

June 24, 1914.

IN RE: INVESTIGATION OF ACCIDENT ON THE BALTIMORE & OHIO
RAILROAD NEAR COOK'S MILLS, PA., ON MAY 31, 1914.

On May 31, 1914, there was a derailment on the Baltimore and Ohio Railroad near Cook's Mills, Pa., of an engine and tender running light, which resulted in the death of 2 engine-men, 1 fireman, 1 conductor and 2 brakemen, and the injury of 1 fireman and 1 brakeman. After investigation of this accident the Chief Inspector of Safety Appliances reports as follows:

Locomotive No. 2156, in charge of Engineman Hughes and Fireman Semple was called to take an emigrant train out of Cumberland, Md., as a section of westbound train No. 13, due to leave that point at 8:27 a.m. When train No. 13 reached Cumberland, however, there were no emigrants on this train and locomotive No. 2156 was ordered to run light to Foley to carry a dead-head crew to relieve the crew of an eastbound freight train which had tied up at that point under the Hours of Service Law. Locomotive No. 2156 left Cumberland westbound for Foley at 9:08 a.m., passed Cook's Mills at 9:19 a.m. and at about 9:20 a.m. was derailed at a point about one and one-half miles west of Cook's Mills, while running at a speed of 63 miles per hour, as shown by the speed recorder with which it was equipped.

After derailment the wheels ran along on the roadway a distance of 480 feet; at this point the cistern broke away from the tender frame and went down the embankment, which at this point is about 10 feet high; the tender trucks remained on the fill. The engine ran an additional distance of 180 feet, and then went down the embankment on the right side of the track, landing bottom side up with the tender frame still attached to the engine.

This part of the Baltimore & Ohio Railroad is a double track line, and train movements are protected by the manual block signal system. Leaving Cook's Mills, westbound, there is a curve around the base of a hill; the track is then tangent for about 5,500 feet. Locomotive No. 2156 had traveled over about 5,000 feet of this tangent track when it was derailed. The grade from Cook's Mills is ascending about six-tenths of one per cent for westbound trains, while at the point of derailment it is about three-tenths of one per cent. It is laid with 55-pound steel rails, 60 feet in length, with about 30 oak ties under each rail. The ballast is of crushed stone, varying in depth from 12 to 18 inches. The speed limit over this part of the road for locomotives running light is 35 miles per hour, while the maximum allowed for passenger trains is 50 miles per hour. The weather at the time was clear.

At the time of the derailment, Engineman Hughes was running the locomotive, while the engineman who was dead-heading was

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firing. The conductor was standing behind Engineman Hughes, two of the brakemen were on the fireman's seat box, the regular fireman was sitting on the forward right hand corner of the tender, while the dead-head fireman and the other brakeman were riding on the rear of the tender. The brakeman who was riding on the rear of the tender, and the regular fireman, were the only employees who were not killed.

When interviewed in the hospital to which he had been taken, Brakeman Homenburg stated that he was riding on the back of the tender on the left side, with his face partly covered with his coat, in order to keep out flying dirt and coal. He was riding backwards at the time and did not notice anything wrong, his first intimation of trouble being when he was thrown from the tender. He also stated that he had not paid particular attention to the speed at which the locomotive was running, but thought it was running at about passenger train speed.

Fireman Sample stated that the locomotive was working steam when it was derailed. He thought the speed at the time was about 50 miles per hour; he did not know the speed limit for locomotives running light. He further stated that he noticed nothing unusual about the riding of the engine or tender, the first thing he knew being when he felt the forward end of the tender drop off the rail. He was apparently thrown some distance, for the next thing he remembered he found himself walking along the track, about an hour afterwards. The derailment occurred so quickly that none of the employees had time to say or do anything.

The members of the crew of a freight train which was following locomotive No. 2156 were the first to reach the scene of the accident. To these employees Conductor Eyster, who was a member of the dead-head crew on locomotive No. 2156, stated that he had been watching the speed indicator, and that it showed the locomotive to have been running at the rate of 63 miles per hour. Before his death, however, Conductor Eyster stated to the physician who was attending him that the speed had been 63 miles per hour. The physician stated that at several different times he asked Conductor Eyster about the speed and that the conductor was positive it was 63 miles per hour.

