

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON
THE PENNSYLVANIA RAILROAD AT HILLSIDE, PA., ON
JULY 15, 1929.

November 15, 1929.

To the Commission:

On July 15, 1929, there was a derailment of a freight train on the Pennsylvania Railroad at Hillside, Pa., the wreckage of which was struck by a passenger train on an adjoining track, which resulted in the death of one employee and the injury of one employee.

Location and method of operation

This accident occurred on the Pittsburgh Division, which extends between Pittsburgh and Altoona, Pa., a distance of 115.8 miles; in the vicinity of the point of accident this is a four-track line over which trains are operated by time-table, train orders, and an automatic block-signal system. The tracks are numbered from south to north, 1, 2, 3, and 4, the first wheel marks occurring on track 1 at a highway crossing located approximately 1,650 feet west of the station at Hillside, while the main portion of the wreckage was about 1,000 feet east of the station. Approaching this point from the west the track is tangent for a distance of about 2,550 feet to where the first wheel marks appeared and for about 2 miles beyond that point. The grade is 0.44 per cent descending for eastbound trains at the point of accident.

The weather was clear at the time of the accident, which occurred at about 11.03 p.m.

Description

Eastbound freight train extra 4458 consisted of 34 cars and a caboose, hauled by engine 4458, with helper engine 4586 behind the caboose, and was in charge of Conductor Ross and Enginemen Lotz and Hiland. This train passed DR Block Station, 3.9 miles west of Hillside, at 10.44 p.m., moving on track 1, and was derailed at Hillside while traveling at a speed estimated to have been between 30 and 40 miles per hour.

Eastbound passenger train No. 60 consisted of one Pullman combination baggage and club car and six Pullman sleeping cars, hauled by engine 3676, and was in charge of Conductor Simpson and Engineman Evars. This train passed DR Block Station on track 2 at 11 p.m., and collided with the wreckage of extra 4458 at Hillside, while traveling at a speed estimated at about 40 miles per hour.

The rear truck of the nineteenth car and the twentieth to the twenty-sixth cars, inclusive, in the freight train, were derailed. The train parted between the nineteenth car and twentieth cars, the nineteenth car stopping more than 600 feet east of the twentieth car. The twentieth car came to rest leaning toward the north obstructing track 2, while the other cars remained upright on track 1. Engine 3676, of train No. 60, came to rest on its right side about 200 feet beyond where it struck the wreckage; the tender was derailed and remained coupled to the engine. The first four passenger cars and the forward truck of the fifth car were also derailed, but they remained upright in line with the track, with the forward end of the leading car resting on top of the tender. Engine 3676, its tender, and the first passenger car were considerably damaged, and the other derailed passenger cars as well as four of the freight cars were more or less damaged. The employee killed was the engineman of train No. 60, and the employee injured was the fireman of that train.

Summary of evidence

Engineman Lotz, of extra 4458, stated that two cars were picked up at Derry, 3.4 miles west of Hillside, and after a brake test was made the train continued, and just after his engine passed the station at Hillside he felt an unusual jerk and upon looking at the air gauge he noticed that the brakes had applied. As the throttle was closed he permitted the train to stop of its own accord, which he thought was about 15 car-lengths beyond the point where the unusual motion had occurred, he estimated the speed of his train at between 30 and 35 miles per hour at the time the air brakes applied. Engineman Lotz also said that he had looked back along the train about three-fourths of a mile west of Hillside but noticed nothing out of the ordinary; he did not hear train No. 60 approaching and did not know what had occurred until some time afterwards.

Fireman Boyle, of extra 4458, stated that he was riding on his seatbox as the train approached Hillside and when he felt a slight lurch he looked back and saw fire flying. He estimated the speed at about 30 or 35

miles per hour at the time of the first indication of trouble and thought the train stopped within a distance of 10 or 15 car-lengths. He got off to protect against westbound trains just before the engine came to a stop, but on looking back toward the rear of his own train he did not see or hear anything of train No. 60.

