

INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT OF THE DIRECTOR

BUREAU OF SAFETY

ACCIDENT OF THE

PITTSBURGH & LAKE ERIE RAILROAD

PITTSBURGH, PA.

FEBRUARY 11, 1937

INVESTIGATION NO. 2144

SUMMARY

Inv-2144

Railroad: Pittsburgh & Lake Erie
Date: February 11, 1937
Location: Pittsburgh, Pa.
Kind of accident: Head-end collision
Trains involved: Light engine : Freight
Train numbers: Extra 9023 : Extra 9513
Consist: : 50 cars and caboose
Speed: 6-15 m. p. h. : Practically stopped
Track: Tangent and approximately level
Weather: Clear
Time: 2:15 a. m.
Casualties: 6 injured
Cause: Failure of Extra 9023 properly to observe
and obey interlocking signal indications

To the Commission:

On February 11, 1937, there was a head-end collision between a light engine and a freight train on the Pittsburgh & Lake Erie Railroad at Pittsburgh, Pa., which resulted in the injury of six employees.

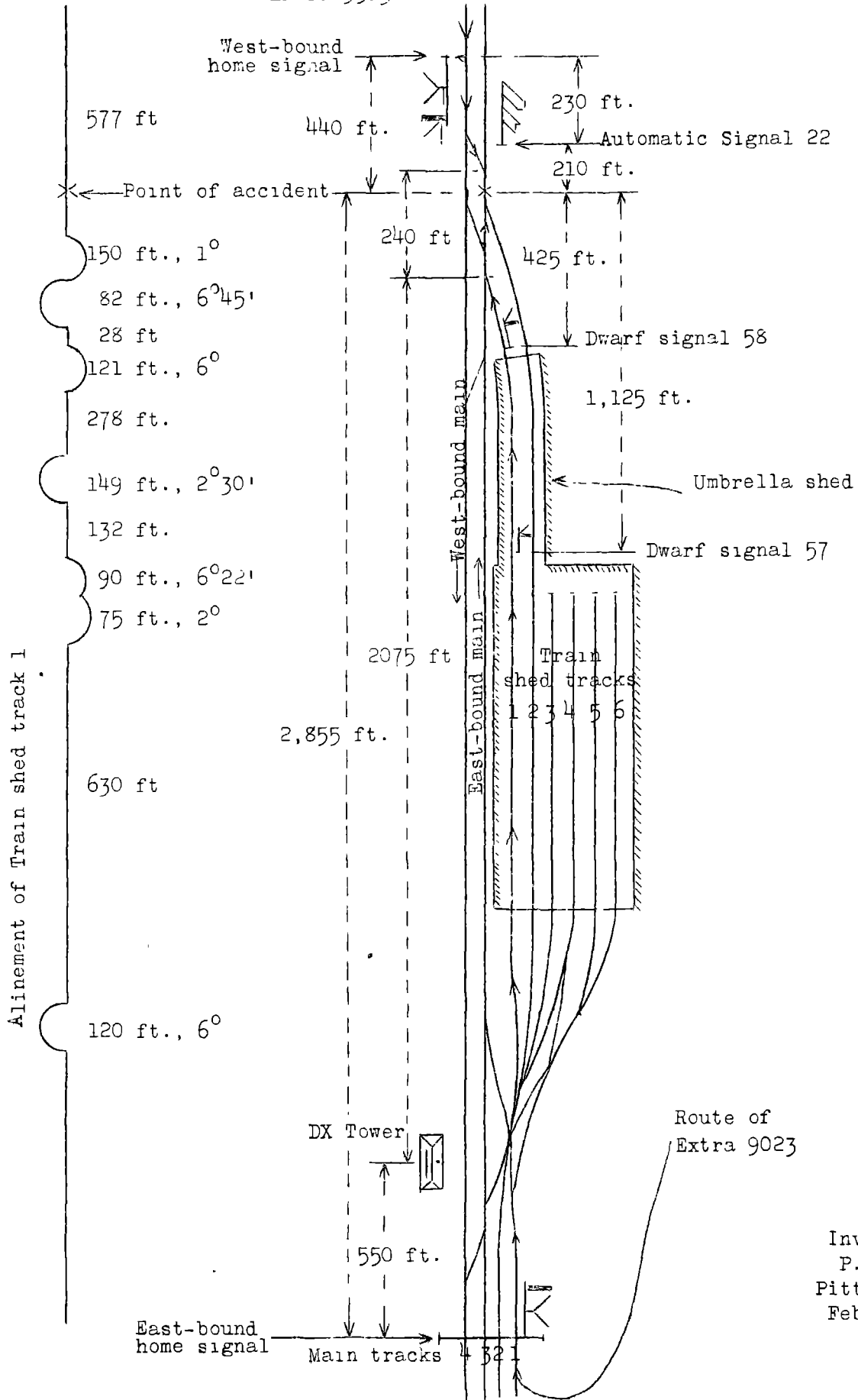
Location and method of operation

This accident occurred on the Youghiogheny Division which extends between Pittsburgh and Connellsville, Pa., a distance of 58.3 miles; in the vicinity of the point of accident this is a double-track line over which trains are operated by timetable, train orders and an automatic block-signal system.

DX interlocking tower is located about 1,000 feet west of the passenger station at Pittsburgh and the accident occurred within interlocking and yard limits a short distance east of the station. West of the interlocking plant this is a 4-track line, all tracks of which are used for either freight or passenger service; these tracks, numbered from south to north are 1, east-bound; 2, west-bound; 3, east-bound; 4, west-bound. At a point opposite the interlocking tower tracks 1 and 2 merge with the tracks leading to the station shed and lose their identity, while tracks 3 and 4 pass the station on the north and form the east-bound and west-bound main tracks of a double-track line eastward from DX tower. There are 6 passenger tracks serving the passenger station, numbered 1 to 6 inclusive from north to south; tracks 1 and 2 are station running tracks; track 1 is elevated about 4 feet above, and parallels the east-bound main track on the south, at a distance of from 18 to 28 feet between track centers, and connects with that track through a switch located 2,075 feet east of DX tower. East of this switch there is a facing-point crossover connecting the east-bound and the west-bound main tracks, the west switch of which is located 240 feet east of the switch leading from station track 1. The accident occurred on the east-bound main track at a point about 10 feet west of the west switch of this crossover.

