INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN ACCIDENT WHICH OCCURRED ON THE CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC RAILROAD NEAR DURAND, ILL., ON JUNE 6, 1932.

July 21, 1932.

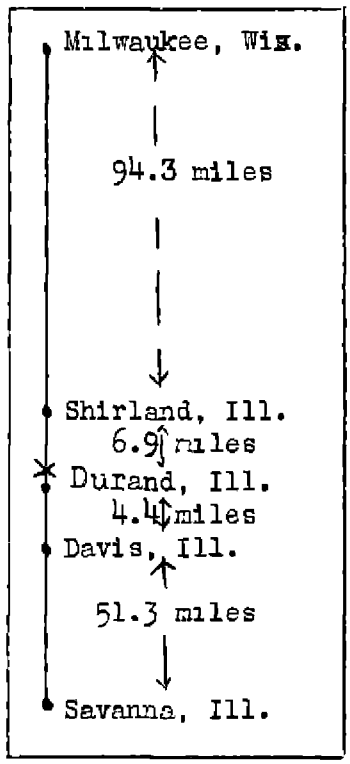
To the Commission:

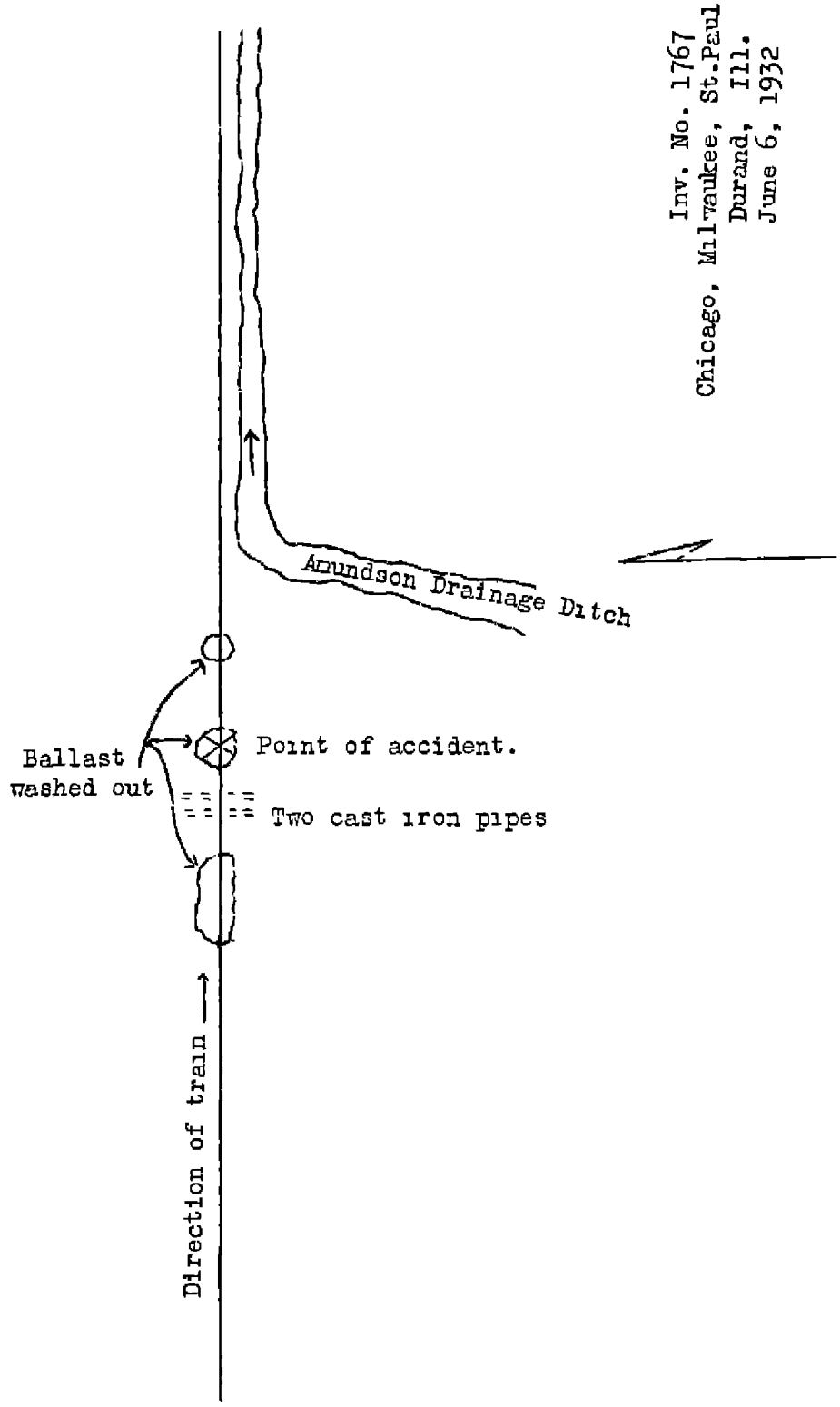
On June 6, 1932, there was a derailment of a passenger train on the Chicago, Milwaukee, St. Paul & Pacific Railroad near Durand, Ill., which resulted in the death of 1 employee, and the injury of 14 passengers, 5 employees, 5 mail clerks, 1 Pullman conductor, 2 porters and 2 dining-car employees. This accident was investigated in conjunction with a representative of the Illinois Commerce Commission.

