

Inv-2347

INTERSTATE COMMERCE COMMISSION
WASHINGTON,

REPORT OF THE DIRECTOR
BUREAU OF SAFETY

ACCIDENT ON THE
PENNSYLVANIA RAILROAD

KENNY, PA.

APRIL 30, 1939

INVESTIGATION NO. 2347

SUMMARY

Inv-2347

Railroad: Pennsylvania
Date: April 30, 1939
Location: Kenny, Pa.
Kind of accident: Derailment
Train involved: Freight
Train number: PH-7
Engine numbers: 3710 and 6769
Consist: 36 cars, cabooses
Speed: 20-25 m.p.h.
Operation: Timetable, train orders and
automatic block-signal system;
accident occurred on yard track
Track: Four; tangent; descending grade
northward
Time: 2:32 a.m.
Weather: Clear
Casualties: 5 killed; 3 injured
Cause: Failure to observe that movement
was being made on wrong track

May 31, 1939.

To the Commission:

On April 30, 1939, there was a derailment of a freight train on the Pennsylvania Railroad at Kenny, Pa., which resulted in the death of five employees, and the injury of one employee and two trespassers. This accident was investigated in conjunction with the Pennsylvania Public Utility Commission.

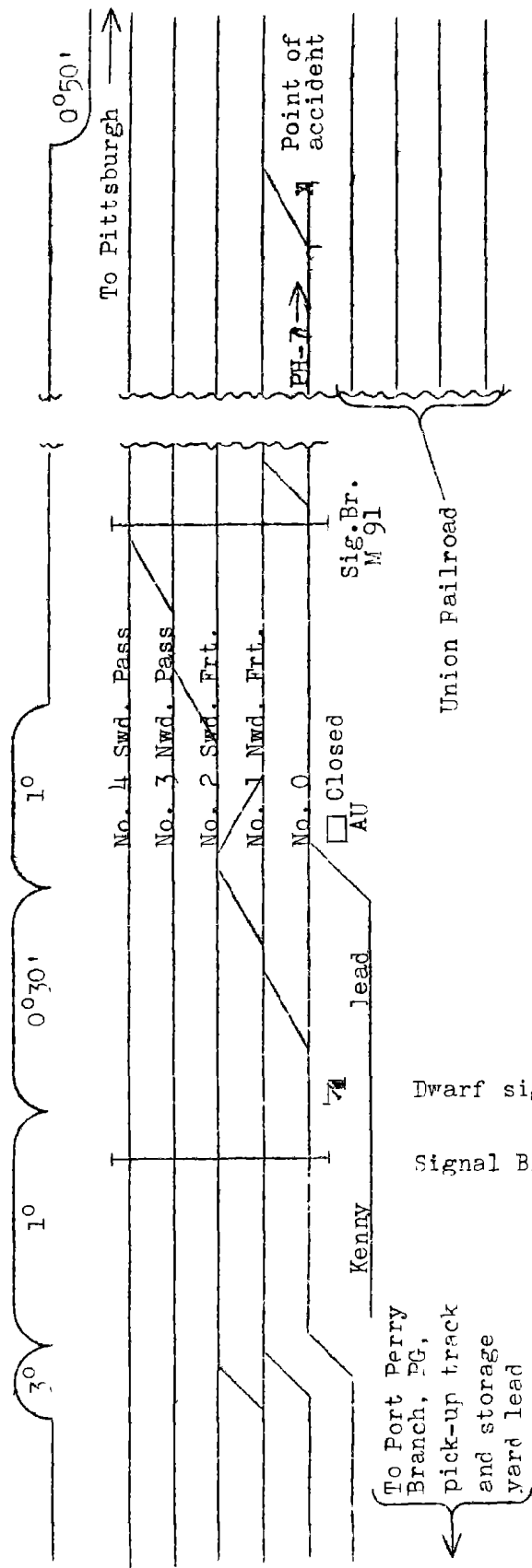
Location and Method of Operation

This accident occurred on that part of the Monongahela Division which extends between Division Post, Pittsburgh, and Ten Mile Run Junction, Pa., a distance of 61.7 miles. In the vicinity of the point of accident this is a four-track line over which trains are operated by timetable, train orders, and an automatic block-signal system; these tracks from east to west are numbered 1, 2, 3, and 4, No. 1 being the northward freight track. The accident occurred at the north end or stub end of a yard track known as track No. 0; this track is 7,993 feet long, parallels the main tracks on the east, and extends northward from the Port Perry Branch at PG Block Station, located 0.8 mile south of Kenny. Four tracks of the Union Railroad, on which tracks there are numerous switch lights, parallel track No. 0 on the east, making nine parallel tracks in the vicinity of the point of accident. Track centers of all nine tracks are spaced approximately 13½ feet apart. Approaching from the south on track No. 0 there is a compound curve to the right a distance of 2,058 feet, the curvature of the eastern portion varying from 0° 30' to 1°, a tangent 1,284 feet long, a 1° 15' curve to the right 586 feet in length, a tangent a distance of 648 feet, a 4° curve to the left 144 feet long and then a tangent 763 feet in length to the north end of track No. 0. The grade is descending northward a distance of 6,505 feet, varying from 0.01 to 0.39 percent, then it is 0.05 percent ascending a distance of 1,488 feet to the end of the track.

