

## INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE  
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE  
WABASH RAILWAY AT OAKWOOD, MICH., ON FEBRUARY 23, 1925.

May 20, 1925.

To the Commission:

On February 23, 1925, there was a head-end collision between a runaway switch engine and another switch engine on the Wabash Railway at Oakwood, Mich., which resulted in the death of two employees and the injury of two employees.

Location and method of operation

This accident occurred on that part of the Detroit Division extending between Detroit, Mich., and Montpelier, Ohio, a distance of 96.9 miles, and at the point where the collision actually occurred it is a double-track line over which trains are operated by timetable, train orders, and an automatic block-signal system. From Detroit to Delray, a distance of 4.4 miles, trains on the main tracks are under the direction of the terminal superintendent of the Union Belt Railroad, which railroad is responsible for the maintenance of all main-track switches and derails protecting the same.

Between Delray and the western yard limits at Oakwood, train movements are under the supervision of the terminal superintendent of the Wabash Railway. The point of accident was opposite the yard office of the manifest freight yard at Oakwood, where movements are under the supervision of the Wabash Railway. Approaching this point from either direction the track is tangent for some distance, while the grade is slightly ascending for westbound movements. Automatic signal 6-7, governing eastbound movements, is located on the engineman's side of the eastbound track at a point about 1,950 feet west of the yard office. This signal is of the one-arm upper-quadrant type.

The weather was cloudy and slightly foggy at the time of the accident, which occurred at 8.35 p.m.

### Description

Switch engine 502, headed east, was in charge of Foreman Schrader and Enginemen Showalter. It had finished switching and proceeded from the dead freight yard to the westbound main track and thence through a crossover to the eastbound main track on its way eastward to the engine house at Delray, entering upon the eastbound track at a point 3,425 feet from the yard office opposite which the accident occurred. It then proceeded eastward on that track, passed signal 6-7 without stopping, and was moving at a speed of about 12 or 15 miles an hour when it collided with engine 483.

Switch engine 483, headed east, was in charge of Foreman Hubbardt and Engineman Alkora, and had been engaged in switching in a yard located east of the station at Delray. At about 8.15 p.m. the crew left the engine on the west lead track at a point about 515 feet east of the switch leading to the eastbound main track while they obtained lunch. While they were absent from the engine it started to back westward, struck the derail located 165 feet from the switch and knocked it off the rail, backed through the main-track switch, and continued westward on the eastbound main track, increasing speed rapidly, and it proceeded in this manner a distance of approximately 2 miles to the point where it collided with engine 502 while traveling at a speed thought to have been about 30 or 35 miles an hour.

Engine 502 was driven backward a distance of several feet and its head end considerably damaged, while the tender cistern was torn from its frame and then slid forward against the boiler head, causing considerable damage. The tender of engine 483 was quite badly damaged. The employees killed were the engineman and one of the switchmen riding on engine 502.

### Summary of evidence

The derail and switch at which engine 483 moved out on the eastbound main track are located in the territory between Delray and Detroit and therefore their maintenance is under the control of the Union Belt Railroad. Section Foreman Wilson, of the Union Belt Railroad, said he had examined the switch and derail on the morning of the accident and found them to be in good condition, but his examination on the morning after the accident showed that the switch stand had been pulled loose from the tie to which it had been spiked, while

the tie was split for its entire length; the derail was off the rail. The ends of the derail were broken off, about 3 inches being missing from the eastern end and about 4 inches from the western end, but he said that it had been in this condition for some time. It also appeared from his statements that on account of their worn condition he had on several occasions plugged the spike holes in the ties to which the derail was secured. Although the ties were not in the best condition, he expressed the opinion that the derail would function properly under ordinary use and would derail a slowly moving engine, and he thought the derail must have received a sudden blow from some car or engine moving at a comparatively high rate of speed.

The derail was a Hayes double derail, pipe-connected to the switch. The base plate spanned two ties, secured to each by three track spikes. The tie which had been split for its entire length was found to have been quite badly decayed and it showed considerable wear at the spike holes.

After engine 483 had been placed on the west lead track at about 8.15 p.m. the foreman and both switchmen left for lunch and the fireman also obtained authority from the engineman to do likewise. Engineman Alkema said that after stopping on this lead track he had placed the straight-air brake valve in application position, closed the throttle, placed the reverse lever on center, and opened the cylinder cocks. He then filled the lubricator and at about 8.25 p.m. left the engine to go to the engine house on the opposite side of the main tracks for the purpose of making out some reports. At about 8.38 p.m. he heard some one inquiring about engine 483 and on returning to the lead track he found that the engine was missing. Shortly afterwards he proceeded to the scene of the accident on another engine, made an examination of engine 483 and he said he found the throttle closed, but the brakes had been released and the cylinder cocks had been closed. In his first statement he said that the reverse lever was as he had left it while in his second statement he said that it was a little off center. Engineman Alkema stated that the steam pressure was about 180 pounds when the engine stopped on the lead track, and that the fireman had put in a little coal before leaving the engine but he did not think this would have caused the black smoke to come from the stack as was testified to by other witnesses who saw the engine when it was running away. Fireman Flatt, however, said it had been some time since he had put any coal in the firebox and that at the time of his departure the fire was rather low. Engineman

on duty at Victoria tower, also estimated the speed to have been 35 or 40 miles an hour at the time it passed his tower, but while there was considerable black smoke coming from the stack, he said he thought the engine was drifting at the time.