Location and method of operation

This accident occurred on that part of the Second District of the Milwaukee Division extending between Savanna, Ill., and Milwaukee, Wis., a distance of 156.9 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 accident occurred about 3 miles east of Durand; approaching this point from either direction the track is tangent for a considerable distance. The grade for eastbound trains is ascending to a point about 1 mile west of the point of accident, and then it is descending, varying from 1.125 per cent to level track at the point of accident, east of the point of accident it is slightly descending, the maximum within $1\frac{1}{2}$ miles being 0.4 per cent. The level portion of the track is about 1,500 feet in length and is located on a fill having a maximum depth of about 4 feet and is immediately east of the 1.125 per cent descending grade above mentioned; the accident occurred at the eastern end of this fill. For the length of this fill the ground on both sides of the track is level and there is no drainage ditch. In the vicinity of the point of accident, however, the land south of the track rises gradually, while that on the north side slopes away from the track so that in addition to drainage eastward on account of the descending grade, there is also drainage toward the track from the fields to the south; this drainage from the south is concentrated at the low point of the fill and together with

Inv. No. 1767
Chicago, Milwaukee, St.Paul & Pacific
Durand, Ill.
June 6, 1932





such water as drains from the west, as well as from a few hundred feet to the east, is diverted under the track from south to north through two 24-inch pipes, which were installed in 1904. The derailment occurred about 18 feet east of these pipes.

A drainage ditch, known as the Amundson drainage ditch, cuts across the fields from southwest to northeast on the south side of the track and reaches the track at a point about 480 feet east of the two cast-iron pipes; in the fields this ditch is about 10 feet wide and 2 feet deep, then narrows to about 5 feet and deepens to 3 feet, and continues eastward on the south side of the track.

It was raining at the time of the accident, which occurred about 6.25 a.m.

Description

Eastbound passenger train No. 26 consisted of two refrigerator cars, one baggage car, one mail and express car, one coach, two sleeping cars and one observation car, in the order named, hauled by engine 6213, and was in charge of Conductor Kelly and Engineman Roe. The first two cars were of steel-underframe construction, while the remainder were of all-steel construction. This train left Freeport, the last open office, 18.4 miles west of Durand, at 5.51 a.m., according to the train sheet, 14 minutes late, passed Durand and on reaching a point about 3 miles beyond was derailed while traveling at a speed estimated to have been between 40 and 50 miles per hour.

Engine 6213, its tender, the first six cars and the forward truck of the seventh car were derailed. The engine stopped on its right side, parallel with and south of the track, with its front end 353 feet east of the point of derailment; the tender was torn from its frame and rested opposite and south of the engine. The first two cars were demolished; the third and fourth cars were at right angles to and across the track, the third car being on its side and the fourth upright, the fifth and sixth cars were derailed toward the south, the fifth car being on its side and the sixth leaning at an angle of about 45°. The employee killed was the engineman, while all other members of the crew were injured.

Summary of evidence

Fireman Lewandosky stated that it commenced to rain when the train reached a point about one-half mile west of Freeport; water was taken at Freeport and although it took about four or five minutes to fill the tank the fireman did not get wet as a result of the rain; he closed the

clear-vision window at Freeport, saying that it did not rain very hard, only a drizzle, but that at Dakota, 7.7 miles east of Freeport, it rained pretty hard; at Davis, 6.3 miles east of Dakota, it was not raining so hard, while at Durand it seemed to slacken and the farther along the train proceeded the less it rained. At Durand he partly opened the clear-vision window, and saw water standing on the main highway in the city, while he could tell from the condition of the fields in that vicinity that it had rained there some time previously. Approaching the point of accident he was sitting on his seat box, looking ahead, but saw no water on the track, nor was he expecting to find high water where the accident occurred. There was no water over the track at that point, but there was considerable water in the ditch. On starting down the hill the engineman had eased off on the throttle and the speed was 40 or 45 miles an hour which is the usual rate at that point. It was daylight and a view ahead could be had for a considerable distance, as the track was straight, but there was no visible indication of a washout. Where the engine stopped after the accident the ground was soft and there was a lot of mud and water; however, he could not tell whether the water was from the full tank of the tender or from rain. Fireman Lewandosky had been firing on this district for a period of 23 years, but never before had he experienced trouble from water at this particular point.