All tracks involved are within the confines of Thomson yard. The switches and signals of an extensive interlocked area are controlled from PG Block Station. North-bound trains required to work in Thomson yard normally use track No. 0 and may enter the main tracks therefrom only through the interlocked cross-overs or by permission from the operator at PG Block Station to use the hand-throw cross-overs.



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|--------------------------|
| (Pittsburgh, Pa.) |
| o Division Post |
| 9.1 mi. |
| X Kenny (P. of A.) |
| 0.8 mi. |
| o PG Block Station |
| 51.8 mi. |
| o Ten Mile Run Jct., Pa. |



KENNY

Inv. No. 2347
 Pennsylvania RR
 Kenny, Pa.
 April 30, 1939

Interlocking home signal 6 at PG Block Station is located at the west end of the westward main track of the Port Perry Branch and governs northward movements to track No. 0 and also to track No. 1 by means of a cross-over located about 125 feet north of this signal. Signal bridge M94, which spans all five tracks but carries signals for only the main tracks, is located 3,259 feet north of signal 6. Dwarf signal 20, which governs the use of the main tracks northward, is located 390 feet north of signal bridge M94 and east of and adjacent to track No. 0. A second facing-point cross-over operated from PG Block Station is located 22 feet north of dwarf signal 20 and leads to track No. 1 and thence to tracks Nos. 2, 3, and 4; track No. 0 is not bonded north of the clearance point of this cross-over. A trailing-point hand-throw switch to the Kenny lead track, which parallels No. 0 track on the east, is located 479 feet north of the second facing-point cross-over. Signal bridge M91, which spans all five tracks but carries signals for only the main tracks, is located 903 feet north of Kenny lead-track switch. A third and a fourth facing-point cross-overs of hand-throw operation and equipped with center-locking devices, are located 16 feet and 2,819 feet, respectively, north of signal bridge M91. Track No. 0 comes to a dead end 121 feet north of the fourth cross-over switch which is normally set for the stub end, or in derailing position; a purple light is displayed by the switch lamp, which is of the long-burning oil type with a 4 $\frac{1}{2}$ -inch lens located 13 inches above and 49 inches east of the east rail. The north portion of track No. 0 is used for storage purposes, but no cars were stored there at the time of the accident.

Home signal 6 is a position-light signal located on a mast; it displays three indications, stop, caution-slow-speed, and proceed; it is not possible to display a proceed indication when the route is lined for track No. 0. Dwarf signal 20 displays two indications, stop, and caution-slow-speed.

Rules 10 (f) and 278 of the book of rules provide:

"10. COLOR SIGNALS. (f) Purple. Stop."

"278. Indication - proceed at not exceeding 15 miles per hour with caution prepared to stop short of train or obstruction. Name-Caution-slow-speed-signal."

Timetable special instructions D1504 and D1608 provide:

"D1504. Other Assigned Tracks and Sidings.
* * *. No. 0 track between its connection with No. 1 track north of PG and just south of Kenny will be used as a switching track for trains in both directions and movements will be controlled by signalman at PG. Special instruction D1608 in effect. Northward trains may use this track by receiving proper signal at PG interlocking and southward trains by receiving proper signal at Kenny. Trains clearing this track at the shop yard will report to and get permission to enter from signalman at PG."

"D1608. Trains moving on yard and other tracks not operated under block signal rules or by train orders must move at such speed that they can stop within range of vision unless tracks are seen or known to be clear and switches properly set."

The weather was clear at the time of the accident, which occurred at 2:32 a.m.

Description

PH-7, a north-bound freight train, at the time of the accident consisted of 36 cars and a caboose, hauled by engines 3710 and 6769, and was in charge of Conductor Ramsour and Enginemen Lingafelter and Feeney. This train had 15 cars when it left Pitcairn, Pa., which was at 1:47 a.m. It arrived at PG Block Station via the Port Perry Branch and passed home signal 6, which was displaying a caution-slow-speed indication, entered track No. 0 at 1:58 a.m., passed signal bridge M94 and stopped at 2:03 a.m. a short distance south of dwarf signal 20. The train was uncoupled behind the second car and the forward part of the train was pulled ahead past dwarf signal 20, which was displaying a caution-slow-speed indication; a cut of 21 cars was picked up from Kenny lead track and coupled ahead of the rear portion of the train on track No. 0, in which position the engines were north of dwarf signal 20. The train departed from this point, passed signal bridge M91, the third cross-over, then the fourth cross-over, the switch lamp of which was displaying a stop indication, and ran off the end of the track while traveling at a speed estimated at 20 to 25 miles per hour.

