INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT OF THE DIRECTOR

BUREAU OF SAFETY

ACCIDENT ON THE

BOSTON & MAINE RAILROAD

SOMERVILLE, MASS.

JUNE 9, 1937

INVESTIGATION NO. 2179

SUMMARY

Inv-2179

Railroad:	Boston & Maine		
Date:	June 9, 1937		
Location:	Somerville, Mass.		
Kind of accident:	Side collision		
Trains involved:	Switch engine 647	:	Cut of cars
Engine number:	647	:	
Consist:	14 cars	:	About 40 cars
Speed:	6 m.p.h.	:	Unknown
Track:	14° 30' right curve; 0.492% descending grade eastward.		
Weather:	Clear		
Time:	9:25 p.m.		
Casualties:	1 killed, 1 injured.		
Cause:	Failure to apply sufficient hand brakes on cars on a gravity yard track.		

July 12, 1937.

To the Commission:

On June 9, 1937, there was a side collision between a cut of cars, and a yard engine shoving another cut of cars, on the Boston & Maine Railroad at Somerville, Mass., which resulted in the death of one employee and the injury of one employee. This accident was investigated in conjunction with the Department of Public Utilities of the State of Massachusetts.

Location and method of operation

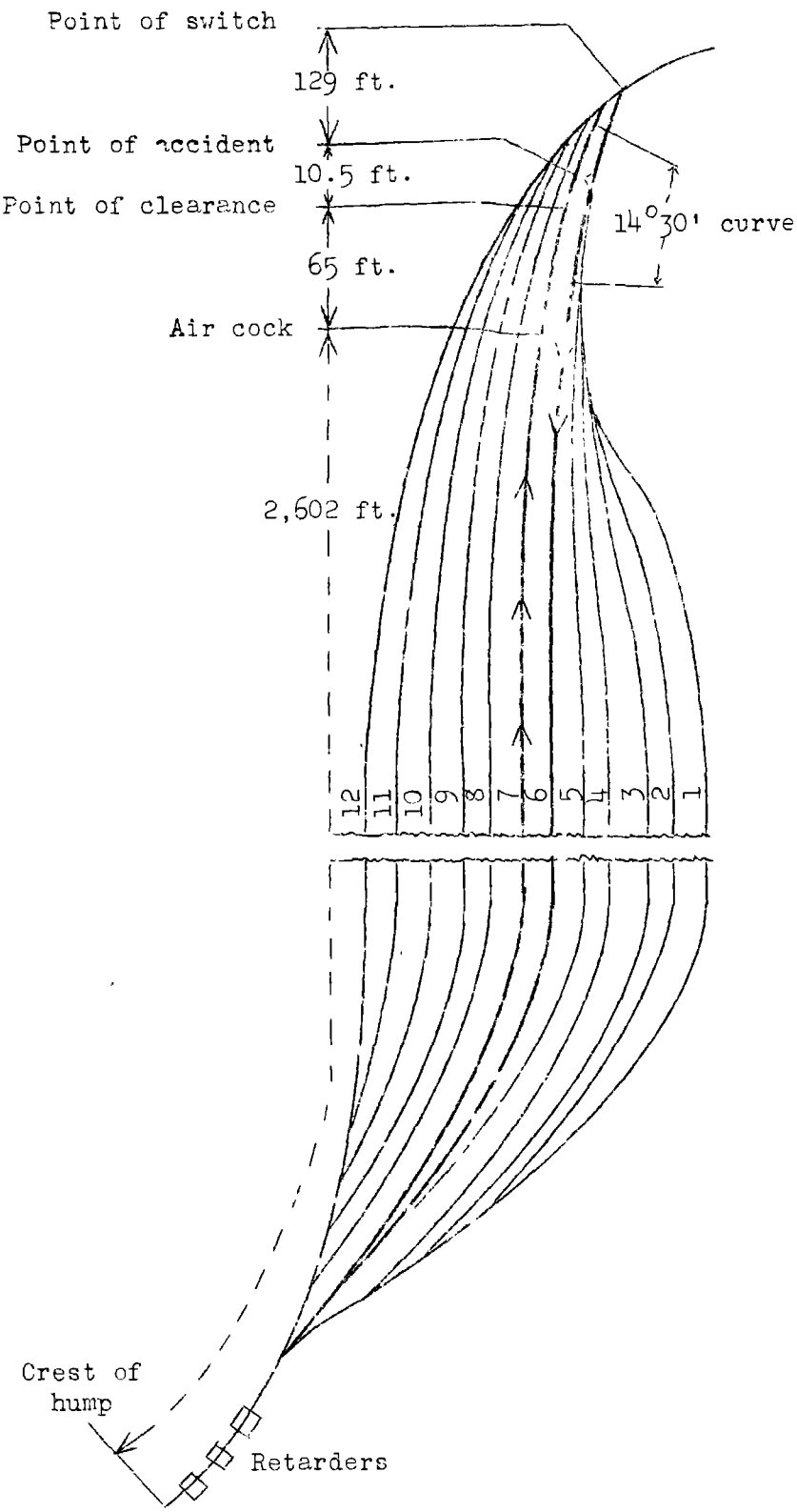
The accident occurred in Yard 9 of the Terminal Division within which movements are governed by yard rules and timetable instructions; this is a gravity yard extending generally east and west and consisting of 12 tracks, of from 21 to 47 cars capacity, which are numbered consecutively commencing with track 1 on the south. The point of collision was at the fouling point between the east ends of tracks 6 and 7. Beginning at the crest of the hump, which is 2,807 feet west of the east switch of track 7 a lead track extends eastward for a distance of approximately 535 feet, to the west switch of track 7; within the next 1,417 feet on track 7 there are five short tangents alternating with five short curves to the left varying from 3° 40' to 10°, followed by a short 9° 40' curve to the right, a short tangent, and then a 14° 30' curve to the right 475 feet in length, on which the accident occurred at a point approximately 50 feet from the eastern end. From the crest of the hump the gradient varies from a maximum of 3.9 percent to a minimum of 0.25 percent descending, and is 0.492 percent descending for approximately 400 feet preceding the point of accident.

