INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE CINCINNATI, NEW ORLEANS & TEXAS PACIFIC RAILWAY, SOUTHERN RAILWAY SYSTEM, NEAR WILLIAMSTOWN, KY., ON OCTOBER 15, 1926.

November 20, 1926.

To the Commission:

On October 15, 1926, there was a derailment of a passenger train on the Cincinnati, New Orleans & Texas Pacific Railway, Southern Railway System, near Williamstown, Ky., resulting in the death of one employee and the injury of three employees.

Location and method of operation

This accident occurred on that part of the Southwestern District extending between Cincinnati, Ohio, and Danville, Ky., a distance of 116.5 miles; at the point of accident this is a single-track line over which trains are operated by time-table train orders, and an automatic block-signal system, within automatic train-control territory. The accident occurred about $1\frac{3}{4}$ miles south of Williamstown, on the passing track, at a point 140 feet north of the south switch. WS tower is at the southern end of double track, and the passing track on which the accident occurred is practically a continuation of the southbound main track, it is 4,831.9 feet in length and parallels the single main track on the west. Approaching the point of accident from the north there is a 1° curve to the left 2,810 feet in length, extending almost to the turnout of the south switch, the curvature of the turnout is 3°15' and it was on this latter curve that the accident occurred. The grade is practically level. The passing track is laid with 85-pound rails, 33 feet in length, with 18 ties to the rail-length, except at the turnout, which had recently been laid with 130-pound rails, 39 feet in length, with 24 ties to the rail-length, single-spiked, fully tie-plated at turn-outs, and ballasted with gravel and cinders to a depth of from 18 to 24 inches.

The weather was clear at the time of the accident, which occurred at about 11.48 a. m.

Description

Southbound passenger train No. 97 consisted of one club car, one dining car, and four Pullman cars, of all-steel construction, hauled by engine 6467, and was in charge of Conductor Keith and Engineman Pearse. This train passed

WS tower at 11.46 a.m., according to the train sheet, five minutes late, continued down the passing track and on reaching the turnout of the south switch, the engine ran over a spike and was derailed while traveling at a speed estimated to have been between 10 and 15 miles an hour.

Engine 6467 came to rest on its right side parallel with and west of the main track, with its head end 266 feet south of the initial point of derailment. The tender remained coupled to the engine and first car and came to rest leaning to the right, diagonally across the main track, the first car came to rest leaning to the left, east of and parallel with the main track. None of the other cars was derailed. The employee killed was the fireman.

Summary of evidence

Rail-laying was in progress on the main track, and Engineman Pearse stated that after passing WS tower his train proceeded down the passing track as required, at a speed of about 10 miles an hour. Approaching the south switch, when just north of the frog, he felt the engine rise and thought it was on account of passing over the compromise joint from the 85-pound to the 130-pound rail. He heard no unusual noise at this time and leaned out of the window to make sure that the switch was properly lined. When about opposite the frog he began to work steam, lightly, and while passing the switch points, at a speed of about 10 or 12 miles an hour, he noticed either smoke or dust from under the front end of the engine, realized that the engine was derailed, and immediately shut off steam and applied the brakes, but was unable to say whether or not he succeeded in reducing speed before the engine turned over. He did not make any examination of the track for the purpose of determining the cause of the accident.

Conductor Keith stated that the speed of the train was not more than 10 or 15 miles an hour through the passing track, that he was riding in the first car when the accident occurred, and that the first he knew of anything wrong was when the air brakes were applied in emergency, at about the time he felt the train lurch, on account of having been derailed. After the accident he observed flange marks on the west rail of the turnout, about 60 feet north of the frog, apparently made by the wheels of the lead truck, which marks continued along the top of the rail some distance before dropping off on the ties. The statements of Baggagemaster Bell and Flagman Swearenger corroborated in substance those of Conductor Keith.

Operator Willison, stationed at WS tower, stated that after train No. 97 passed the tower he watched it as it passed out of sight around the curve and the speed was not high, about the same as most trains entering the passing

track.