Both engines, their tenders, and the first two cars were derailed but stopped upright and practically parallel

with the adjacent tracks. The front end of the first engine was 136 feet north of the end of track No. 0. The cabs of both engines were crushed and the first tender stood on its front end. The second engine was raised against the bottom of the first tender and stopped with the right drivers against a car standing on the adjacent track of the Union Railroad. The first car was demolished. The last thirty-four cars and the caboose were damaged, the twenty-fifth car being telescoped. The employees killed were both enginemen and both firemen and the conductor, and the employee injured was the flagman.

Summary of Evidence

Brakeman Winrod stated that at Pitcairn the air brakes were tested. At PG Block Station the train entered track No. 0 and stopped about four or five car lengths south of dwarf signal 20. He made the cut behind the second car, handled the switch for the back-up movement to pick up the cars on Kenny lead track, made the coupling to them and the usual air-brake test was made. The cars were pulled out and the flagman coupled them to the rear portion of the train and he, himself, handled the switch and remained at the head end to relay signals. At this time the lead engine stood about three or four car lengths north of old AU tower, located about 14 feet north of Kenny lead-track switch, at which time the headlight was burning. A road test of the air brakes was made on the entire train, and he went in the look-out shelter on top of the second tender as the conductor boarded the lead engine. From this shelter he could see out the side and back windows, but not ahead. He could not tell on what route the train was traveling and he did not realize that it was on track No. 0. The first knowledge he had of anything wrong was when the engines ran off the end of the track, at which time both engines were working steam and the speed was between 20 and 25 miles per hour. No air-brake application was made immediately prior to the accident. It had been 8 or 10 years since he had used track No. 0 and he was not very familiar with it and did not know how long it was, but he knew that from the point where the engines stood after the pick-up was made it would be necessary to cross over through hand-operated switches to enter track No. 1. He knew that there was a derail switch at the north end of track No. 0, but he was not in position to see the switch-lamp indication there. It would have been his duty to operate the cross-over switches on instructions from the conductor, but no such instructions were received and he did not give any thought about the train crossing at a hand-operated cross-over, assuming that if there were anything to be done it had been otherwise arranged

for. At Pitcairn both enginemen and the conductor appeared normal in every respect.

Flagman Mace stated that as the caboose passed PG, moving slowly, the yardmaster instructed them to pick up cars from Kenny lead; the conductor repeated these instructions, and said he would ride the engine to QB, 7.2 miles north of PG. After the cars were picked up he coupled them to the rear portion of the train on track No. 0, then the usual air-brake test was made and he saw that the brake was set on the second car in the rear portion, gave a proceed signal, boarded the caboose, went inside and was not aware of anything wrong until the accident occurred, at which time the speed was about 20 miles per hour. He thought that the engines were south of dwarf signal 20 at the interlocked cross-over when the pick-up was made and that his train used that cross-over to move from track No. 0. He did not remember of having previously picked up cars from Kenny lead track and was not fully acquainted with the tracks there.

Assistant Yard Master Bowen stated that as train PH-7 approached PG the headlight was burning brightly. He gave a hand-lamp proceed signal and the headlight was dimmed.

Block Operator Kasten, at PG Block Station, stated that he lined the route for track No. 0 and dwarf signal 20 for PH-7 to go north of the remote-control signal to Kenny lead track. Soon thereafter the indicators cleared up, showing that the engines had passed north of the switch, and he set the signals to make the return movement. He expected to be called after the return movement was made to arrange for PH-7 to move out of track No. 0, provided sufficient room had not been left to get out over the interlocking at dwarf signal 20, or to back up to clear this signal, but no word was received. He could not see the train after it passed the tower and it seemed to be engaged quite a long time. He tried to communicate by telephone with a car inspector but it was some time before he succeeded in contacting him. In the meantime the circuit cleared up, which indicated that either the train had backed up to a point south of dwarf signal 20 in order to head out through the interlocked cross-over, or the entire train had proceeded northward over this switch. He then was informed by the car inspector that PH-7 had proceeded northward on track No. 0, and shortly afterwards he was informed of the accident. There was nothing to indicate to him which route the train had taken. There is a track circuit, a light in the switch and a signal indicator in the tower; when the train is on the circuit, the light is out, and when the train clears, it

is lighted. After a train enters track No. 0 he usually heads it out to the main track without knowing when it is actually ready to depart, provided the entire train is then south of dwarf signal 20, but this was not the case in this instance. Therefore, under the requirements PH-7 could not leave track No. 0 without first obtaining permission by communicating with him. He said that engines of the type involved were not authorized to use the fourth cross-over. He did not see any member of the crew prior to the accident. PH-7 picks up from Kenny lead about once or twice a week; two nights before the accident it filled out on that track. During the last two or three weeks it has picked up from that track more often than usual.