Master Mechanic Miller stated that the first marks of derailment were about 460 feet east of where the tender trucks were found. From these marks and from the position of the trucks he was of the opinion that the forward tender trucks were the first to be derailed. After running a short distance, the derailed truck began to work off the road bed and at a distance of 80 or 100 feet, the wheels began to cause serious damage to the ties. Finally the forward truck apparently worked itself back against the rear truck, the eastern being pulled off and going down the embankment, while the trucks remained on the track. Careful examination of all wheels and flanges under

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both engine and tender showed nothing to be wrong.

Mr. D. C. Ziler, connected with the wrecking department, stated that his examination of the track, made immediately after his arrival at the scene, showed that the first wheel to be derailed had run along the ball of the rail a distance of 12 feet before dropping off. There was no indication that the driving wheels had been off the track prior to the turning over of the engine.

Careful examination and measurements were made of the track for a distance of 2,000 feet east of the point of derailment. This examination showed the track to be in good condition.

At only two points in the distance of 2,000 feet was there a variation in track levels of as much as one-half inch, while there was one place where there was a difference of five-eighths of an inch. The track was also gauged for a distance of 2,000 feet, and at no point was the gauge less than 4' 9 $\frac{1}{2}$ " , and at only three points did the gauge reach 4' 9" .

Locomotive No. 2156 was a Pacific type passenger locomotive, built in 1911. In May, 1914, it received general repairs, including the turning of the tires and the placing of three new pairs of wheels under the tender. Since leaving the shops, it had made 11 trips, covering a distance of about 3,000 miles. Careful examination of the wheels and trucks of both engine and tender showed them to be in good condition. This examination also showed that the hub lining was missing from the trailer truck on the left side, giving the trailer truck a lateral play of 1-3/4 inches. His hub lining was not found, and it could not be ascertained when or where it was lost. The side bearings on the tender trucks showed about 1/32 of an inch clearance on each side on the forward trucks and 5/32 of an inch clearance on each side on the rear trucks. Leaving Cumberland, the tender had a full supply of coal and water. Locomotive No. 2156 had reached Cumberland early in the morning of May 31, and had been inspected on its arrival by Engine Inspector Sills. This inspection, however, was confined to the engine, the tender not being inspected. At the time of this inspection no defects were found, there being needed only the usual adjustments and minor repairs needed at the end of every trip. At this time all hub linings were in place and Engine Inspector Sills stated that the trailer truck had a lateral play of not over 3/8". All employees who had used this locomotive on the trips immediately prior to the one on which the accident occurred stated that it was in good condition and rode as well as any other locomotive.

In this connection attention is called to further statements by Engine Inspector Sills. Until January, 1914, there had been employed two engine inspectors and one tender inspector.

In January the tender inspector was assigned to other work, and in February the second engine inspector was taken sick, and as no substitute was provided, Engine Inspector Sills had to do the work formerly done by three men. On account of the number of locomotives to be inspected each night, varying from 35 to 50, he was unable to inspect the tenders, which accounted for the fact that the tender of locomotive No. 2155 was not inspected on the morning of the accident. On several occasions Engine Inspector Sills had spoken to his superiors about the condition existing, telling them that he could not do all the work, but was told to do the best he could.

While it can not be definitely determined what caused this accident, it is believed that it was due to the high rate of speed at which locomotive No. 2155 was traveling, for which Engineman Hughes is responsible.

Engineman Hughes was employed in 1878 as an operator, was promoted to the position of dispatcher in 1886; in 1892 was made freight conductor and in 1895 freight engineer. He had been suspended for 60 days in 1904 for damage to the crown sheet of a locomotive; for 30 days in 1906 on account of a rear-end collision; for 2 weeks in 1907 for responsibility in connection with an accident; for 30 days in 1911 for responsibility in connection with an accident; and for 1 week in 1911 for failing to stop at an automatic signal set against his train. Engineman Hughes had not been on duty more than one hour and forty minutes after a period off duty of about twelve hours.