Three mechanical car retarders, operated from the crest of the hump, control the speed of detached cuts of cars moving down the lead toward the east end of the yard. A yard brakeman accompanies each cut of cars to the stopping point, and fieldmen, called "skatemen", are located in the lower end of the yard to place skates on tracks and apply hand brakes as required by the rules of the company. Flood lights illuminate the vicinity of the point of accident.

Immediately prior to the accident there was a cut of cars standing on track 7 near the east switch.

The weather was clear at the time of the accident, which occurred at about 9:25 p.m.

Inv. No. 2179
Boston & Maine R.R
Somerville, Mass.
June 9, 1937



YARD 9

Description

Switch engine 647, headed east, in charge of Yard Foreman O'Riordan and Engineman Fletcher, moving at a speed of about 6 miles per hour, was engaged in shoving 14 cars into the east end of track 6 when it was struck on the left side by a cut of cars which had been standing at the east end of track 7, but which were moved beyond the clearance point by the impact of another cut of cars striking against them from the west.

Two pairs of driving wheels of the locomotive were derailed, and the first car on track 7 was raised off the rails, and slightly damaged. The left side of the tender was lightly scored and the left side of the engine cab was torn off.

The employee killed was the fireman of engine 647, and the employee injured was the engineman.

Summary of evidence

Yard Foreman Sonier, of hump engine 649, stated that he made several couplings on track 7 shortly after 9:00 p.m., with the assistance of Skatemen Jay and Hurd, after which the cars were moved 3 or 4 car lengths west and spotted at the air line on that track, and a sufficient number of cars were removed to leave room for 20 cars at the upper end. He was not close to the lower end during this operation, and, therefore, did not know if any hand brakes were set on the cars at the extreme east end, but the laboring of the engine in pulling the cars back 3 or 4 car lengths indicated that some brakes were set. A cut of 21 cars was then humped, and 14 of these in one cut headed for track 7, and accompanied by Skateman Fuller, passed through the three retarders about 9:25 p.m., at a speed of not quite one mile per hour. He learned later that this cut had caused an accident at the east end of the yard. He said it was safe operation and common practice to drop cuts of cars from the hump when accompanied by a yard employee, and also common practice for engines to work at each end of the yard at the same time. He was of the opinion that 5 or 6 hand brakes set on cars at the east end of a track would prevent the cars from moving when others were dropped against them.

