-electric unit 513 moved from the lead track to track No. 1 at the east switch. The members of each crew were not aware that track No. 1 was occupied by an opposing movement, and each crew intended to re-enter the lead track at the opposite end of track No. 1.

As Diesel-electric unit 513 was approaching the point where the accident occurred the speed was about 8 miles per hour. The enginemen and the members of the train crew were in the control compartment of the unit. The enginemen were maintaining a lookout ahead. The brakes of the Diesel-electric unit and of the cars had been tested and had functioned properly when used. When the Diesel-electric unit reached a point about 100 feet east of the point where the accident occurred, the engineer observed engine 172 approaching from the west at a distance of about 160 feet. He immediately placed the automatic brake valve in emergency position. The speed had been reduced to about 3 miles per hour when the collision occurred.

As engine 172 was approaching the point where the accident occurred the speed was about 4 miles per hour. The engine was in backward motion and was pulling four cars. The enginemen and the members of the train crew were in the cab of the engine. The enginemen were maintaining a lookout in the direction of movement. The brakes of the engine had been tested and had functioned properly during the assignment. Normal brake-pipe pressure was being maintained in the air-brake system of the cars, but the brakes of the cars had not been tested. When the engine reached a point about 60 feet west of the point where the accident occurred the engineer observed Diesel-electric unit 513 approaching from the east. He immediately placed the independent brake valve in application position and placed the reverse lever in position for forward motion. The collision occurred before the speed had been materially reduced.

The range of vision between opposing movements in the immediate vicinity of the point of accident is restricted by a pier, which supports an overhead trestle, and by a concrete retaining wall 24 feet high. The west end of the pier is 43 feet east of the point of accident. This pier, which is 25.5 feet in length, is parallel to track No. 1 and about 8 feet north of the center-line of the track. East of this pier, the concrete retaining wall parallels track No. 1 on the north at a distance varying between 8.19 feet and 11.27 feet from the center-line of the track. These structures restrict the view of an opposing movement from the north side of the cab of an engine approaching from either direction to a distance of about 200 feet. Because of track curvature, an opposing movement cannot be seen from the south side of the cab of an engine.

The rules of this carrier provide that all movements, except those controlled by interlocking and automatic block signals, shall proceed under control, prepared to stop within range of vision. Within yards, all trains and engines have equal authority of movement and must proceed as the way is seen to be clear. In the instant case, each engineer said that he was operating at a speed which would enable him to stop within his range of vision, and that he would have been able to stop his engine short of the opposing engine if that engine had not been in motion. However, the range of vision of each engineer overlapped that of the other on the curve, and the collision occurred at a point well within the range of vision of each engineer when he first saw the opposing engine. Obviously, the rule does not adequately provide for safety of opposing movements on yard tracks where the range of vision is restricted to the extent as disclosed in this investigation.

Cause

It is found that this accident was caused by failure to provide adequate operating rules for the movements involved.

Recommendation

It is recommended that the Union Railroad Company provide adequate protection for the safe operation of opposing movements on yard tracks.

Dated at Washington, D. C., this twenty-fourth day of August, 1949.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.