Approaching the point of accident from the east there are numerous short curves and tangents, followed by a compound curve to the right for a distance of 725 feet, consisting of a 6°05' curve for 230 feet, a 3°30' curve for 210 feet, and a 4°40' curve for 285 feet, then tangent track for 577 feet; the accident occurred on this tangent at a point 80 feet from its western end. Approaching the point of accident from the west on station track 1, there are numerous short curves and tangents. The tracks are practically level at the point of accident.

Route of
Extra 9513



Inv. No. 2144
P. & L. E.
Pittsburgh, Pa
Feb. 11, 1937

In DX tower there is an 88-lever, straight-electric type interlocking machine. The east-bound home signal, governing movements on east-bound main track 1, is located on a signal bridge 550 feet west of the tower and is a 2-unit, position light signal, the top unit of which permanently displays a stop indication; the bottom unit is capable of displaying either a medium-speed or a restricted-speed indication, the restricted speed indication being a calling-on signal. Any route from main track 1, other than to the station tracks, is authorized by the calling-on signal; the medium speed indication provides for a movement to any of the station tracks when the route is clear, but if the route is not clear, such a movement is authorized by the calling-on signal. Further movements over station tracks are authorized by dwarf signals; dwarf signals 57 and 58, governing east-bound movements leaving station track 1, are located 1,180 and 1,880 feet, respectively, east of DX tower and are 2-indication, position-light signals displaying proceed-at-restricted-speed or stop indications.

Automatic block signal 22, governing movements over the east-bound main track beyond interlocking limits, is located 635 feet east of dwarf signal 58.

The west-bound interlocking home signal is located 2,745 feet east of DX tower and is a 2-unit, position light signal; the top unit governs through movements on the west-bound main track while the bottom unit governs movements through the cross-overs.

Annunciators are provided in the tower to indicate the approach of trains on the main tracks. The west-bound main track annunciator circuit begins 8,170 feet east of the tower, while the circuits governing east-bound main tracks begin 6,020 feet west of the tower.