Head Brakeman Henderson, of extra 4458, stated that he rode on the left side of the engine cab between Derry and the point of accident and that he had looked back while the train was rounding the curve west of Hillside. Upon reaching a point between 500 and 1,000 feet east of the station at Hillside he felt a lurch, and again looked back and at this time he noticed the glare of fire; both he and the fireman called it to the attention of the engineman at the same time. He did not see train No. 60 and was of the opinion that that train collided with the wreckage before the head end of his own train came to a stop.

Conductor Ross, of extra 4458, stated that while at KR Block Station, 9.7 miles west of Hillside, he inspected the train and found a hot box on the seventeenth car. This car was set out at Ligoner and five cars picked up at that point. The train proceeded to DR Block Station, where two more cars were picked up, but he did not inspect the train at this point. He was riding in the caboose approaching Hillside and when the train was going around the curve west of that point he went out on the platform and looked ahead but saw no indications of anything wrong. He re-entered the caboose and when the train was about at the water bridge, approximately 350 feet west of the station, the air brakes went into emergency; he estimated the speed of his train at this time at 35 or 40 miles per hour. He observed train No. 60 was then approaching closely and he immediately lighted a fuse and threw it on track 2, when train No. 60 was about 15 car-lengths distant. The flagman also gave stop signals with his lanterns, which were acknowledged by the approaching train. He said that fire was flying from the wheels of the passenger train when it passed his caboose.

Flagman Taylor, of extra 4458, stated that he rode on the right side in the cupola of the caboose between Derry and Ridge View Park, the latter station being 1.2 miles west of Hillside, keeping a sharp lookout ahead, but after passing that point he left the cupola and went out on the rear platform for the purpose of cutting off the helper engine and was still on the platform when he felt an application of the brakes. At first he thought it was a service application, but he soon realized that it was an emergency application and knowing of no reason for making

such a stop he grabbed his lanterns, got off the caboose just before the train stopped, and started giving stop signals, which were acknowledged by train No. 60, which was then about 15 car-lengths to the rear of his own train. The conductor also threw off a fusee before that train passed their caboose. While going back to flag he noticed marks on the ties but could not determine whether they were flange marks or marks made by something dragging.

Engineman Hiland, in charge of helper engine 4586, stated that while at Derry he informed the conductor that he would take water at Hillside. The train was traveling at a speed of about 55 or 40 miles per hour when his engine was uncoupled, which was at a point about 25 or 30 car-lengths west of the water station. The engine was stopped at the water station but train No. 60 passed before water could be taken, and when it passed the engineman on that train acknowledged a flag. Engineman Hiland did not know that an accident had occurred until informed of the fact by the flagman after his engine started towards the rear of the train.

Fireman Ellenberger, of engine 4586, stated that he was looking ahead while going around the curve at Ridge View Park but did not notice anything wrong. As soon as his engine was uncoupled he went back over the tender to take water and then looked ahead to locate the water station and in doing so he saw two lights on the rear of the caboose, one of which appeared to be a fusee and which seemed to be moving toward the left side of the caboose. Realizing that something was wrong he gave a stop signal to the crew of train No. 60, the head end of their engine at the time being opposite the tender of his own engine. He did not know whether this signal was seen by the engine crew, but when that engine reached a point about four or five car-lengths beyond, he heard a flag signal being acknowledged. He said that the head end of train No. 60 passed him before his own engine came to a stop.

Fireman Kaefer, of train No. 60, stated that after his engine was coupled to the train at Pittsburgh the regular air-brake test was made and the car inspector reported to the engineer that all brakes on the cars were in proper working order, and that the brakes worked satisfactorily en route. The headlight was burning brightly as the train approached Hillside. After calling the indication of the automatic signal east of Ridge View Park he got down on the engine deck and had just started putting in a fire when the engineman sounded two blasts of the whistle and at the same time applied the brakes in emergency. Fireman Ellenberger looked ahead from the left side of the engine after the whistle was sounded but did not see any obstruction although shortly afterwards the engine appeared to have encountered something which caused it to

sway considerably and finally to turn over on its right side. He did not know the exact location of his train when the brakes were applied but they took hold noticeably and he thought the speed had been reduced to about 40 miles per hour by the time the accident occurred.