Statements of Conductor Kelly, Brakeman Mark, Flagman Butler and Baggageman Hall, were similar to those of Fireman Lewandosky as to weather conditions; there had been no indication of heavy rainfall en route and no severe storms were encountered. No apprehension was felt as to track conditions, nor had any train order been received relative to weather conditions. Conductor Kelly was riding in the fifth car when the accident occurred, he estimated the speed at that time to have been between 45 and 50 miles per hour. About three minutes after the accident he climbed out of the coach window, on the track side, and it was then raining lightly. At first no water of consequence was running through the two cast-iron pipes under the track at that point, but as a result of the derailment the wreckage formed a dam. There was no water over the track, and at the point where the observation car stopped, the track conditions were normal, as well as for a distance of about 1 mile west of the point of accident; his examination of the track, however, showed that it had been washed out in two places. Conductor Kelly had been operating in this territory for 31 years, but according to his recollection no previous trouble had been experienced at this point; he was of the opinion that the washout was the result of a local cloudburst.

Section Foreman Miller, whose territory extends eastward from the section upon which the accident occurred, arrived at the scene of accident about 20 minutes after its occurrence, while Section Foreman Powers, upon whose section the accident occurred, arrived about one hour after the accident occurred. When Section Foreman Powers arrived no water was running over the track, and he said there had been no general heavy rain prior to the accident. Section Foreman Powers, who resides at Davis, 4.4 miles west of Durand, said the stars were shining when he retired at about 10 p.m. June 5, but about 2 a.m., June 6, it was raining lightly; he was up for about 10 or 15 minutes, it did not rain hard enough to cause him any undue concern or to warrant a patrol of the track being made; nor did he receive any message to patrol the track and when the rain stopped he went back to bed. At Davis there was no indication of heavy rain; as he and his men were on their way to the wreck the first indication of water around the track was just west of Durand. No previous trouble had been experienced at the point where the accident occurred. Section Foreman Powers was of the opinion that water flowed over the fields south of the track to such an extent that the Amundson drainage ditch could not accommodate it, causing it to back up, deposit debris, and wash out the track in three different places in the immediate vicinity of the two drainage pipes. Section Foreman Miller, who resides at Shirland, 6.9 miles east of Durand, said that during the day of June 5, it rained lightly; he retired at 7.30 p.m. and did not awaken until 4 a.m., June 6, and at this time also it was raining lightly and it did not rain hard between that time and 6.30 a.m. On his way to the wreck by motor car with his men the first water he noticed was in a field about three-fourths of a mile east of the point of accident, the water being 6 or 8 inches deep; at the point of accident there was considerable water near the ties, from 12 to 16 inches from the top of the rail, and the water then had receded about 6 inches from its highest point. A farmer who lives in the immediate vicinity and just south of where the accident occurred informed him that there had been a heavy rain storm at that point about 3 a.m. No previous trouble had been experienced at the point of accident. Section Foreman Miller was of the opinion that the washout was due to a local cloudburst, the water coming from the fields south and southwest of the track for a distance of 2 or 3 miles.

Roadmaster Zimmerman arrived at the scene of the accident about one hour after its occurrence; at that time there was only a very little water running, it probably having receded about 12 inches from its peak height. There were a number of washouts between the point where the

accident occurred and approximately three-fourths of a mile eastward, but the serious washouts occurred at the point where the derailment took place. There was no indication along the track west of where the accident occurred, such as washouts or high water, that would have given warning to Engineman Roe of dangerous track conditions ahead. No previous trouble had been experienced at this point. Roadmaster Zimmerman thought that the washout was due to a cloudburst occurring about 1 or 2 miles south of the track.

Division Engineer Lakoski stated that there is a gravel highway paralleling the railroad about one-fourth of a mile south of the track, and the Amundson drainage ditch passes through a culvert under the highway. In his opinion a heavy local rain storm occurred and the opening of the culvert became more or less dammed by debris, causing the water to rise and back up so that a large volume finally flowed over the highway and toward the track. The drainage ditch being incapable of accommodating the water, it spread out and flowed toward the two pipes under the track, but they also were unable to take care of the abnormal volume, resulting in the water backing up against the roadbed and causing the washouts.

Train Dispatcher Thomas stated that shortly before 1 a.m., eastbound extra 8684 passed the point where the accident occurred, while westbound extra 8646 passed shortly before 1.30 a.m., but no report was made by either crew of dangerous track conditions, the only report made being that it was raining lightly between Durand and Shirland. No train order had been issued to train No. 26 relative to weather conditions.

Conclusions

This accident was caused by a washout.

Within a period of five and one-half hours prior to the occurrence of the accident two trains, one in each direction, passed over the point where the accident afterwards occurred, but no report was made by either crew of dangerous track conditions, the only report made being that it was raining lightly between Durand and Shirland. No previous trouble had been experienced in this locality, and apparently no one connected with the railway had any information to indicate that a dangerous condition had arisen, or that the section crews should have been patrolling the track. It appeared that a heavy local rain storm occurred 1 or 2 miles south of the track and that the volume of water was such that it could not be accommodated by the Amundson drainage ditch, and the two cast-iron pipes

under the track were unable to take care of the abnormal volume of water which spread out over the fields, resulting in the water backing up against and scouring out the roadbed in three different places near the two pipes, thereby causing the derailment.

All of 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.