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, AT BURNSIDE, KY., ON FEBRUARY 6, 1926.

March 22, 1926.

To the Commission:

On February 6, 1926, there was a derailment of a freight train on the Cincinnati, New Orleans & Texas Pacific Railway, Southern Railway System, at Burnside, Ky., resulting in the death of one employee, and the injury of two employees.

Location and method of operation

This accident occurred on that part of the Southwestern District extending between Oakdale, Tenn., and Danville, Ky., a distance of 137.9 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 an automatic block-signal system. The initial point of derailment occurred approximately 1 mile south of the station at Burnside, in a shallow rock cut, known locally as Sandy Cut, while the final derailment occurred at the south switch of the passing track at Burnside, located 3,433 feet beyond the initial point of derailment and about 2,500 feet south of the station, the south switch of the passing track is a facing-point switch for northbound trains and leads off the main track through a No. 10 turnout to the left or west. Approaching from the south the track is tangent for a distance of 1,969 feet, followed by a 6° curve to the right 1,090 feet in length, the initial mark of derailment occurring on this curve at a point 332 feet from its southern end. Following this curve there are 375 feet of tangent and then a compound curve to the left extending to and beyond the point of final derailment; the curvature of the compound curve varies from 0°14' to 4°, and is 2° 17' at the south switch of the passing track. The grade for northbound trains is 1.075 per cent descending at the initial point of derailment and for a distance of 133 feet beyond, and then is 1.136 per cent descending to and beyond the point where the final derailment occurred.

The track in the vicinity of the point of accident is laid with 100-pound rails, 39 feet in length, with 24 to 25 oak ties to the rail-length, and is ballasted with slag; rail anchors and triple-spiked tie plates are used. The track is well maintained. The speed of freight trains is limited to 30 miles an hour.

The weather was clear at the time of the accident, which occurred at about 1.10 p.m.

Description

Northbound freight train extra 6250 consisted of 36 cars and a caboose, hauled by engine 6250, and was in charge of Conductor Davidson and Enginemen Errett. This train passed Toteville, the last open office, 1.9 miles south of Burnside, at 1.08 p.m., according to the train sheet, and while rounding the curve in Sandy Cut at a speed variously estimated to have been between 25 and 38 miles an hour the pony-truck wheels of the engine were derailed to the left, as a result of striking spikes which had been placed on the west or outside rail of the curve. The fact that this pair of wheels had been derailed was not noticed by the engine crew and the train continued until the engine encountered the south switch of the passing track at Burnside, where the final derailment occurred while the train was traveling at a speed estimated to have been between 18 and 35 miles an hour.

Engine 6250 came to rest on its left side, parallel to and west of the passing track, at a point 507 feet north of the south switch; the tender was torn loose from its trucks and came to rest on the main track 351 feet north of the engine, headed southward. Seventeen cars were derailed, eight of which were destroyed. The employee killed was the fireman.

Summary of evidence

Enginemen Errett stated that on entering Sandy Cut the speed was about 35 or 38 miles an hour and that he made a 10-pound brake-pipe reduction, the air brakes not being released prior to the final derailment. On reaching a point about 15 or 20 car-lengths from the south switch of the passing track the engine lunged to one side and he immediately moved the brake valve to the emergency position, but he did not think an emergency effect was received owing to the previous service application. He then looked back to see whether or not the cars were being derailed, thinking probably that the track had slewed or the train had struck a rock, and shortly afterwards the facing-point switch

was encountered, resulting in the general derailment. Engineman Errett said he did not know that the pony-truck wheels had been derailed while rounding the curve through Sandy Cut, and that he noticed nothing wrong with the riding qualities of the engine until it lunged to one side at a point just south of the south switch. The statements of Head Brakeman Hyden corroborated in substance those of Enginemen Errett, he estimated the speed to have been about 25 or 30 miles an hour through Sandy Cut and about 18 miles an hour on encountering the switch.

Conductor Davidson and Flagman Taylor stated that the air brakes worked properly en route and they were unaware of anything wrong prior to the final derailment, they did not recall an air-brake application having been made in Sandy Cut, and estimated the speed to have been between 30 and 35 miles an hour at the time the train encountered the switch.

Supervisor Trusty, Section Foreman Toney and Section Laborer Dobkins arrived at the scene of the accident within less than an hour after its occurrence. On the west side of the track, about 6 feet from the point where the wheel mounted the rail in Sandy Cut, Supervisor Trusty found a spike that had been run over and he told Section Foreman Toney that it was the cause of the derailment. At a point 4 feet 2 inches from the receiving end of a rail on the west side of the track, on top of the rail, there was a black spot, apparently caused by rust from some foreign matter which had been on the rail, while 8 inches north of this spot and 7/8 inch from the gauge side of the rail a flange mark appeared on top of the rail, leading diagonally toward the left for a distance of 3 feet, at which point the wheel left the rail. Starting 2 feet beyond this point, wheel marks appeared on the ties, continuing a distance of 1,102 feet to the end of the guard rail of the curve. On the west side of both rails the wheels had cut the bolt heads at each joint. When the switch was reached the wheels struck the first brace, mounted the rails, jumped over the stock rail, and continued to the frog, from which point the track was torn up for a considerable distance. Superintendent Trusty did not think that the engine-truck wheel ran entirely over the spike which had been placed on the rail, but rather that it struck the point of the spike and that the spike turned and was thrown from the rail.

Measurements taken of the gauge, alinement, and superelevation of the track at each rail joint from the initial point of derailment southward around the curve showed the track to be in good condition, the maximum superelevation of the outside rail was 5½ inches. Careful inspection of the engine subsequent to the accident disclosed no defect that would have caused or contributed to the accident.

An inspector of the Commission also found a spike in the vicinity of the initial point of derailment which apparently had been placed on the rail with the point of the spike head in an open rail joint and then had been run over by a wheel. On February 11th, in the presence of officials of the railroad and the Commission's inspectors, a spike was placed in an open rail joint and the pony truck of an engine, similar to the one involved in the accident, was run over this spike, leaving marks on it that corresponded to those on the spike found by the inspector.

Conclusions

This accident was caused by spikes being placed on the outside rail of a curve, apparently with malicious intent.

Estimates of the speed of the train at the time of the final derailment varied from 18 to 35 miles an hour; but the distance the train ran after the brakes had been applied, the condition of the wreckage and the manner in which the equipment came to rest, indicate that the speed probably was excessive. While speed did not cause the accident, it is believed that had the speed limit been observed the consequences of the accident would have been materially lessened.

All of the employees involved were experienced men; at the time of the accident they had been on duty about 8 hours, prior to which they had been off duty more than 14 hours.

Respectfully submitted,

W. P. BORLAND,

Director.