Car Inspector McIntosh, at Pitcairn, stated that the air brakes were tested and worked properly. Before the train departed he talked with both enginemen and the conductor and they appeared normal.

Car Inspector Kenst, at Kenny yard, stated that the air brakes were tested on the cars that were to be picked up when they were assembled on Kenny lead track. After the accident he saw the switch lamp on the switch stand of the fourth cross-over at the north end of track No. 0 and it was burning and displaying a purple aspect.

Train Master Crawford and Assistant Train Master-Assistant Road Foreman of Engines Mackall inspected the derail switch involved and the equipment about 1½ hours after the accident. The switch lamp was burning and showed a purple aspect, the lever for the center-locking device was in normal position and locked, and the switch was in normal position, set to derail. The brakes were applied on the 34 cars that were not derailed. The throttle lever of the second engine was about half open, the brake valve in running position, the reverse lever in forward position and the double-heading cock cut out. About 3 p.m. the lead engine was pulled away from its tender and the throttle lever was found to be about half open and the reverse lever in forward position. The brake valve was torn away and pipes were broken off.

Division Engineer Rudisill stated that he arrived at the scene of accident about 4:15 a.m. The normal position of the switch involved is set to derail; the switch lamp displays a purple aspect for derail movements, and a yellow aspect for movements through the cross-over to main track No. 1. In this instance the switch lamp displayed purple, the switch was properly locked, the switch points were lined

for the normal position and fitted properly against the rail and were not damaged.

Statements of other witnesses did not develop anything additional of importance.

According to the record of trips furnished by the railroad company for the 60-day period prior to the accident over the territory involved, Conductor Ramsour made fourteen southward and thirteen northward trips, twenty as flagman and seven as conductor, and four of these were on train PH-7, three being as flagman and one as conductor. Engineman Lingafelter made five southward and four northward trips and three of these were on PH-7. Engineman Feeney made sixteen southward and nineteen northward trips, none of which were on PH-7.

Observations of the Commission's Inspectors

The Commission's inspectors observed that the purple aspect of the switch lamp involved could be seen for a distance of about 1,500 feet; however, in this vicinity the nine parallel tracks have a uniform track-center spacing of $13\frac{1}{2}$ feet and there is a maze of dwarf switch lights on the Union Railroad, making it difficult to locate and identify any particular light. From the point where the engines last stood on track No. 0, prior to the accident, the automatic signal on bridge M91 for track No. 1 appeared to the right of the engineman's direct view ahead because of track curvature.

Discussion

Train PH-7 arrived over the Port Perry Branch at PG tower and entered yard track No. 0 under a caution-slow-speed indication, and stopped south of dwarf signal 20 which was also displaying a caution-slow-speed indication. After picking up twenty-one cars and coupling them to the rear portion of the train, both engines stood on track No. 0 about 515 feet north of dwarf signal 20. The train then proceeded and passed both the third and the fourth cross-overs, and ran off the north end of the stub track at a speed estimated to have been from 20 to 25 miles per hour.

Under the rules this train was required either to back to a point south of dwarf signal 20 in order to head through the interlocked cross-over or to proceed on track

No. 0 to the third cross-over at a speed of not exceeding 15 miles per hour and to obtain permission from the operator to enter the main track at that point. The remainder of track No. 0 was used as a storage track and engines of the type involved were not authorized to use the fourth cross-over.

It was dark but the weather was clear at the time of the accident, and the purple aspect of the switch lamp could have been seen a distance of about 1,500 feet; however, there are numerous other switch lamps in this vicinity and it is difficult to identify any particular light. Also, from the point where the engines stood after the pick-up was coupled to the rear portion of the train the automatic signal on bridge M91 for track No. 1 appeared to the right of the engineman's direct view, owing to track curvature. The lead engineman had made only three northward trips on train PH-7 during the 60-day period prior to the accident, the conductor had made only four trips on this train and three of these were as flagman, and the second engineman had not made any trips on this train within this period. The brakeman had not previously used track No. 0 for 8 or 10 years, and the flagman did not recall of having ever used it prior to the accident. The brakeman did not realize that his train had departed on track No. 0, and the flagman thought that it had headed out at dwarf signal 20 to the main track; these two employees were the only surviving members of the crew of train PH-7. It appears that all five employees on both engines were of the impression that their train was on the main track, but as they were killed in the accident it is impossible to definitely determine the cause of their failure to observe that they were on a yard track.

Conclusion

This accident was caused by failure to observe that a movement was being made on the wrong track.

Respectfully submitted,

W. J. PATTERSON,

Director.