

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
NEW YORK, NEW HAVEN & HARTFORD RAILROAD NEAR HILLSIDE,
MASS., ON OCTOBER 13, 1927

November 18, 1927

To the Commission

On October 13, 1927, there was a derailment of a freight train on the New York, New Haven & Hartford Railroad near Hillside, Mass., resulting in the death of one employee and the injury of one employee.

Location and method of operation

This accident occurred on the Wrentham Branch of the Providence Division, extending between Norwood Central, Mass., and Valley Falls, P. I., a distance of 23.85 miles, in the vicinity of the point of accident this is a single-track line over which trains are operated by time-table, train orders and a manual block-signal system. The derailment occurred at a point about 3,700 feet west of the station at Hillside, approaching this point from the east, beginning at the station, the track is tangent for a distance of 1,925 feet, followed by a 1° curve to the left 1,727 feet in length, the accident occurring at the leaving end of this curve. The grade is 1.1 per cent descending for westbound trains. The track is laid with 78-pound rails, 30 feet in length, with an average of about 13 ties to the rail-length, tie-dated and ballasted with sand and gravel.

Although the weather was clear at the time of the accident, which occurred at about 2.45 p.m., it had rained unusually hard during the forenoon.

Description

Westbound freight train extra 260 consisted of five cars and a caboose, hauled by engine 260, and was in charge of Conductor Vizer and Engineman Keenan. This train left North Attleboro, 2.26 miles east of Hillside, at 2.30 p.m., and was derailed at a point about 3,700 feet west of Hillside station while traveling at a speed estimated to have been between 15 and 20 miles per hour.

Engine 260 together with its tender and the first car in the train were derailed to the south and came to rest on their left sides, parallel with the track. The employee killed was the engineman.

Summary of evidence

Fireman Lillie stated that he reported for duty at 7.15 a.m. the day of the accident and that it rained very hard until about noon, but that it was not raining when the train departed from North Attleboro. He was riding on the left side of the engine with the head brakeman, when approaching the point of accident and he said the engineman had cautioned them to look out for washouts. The speed of the train was about 20 miles per hour, steam having been shut off and a light air-brake application having been made to control the speed of the train on the descending grade, when he saw a washout, on the left side of the track, just as the engine reached it. The result was that none of the three employees on the engine had time to get off before it was derailed. Fireman Lillie further stated that when passing through the 2,800 foot cut immediately west of the point of accident he did not notice any unusual flow of water in the ditch on the left side of the track, nor was there any indication of a washout.

Head Brakeman Hurtado said the engineman had remarked "That looks like a washout back there", Head Brakeman Hurtado then looked down and saw water up to the ends of the ties, with a swift current, after which he turned around and looked back along the left side of the train to see if the cars passed that point in safety, and it was at about this time that the accident occurred. His other statements were similar to those of Fireman Lillie.

Conductor Vizor who was riding in the caboose said a light application of the air brakes was made shortly before the accident occurred, and he estimated the speed of the train at the time of the accident to have been about 20 miles per hour. He had noticed water in the ditches on each side of the track, but he had not noticed any water on the track, after the accident, however, he saw water on the track and on both sides of it at the point of accident. Conductor Vizor had handled trains over this territory at various times during the past 10 or 15 years and he said this was the first time he had ever seen a washout at this point, that he had not anticipated any trouble from washouts, and that he did not have any conversation with Engineman Keenan in regard to track conditions before departing from North Attleboro, the statements of Brakeman Rooney and Flagman Beaulieu, who were also riding in the caboose, developed nothing additional of importance.

Section Foreman Mancini stated that it was raining lightly when he went on duty at 7 a.m., the day of the accident, that it rained very hard for about an hour during the forenoon, and that it stopped raining around noon. The section foreman patrolled the track east of North Attleboro, his section extending from Plainville, 0.90 mile east of North Attleboro, to Adamsdale Junction, 4.20 miles west thereof, and Trackwalker Perdue patrolled the track west of North Attleboro, including the point of accident, while the two section laborers remained in the tool house at North Attleboro. Section Foreman Mancini said that during the greater part of the forenoon he was located at Plainville and that he did not see Trackwalker Perdue from 7 a.m. until about noon, at which time he met the trackwalker at the tool house and was informed that conditions were all right west of North Attleboro. Section Foreman Mancini further stated that he had never had any trouble from washouts at the point where the accident occurred, had never had occasion to have slow orders issued to cover that section of track, and that Culvert 970, 166 feet east of the point of accident had always provided adequate drainage for water in the cut.