The weather was clear at the time of the accident, which occurred about 2:15 a.m.

Description

Extra 9023, a light engine, was in charge of Conductor Sentz and Engineman Snyder. This train departed from McKees Rocks, 3.5 miles west of Pittsburgh, on track 1, at 2 a. m., according to the train sheet; at DX Tower it passed the eastbound interlocking home signal displaying a restricted speed indication, proceeded through station track 1, passed dwarf signal 57 displaying a restricted-speed indication, passed dwarf signal 58 displaying a stop indication, ran through the east switch which was lined for a through main track movement and collided with Extra 9513 while traveling at a speed estimated to have been between 6 and 15 miles per hour.

Extra 9513, a west-bound freight train, consisted of 50 cars and a caboose hauled by engine 9513, and was in charge of Conductor Morrison and Engineman Williams. This train departed from BK Tower, 3.7 miles east of Pittsburgh, at 1:56 a.m., according to the train sheet, passed the west-bound interlocking home signal, displaying a diverging route, restricted-speed indication, at a speed of 5 or 6 miles per hour, entered the crossover leading to the east-bound main track and collided with engine 9023 at a point 10 feet west of the leaving end of the crossover while traveling at a low rate of speed.

The engines stopped with their front ends jammed together and badly damaged. The lead truck of engine 9513 was nearly destroyed and the front driving wheels were raised 6 or 7 inches above the rails; all of the driving wheels of engine 9023 were derailed. None of the cars in Extra 9513 was derailed, although five were slightly damaged. The employees injured were the engineman, fireman and head brakeman of Extra 9513, and the engineman, fireman and conductor of engine 9023.

Summary of evidence

Engineman Snyder, of Extra 9023, stated that he passed the east-bound home signal at DX interlocking plant at a speed of 15 to 18 miles per hour. This signal displayed a restricted speed indication which he called and which was answered by both the fireman and the conductor and Engineman Snyder applied the air brakes reducing the speed to between 8 and 12 miles per hour. He did not realize that his engine had entered station track 1, but thought that he was operating over the east-bound main track, and as he was looking ahead for the indication of the automatic signal located near the eastern end of the plant he did not observe the indication of dwarf signals 57 and 58, nor did he see the position of the switch leading from station track 1 to the east-bound main track. Just as he observed the green indication of the automatic signal and opened the throttle slightly, his engine swerved to the left and he saw the headlight of the approaching train about 4 or 5 car lengths distant. He immediately closed the throttle and applied the air brakes in emergency, reducing the speed to between 6 and 8 miles per hour at the time of the accident. Engineman Snyder was familiar with the interlocking signals, having operated over station track 1 numerous times. He was in good condition, had had sufficient rest before going on duty and could not account for his confusion, except to say that it was an oversight.

Fireman Hoyson, of Extra 9023, stated that after his engine entered the interlocking plant the engineman reduced the speed to about 8 or 10 miles per hour, but when the straight track was reached he slightly opened the throttle and increased

speed to between 10 and 15 miles per hour. Fireman Hoyson was operating the injector while passing through the train shed and did not notice the indications of the dwarf signals, but when he looked out of the left window he saw Extra 9513 on the west-bound track and he assumed that his train had the block. Just prior to the collision engine 9023 was working under a light throttle and was running between 10 and 15 miles per hour and at the moment of impact Engineman Snyder closed the throttle, but Fireman Hoyson did not hear any application of the brake.

Conductor Sentz, of Extra 9023, stated that the speed was reduced as the train entered station track 1 and he thought that the engineman knew on what track he was operating. Conductor Sentz observed the restricted speed indication of dwarf signal 57 and called its indication, but received no reply. He was unable to see the indication of dwarf signal 58, but from the manner in which the engine was being operated - the speed having been increased slightly - he thought that the engineman must have received a favorable indication. Just as they approached the switch leading to the east-bound main he saw that it was lined against them and he called a warning three times. Steam was being used as the engine ran through the switch and the speed was about 10 miles per hour. He was unable to say whether the throttle was closed at the time of the accident.