Assistant Signal Supervisor Wilson stated that at the request of Track Supervisor Strunk he proceeded with his motor car over the main track from WS tower, accompanied by a member of the section force, to a point just north of the south switch, in order to line and lock the switch for the passing track, about 5 or 10 minutes prior to the derailment, they then returned to the tower again using the main track. Supervisor Wilson said that he did not get off the car on arriving at the switch, did not pay any attention to the passing track, and did not notice any trackmen in the vicinity of the south switch at the time.

Master Mechanic Wilking arrived at the scene of the accident about 1.30 p.m. He at once inspected the derailed engine but found no defect that would have contributed to the accident. On looking over the track he saw an indentation on the rail, there were several spikes laying around at this point and the second one he picked up had been run over recently, and he found that the indentation on the rail exactly matched the head of the spike. In his opinion the derailment was caused by the engine running over the spike.

Roadmaster Marshall, Track Supervisor Strunk, Section Foreman Ballenger, Extra Gang Foreman Masterson, Road Foreman of Engines Ronan, Master Mechanic Wilking and others examined the track and equipment subsequent to the accident. The first mark of derailment was an indentation on the west rail of the turnout, 44 feet south of the compromise joint on the west rail and 57 feet 4 inches south of the compromise joint on the opposite rail. It distinctly showed that a spike, with the point to the north, had been run over, while laying on the rail. This spike was found about 2½ feet away and the indentation on the rail exactly matched the head. At a point 7¾ inches south of the spike mark on the rail and 7/16 inch from the gauge side of the rail the first wheel flange mark, distinct, appeared on top of the rail, this mark continuing across the rail for a distance of 8 feet 8¼ inches to where it dropped to the ties. Cross levels showed the west rail to be from one quarter to one-half inch low, while the gauge of the track showed it to vary from 4 feet 8½ inches to 4 feet 9 inches. The ties were only in fair condition, but the roadbed was well ditched and drained. No superelevation is provided at the turnout, and the outside of the roadbed bore some evidence of being soft at the initial point of derailment. The track was destroyed from the switch frog, located 61 feet 4½ inches south of the spike mark, to where the engine came to rest, 204 feet, 10 inches from the frog. Careful examination of the derailed engine disclosed no defect that would have caused the derailment

and it was the general opinion that neither the condition of the track nor rolling stock caused or contributed to the accident, but rather that it was caused by the spike placed or dropped on the rail.

Engine 6467 is of the 4-6-2 type, having a total weight engine and tender loaded of 380,700 pounds, distributed as follows, engine truck, 48,000 pounds, driving wheels, 141,500 pounds, trailing truck, 42,500 pounds, tender, 148,700 pounds. Its driving wheel base is 12 feet 6 inches, and total wheel base engine and tender 67 feet ½ inch.

Conclusions

This accident was caused by a spike which was laying on the running surface of the rail, with its point toward the approaching train.

At the time of the accident the passing track was being used as main track. The last train to use the passing track prior to the derailment was southbound freight train No. 51, at about 3.32 a.m., 8 hours 16 minutes prior to the accident, at which time nothing unusual was noticed. About 9.30 a.m., 2 hours 18 minutes prior to the accident, the passing track was used by Track Supervisor Strunk and Extra Gang Foreman Kesterson with a gang of 16 laborers, a push car was moved upon the passing track through the south switch, brought to a stop on the turnout near the frog and loaded with switch material, after which the push car was moved northward over the point of derailment to the north end of the passing track. The track supervisor and extra gang foreman looked over the track after the loading of the switch material was completed but nothing irregular was observed, or any obstruction on the rails, and they said that had a spike been on the rail at that time it would have been noticed. The evidence clearly indicated that the engine of train No. 97 encountered a spike and that this caused its derailment. At the time of this investigation it had not been determined under just what circumstances the spike happened to be on the rail.

All of the employees involved were experienced men, 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.