Trackwalker Perdue stated that when he started out to patrol the track on the morning of the accident he reached the culvert east of where the accident occurred at about 8 a.m. and at that time the culvert was clear, containing no weeds, stones, etc., and it was taking care of the water flowing from the south side to the north side of the track. He then proceeded to Adamsdale Junction and on his return trip he arrived at the point where the accident afterwards occurred at about 10 a.m. At this time it was raining very hard and the water was at least 2 feet deep in the ditch on the south side of the track, getting close to the ends of the ties, with a strong current which was carrying leaves, branches, etc., along with it, while he also saw a couple of old ties floating past him. He thought that this condition was safe, however, even though it rained for another hour and a half afterwards. He remained in this vicinity about one-half hour, however, and then started toward the tool house, but before reaching that point it began to rain very hard, and he went inside the station at Hillside and remained there about one-half hour, after which he proceeded to the tool house, reaching that point about noon. Trackwalker Perdue stated that he reported to Section Foreman Mancini that everything was all right and that there were no washouts to amount to anything, just a few holes, also that there was a lot of water running on each side of the track, at the point where the accident afterwards occurred, and he said the section foreman then told him to go down to that point after dinner. Trackwalker Perdue said that he started to comply with these instructions and had reached a point he described as

Metcalf's Cut, located about $1\frac{1}{2}$ miles east of Hillside, when extra 260 passed him. Section Foreman Mancini arrived while he was doing some minor work at this point and informed him of the accident.

The land on the south side of the track, east of the culvert previously mentioned, is cut-over pasture land which extends back some distance from the track and slopes gradually upward from the edge of the 2,800 foot cut, with the result that the natural drainage of this land is toward the edge of the cut. In order to care for this drainage in the vicinity of the central portion of the cut there is a ditch immediately inside of the fence line which carries the water to a point opposite the culvert and then turns to the north or right and leads directly to the culvert, there is also another ditch along the side of the track carrying the water from the cut toward the culvert. Division Engineer Ruff said he reached the point of accident less than two hours after its occurrence and that time there were indications that there had been an abnormal volume of water for the culvert to handle, for at a point west of the culvert it appeared that the water had been over the track, while at the approximate point of derailment the ballast had been washed out from under the track to the extent of about one-half of the gauge of the track, to a depth of about 10 inches under the ends of the ties, this condition extended for a distance of about 200 feet, most of which was west of the point where the engine came to rest. Mr. Ruff said there was a small brook flowing through some woods quite a distance back from the track, on the south or uphill side. On account of the swampy condition of the ground at the time of his inspection of this brook he had been unable to ascertain its outlet, but he said he thought it was on the other side of the hill and that overflow water from this brook would not reach the railroad track except at a point about 500 feet west of the point of accident.

The records of the weather bureau at Providence, R. I., 10.29 miles from Hillside, showed that 1.94 inches of rain fell between 4 a. m. and 12 o'clock noon, nearly two-thirds of which fell during the last two hours of the period mentioned. While this was considered as an excessive rainfall, it further appeared that on August 24 there was a rainfall of 2.46 inches within a period of only one hour, and on the train sheets covering that day there were several notations of washouts and other bad track conditions at various points in and near Providence, but there was no notation of any difficulty at the point of the accident here under investigation.

Conclusions

This accident was caused by a washout.

The statements of the surviving members of the crew who were on the engine indicated that the washout was not seen until about the time the engine reached it and that the engine was derailed before any of them had a chance to get off. The statements of the division engineer were to the effect that he found the ballast had been washed out from under the track to the extent of about one-half the gauge of the track and to a depth of about 10 inches. Ordinarily the water flowing along the south side of the right of way is carried under the track at a culvert located several hundred feet east of the point of accident, this water then flowing away from the track on the north side thereof, but on the day of the accident the volume of water delivered by the two ditches was so large that the culvert could not handle it, with the result that it flowed along the south side of the track beyond the culvert and washed out the ballast to the extent above indicated. In view of the fact that within the preceding two months there had been a rainfall of considerably greater intensity which had not caused trouble at this point, it would seem apparent that there must have been some unusual condition to account for the volume of water which resulted in the occurrence of this accident, and it is possible it can be accounted for by a temporary damming of the brook located in the woods some distance from the track, the giving way of this dam causing a sudden rush of accumulated water. Regardless of the source of the water, however, it would appear that Trackwalker Percue did not properly inform Section Foreman Mancini concerning the conditions he had observed in the immediate vicinity of the point of accident, had he done so and had the section foreman acted promptly upon receipt of such information, there is little doubt but that the accident would have been prevented.

All 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