Engineman Williams, of Extra 9513, stated that he approached the west-bound interlocking home signal under full control as the view is restricted to about 10 or 12 car lengths. The signal displayed a restricted speed indication and on passing it he began working steam. He saw an engine moving eastward on station track 1 and continued to watch it. He noted that the switches were lined for a movement from the west-bound to the east-bound main, and when he saw that the opposing engine was not going to stop, he immediately closed the throttle and applied the air brakes in emergency, at which time his engine was entering the crossover at a speed of 5 or 7 miles per hour. He then braced himself for the impact and was unable to say whether or not his train had stopped prior to the accident.

The statements of Fireman O'Donnell, Conductor Morrison, and Head Brakeman McDonald corroborated those of Engineman Williams. Head Brakeman McDonald thought their train had stopped prior to the accident, but Conductor Morrison stated that it had not. Conductor Morrison also stated that he examined the switch leading to station track 1 and the condition of the switch points indicated that the switch had been run through.

Towerman Lunn, on duty at DX tower, stated that as several trains were approaching the plant from both directions, light engine 9023 East was routed over station track 1 and Extra 9513

West was routed over the east-bound main track in order to save delay to a west-bound train immediately behind Extra 9513. Assistant Towerman Hofmeister who was handling the levers, was instructed to hold engine 9023 at dwarf signal 58 and Towerman Lunn checked the route as lined, noting that dwarf signal 57 displayed a restricted speed indication and signal 58 a stop indication; he stated that it is impossible to display signal 58 in the proceed position with a movement authorized from the west-bound to the east-bound track. About 2:10 or 2:12 a. m. Assistant Towerman Hofmeister called his attention to the fact that the circuit of station track 1 had cleared, and about 2:15 a.m. he was informed of the occurrence of the accident. Towerman Lunn immediately called the maintainer to check the levers, circuits and other apparatus before another movement was made over the interlocking. Towerman Lunn also stated that it is a common occurrence to route light engines over the station tracks. The statement of Assistant Towerman Hofmeister corroborated that of Towerman Lunn.

Signal Maintainer Herr stated that on being informed of the accident between 2:15 and 2:20 a. m. he checked the position of the levers and found them to be in proper position for the intended movements. He found that switch 73, at the east end of station track 1, had been run through. A piece had been broken off the left switch point leaving it about $1\frac{1}{4}$ inches open; a burr made by wheel flanges, on the right switch point, prevented the point from fitting closely against the stock rail. After making certain repairs and adjustments to the switch points and rods he manually operated the switches until the tracks were cleared, and the track circuits cleared after one damaged rail had been replaced.

Signal Supervisor Dean stated that after the accident no conditions were found to indicate that there had been anything wrong with the plant prior to the time of collision.

Discussion

The evidence indicates that Engineman Snyder of Extra 9023 thought he was operating on the east-bound main track after entering the interlocking limits when he was actually on station track 1. As a consequence he was looking ahead for the indication of east-bound automatic signal 22 located near the eastern end of the plant, and failed to observe the indications of dwarf signals 57 and 58, or to note the position of the switch which was lined against his engine. Engineman Snyder was in good physical condition, was familiar with the plant, and stated that the accident resulted from an oversight on his part.

Fireman Hoyson and Conductor Sentz were aware of the fact that their engine was operating on station track 1, but judged from the handling of the engine that the dwarf signals were displaying proceed indications. Fireman Hoyson was operating the injector and did not see either of the dwarf signals, but Conductor Sentz observed dwarf signal 57 and called its indication, but received no answer, and he did not see the indication of dwarf signal 58.

There was a discrepancy in the statements as to what action the engineman took toward bringing the engine to a stop after the opposing train was seen. Engineman Snyder stated that he closed the throttle and applied the air brakes in emergency, reducing the speed to 6 or 8 miles per hour at the time of the accident, while Fireman Hoyson stated that he did not hear any application of the brakes but the engineman closed the throttle at the moment of impact. The damage sustained by the two engines and cars indicates that the speed of engine 9023 had not been materially reduced at the time of the accident.

Conclusion

This accident was caused by failure of Extra 9023 properly to observe and obey interlocking signal indications.

Respectfully submitted,

W. J. PATTERSON,
Director.