Conductor Simpson, of train No. 60, stated that the brakes were tested and reported in good condition before departing from Pittsburgh and he noticed no unusual handling of the train in making a station stop and also in reducing speed after leaving that point. He was riding in the second car of the train approaching Hillside and his first intimation of anything wrong was when the engine whistle was sounded twice, which was followed immediately by an emergency application of the brakes. He did not know how far the train traveled after the brakes were applied but said the accident occurred a very few seconds later. He estimated the speed at 60 miles per hour at the time the brakes were applied, but they responded promptly and had reduced the speed to about 40 miles per hour at the time of the accident.

Air Brake Inspector Faras stated that he made the regular brake test on train No. 60 at Pittsburgh and found them to be in proper condition. Car Inspector McCarthy stated that he inspected the cars of extra 4458 at Pitcairn, 33 miles west of Hillside, and to the best of his knowledge they were in good condition. Car Inspector Regan stated that he was on duty at Pitcairn at the time the cars of extra 4458 were assembled; he did not remember the condition of these particular cars but was satisfied they were intact when they left that point. Air Brake Repairman Decker stated that he assisted in making an inspection and brake test on the cars of extra 4458 at Pitcairn and noticed no defects with the trucks of the cars he inspected.

The first indication of any disturbance was a slight mark on the end of a tie on the outside of the south rail of track 1 at a point approximately 6,900 feet west of where the main part of the wreckage came to rest. These marks extended eastward intermittently and became more prominent on the same side of the rail until they came to the road crossing, a distance of 4,134 feet; at this point the first wheel marks appeared on the ties and they continued from that point to the point of final derailment. Fragments of a journal box and bolts were found on the south side of track 1, at a point about 100 feet east of where the first mark appeared on the ties.

The rear truck of the nineteenth car, P. R. R. hopper car 149236, was demolished. This car was equipped with trucks of the arch-bar type and had a capacity of 100,000 pounds and a load limit of 130,200 pounds; at the time of the accident it was loaded with 130,000 pounds of iron ore. Both journal box bolts on the right or south side of the truck, front journal, had been sheared off and it was some of the parts of these bolts which were found near where the first mark appeared on a tie.

Conclusions

This accident was apparently caused by the failure of the rear truck of the nineteenth car in extra 4458.

According to the statements of the crew of extra 4458 they were unaware of anything unusual until the brakes applied in emergency, whereupon the firemen and head brakemen looked backward and noticed fire flying from beneath the train. Subsequent to the accident the rear truck of the nineteenth car, of the arch-bar type, was found in badly damaged condition and the indications were that two journal box bolts on the right side had been sheared off, the top of one and the bottom of another being found approximately 6,900 feet from where the wrecked cars came to rest. The marks on the ties indicated that some part of this truck started dragging at that point and continued for a distance of about 4,100 feet until it encountered the crossing plank of a highway crossing and then the truck became partly derailed and followed along the track in this position until it came in contact with a trailing-point switch near Hillside station, where additional damage was done. A few hundred feet farther east, the truck encountered the frog of another trailing-point switch, where the truck was demolished, resulting in the final derailment and the breaking in two of the train.

It appears that as soon as it became known that something was wrong with extra 4458, the crew took immediate steps to flag train No. 60, which was then closely approaching on track 2, the engineer of that train was on the alert and applied the brakes in emergency, but the distance in which he had to stop his train was not sufficient to prevent it from colliding with the derailed equipment which was obstructing track 2.

The employees involved were experienced men and at the time of the accident none of them had been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted,
W. P. BORLAND
Director.