Foreman Schrader, of engine 502, said he was riding on the right side of the footboard at the rear of the tender, with Switchman St. Onge on the left side, the latter being one of the employees killed in the accident. Foreman Schrader did not see the indication of automatic signal 6-7 and said the engineman did not stop at that point, and he did not think the engineman made any reduction in speed prior to the accident, this causing him to believe that Engineman Showalter had not seen the approaching runaway engine. Foreman Schrader estimated the speed of engine 502 to have been about 15 miles an hour at the time of the collision.

Fireman Vessell, of engine 502, had obtained permission from the engineman to go directly home after the engine had finished switching, instead of going with it to the engine house, and consequently he knew nothing of the circumstances surrounding the occurrence of the accident.

Switchman Menhennett, who had taken the fireman's place, said he put in a fire and then got on the fireman's seat box. He had not noticed the indication of signal 6-7, neither did he notice the approach of the runaway engine and so far as he knew Engineman Showalter made no move towards stopping the engine prior to the occurrence of the accident.

Road Foreman of Engines Seeley reached the scene of the accident about two and one-half hours after its occurrence, and he said he found the reverse lever a little back of the center of the quadrant while the throttle was open one or two notches. He did not make any examination of the cylinder cocks. Mr. Seeley said he had examined engine 483 when it was received from the shops on February 4 after having received class 5 repairs and had found the engine to be in excellent condition. He also stated that he considered Engineman Alkema to be competent and did not think he had misrepresented anything in his statements, and expressed the opinion that some one had started the engine. Trainmaster Packwood said his examination of the accident showed that the throttle was slightly open and that the reverse lever was three notches back of center.

Engine 483 was carefully examined and tested on February 26 and 27. On account of damage sustained in the accident the condition of the brakes prior thereto could not be definitely determined but it appeared from the general condition of the air-brake mechanism that if the throttle were open, with the reverse lever in any position on the quadrant, the engine could not have been started provided the straight air brakes had been applied. The throttle was found to be properly connected, with no possibility of its cocking either wide open or partly open. The throttle seat was in good condition, while hydrostatic test showed the throttle stand pipe and steam dry pipe to be free from leaks; a test of the throttle under full steam pressure also failed to disclose any leaks. It was also found that with a man standing in the ordinary position for the purpose of filling the lubricator there would be no probability of his opening the throttle without knowing it. Operation of the throttle valve showed that it worked stiffly but that each time it was moved to the closed position the valve would be closed tightly. A person filling the lubricator, however, could have easily moved the straight-air brake-valve handle.

#### Conclusions

This accident was caused primarily by engine 483 running away on the main track without any one on the engine.

The evidence indicates that engine 483 had been left on the lead track while the members of the crew, with the exception of the engineman, went to lunch, and that the engineman finally left the engine to go to the engine house for the purpose of making out some reports. While he was so absent the engine started, knocked the drrail off the track, ran through the main-track switch, and then attained a comparatively high rate of speed throughout the distance of nearly 2 miles from the lead track to the point where it collided with engine 502.

The engine had been received from the shops but a short time before the day of the accident, and careful examination and test failed to disclose the presence of any steam leaks which might have been the cause of its running away. Furthermore, while a slight leak might have caused the engine to start of its own accord, it is very doubtful whether it would have attained a speed of 30 miles an hour or more. There was nothing to prove definitely that Engineman Alkema did not leave the engine in the position as he described it, and under these cir-

cumstances it would appear that some one boarded the engine and opened the throttle.

Under rule 762, of the Rules and Regulations of the Transportation Department, it is provided that enginemen must not leave their engines when on duty except in case of necessity, in which event the fireman or some competent person must be left in charge. Engineman Alkema did not comply with this rule and to this extent he is responsible for the occurrence of the accident.

A contributing cause of this accident was the fact that the derailing device failed to function properly, due partly to the fact that the ends of the derail had been broken resulting in its receiving a blow probably of much greater force than otherwise would have been the case, but more particularly to the fact that both of the ties to which the derail was fastened were not in sound condition. Had this derail been in proper condition, secured to sound ties, it is very probable that it would have derailed the tender of engine 483 and thus have prevented that engine from moving out on the main track.

Eastbound signals 6-7 and 5-7 are located 1,950 feet west and 2,975 feet east of the point of accident, respectively. In view of the much higher rate of speed at which engine 483 was moving, it seems probable that it had entered the block governed by signal 6-7 after that signal had been passed by engine 502, and therefore that a stop indication was not displayed by signal 6-7 at that time.

The employees involved were experienced men. At the time of the accident the crew of engine 483 had been on duty about  $4\frac{1}{2}$  hours after 16 hours off duty, the crew of engine 502 had been on duty about 12 hours, after periods off duty of from 10 to 16 hours.

Respectfully submitted,

W. P. BORLAND,

Director.