Yard Helper Kamholz, of hump engine 649, who cut cars at the hump, corroborated the statements of Yard Foreman Sonier in regard to the speed of the cars, the number of brakes sufficient to hold cars at the east end of the yard, and the method of humping cars.

Skateman Fuller, who was not yet on duty, volunteered to accompany the cut of 14 cars down track 7, but by the time the cut had moved about two car lengths he was relieved by Skateman Jay; at that time the cars were moving at a speed of about 1 mile per hour.

Skateman Jay, of Yard 9, stated that the last time he remembered cars being shoved down to the eastern clearance point on track 7 was before dark; there were about 20 cars in the cut, and the east end was stopped close to the skate which was located 2 or 3 car lengths west of the clearance point. He set the hand brakes on four of these cars, sufficient, in his opinion, but after setting the brakes he did not remove the skate, as suggested by the rules, explaining that he left it for double safety. Later, while walking towards the hump, he relieved Skateman Fuller on a cut of 14 cars which were moving on track 7 at a speed of about 1 mile per hour and immediately began to set a handbrake on the leading car. He rode the cut a distance of 9 or 10 car lengths, and just before the impact with the standing cars, he braced himself on the running board to guard against being knocked off the car. The speed at that time was less than 1 mile per hour and the cars appeared to move eastward a short distance as a result of the impact. He did not set additional brakes on the moving cars because it was not necessary in order to control the speed and because he thought there were enough brakes set on the standing cars to hold all of them. He stated that it was the skateman's duty to keep brakes set on a sufficient number of cars at the east end of the hump tracks to prevent fouling of the lead and other tracks due to being struck by cuts running down from the hump. He was unable to remember how many brakes he had set on other tracks but distinctly remembered having set four brakes on track 7.

Retarder Operator Rennie said that the cut of cars headed for track 7 was moving at a speed of about 1 mile per hour through the retarding machines, and the operation in this instance was in accordance with the usual procedure which he considered safe. Considering the rate of speed of this cut of cars and the distance to be traveled, he was of the opinion that if necessary more than one hand brake could have been set before the impact with the standing cars occurred.

Conductor Donovan, who was in charge of hump engine 649 after 9:30 p.m., stated that almost immediately after coming on duty he was instructed to have his engine pull the

cars on track 7 back out of the side of engine 647, and in carrying out these instructions he ordered Skateman McGrath to set brakes on more cars at the lower end of that track. He then went with his engine to couple up the cars on this track but found only one coupling, near the hump end of the track, necessary, and when this had been made the entire cut of cars was moved without the necessity of taking the slack,although Skateman McGrath was engaged in setting brakes when the pull was made.

Skateman McGrath stated that in carrying out the orders of Conductor Donovan, he set brakes on 7 or 8 consecutive cars on track 7, beginning on a car which he thought was about sixth from the east end and working west from that point. He did not try the brakes on the cars east of the one on which he set the first brake, but did find a brake set on one car of the group which he covered, and thought it was the first brake he tried.

Yard Foreman O'Riordan, of switch engine 647, stated that while switching on the east end lead in yard 9 some time before the accident, four cars were kicked into the east end of track 7; these failed by about 2 feet to couple to the other cars in the track and left about 70 feet clear on the east end of the track. Yard Helper Gayne set brakes on the two cars farthest west, after which Foreman O'Riordan removed the skate. He observed the hump crew spot the cars on track 7 to the air line, and judged by the sound made by the wheels and the exhaust of the engine, that several good brakes were set on the east end. Later on his engine kicked another car into track 7, which reduced the distance to the clearance point to about 30 feet; no brake was set on this car. A few minutes thereafter his engine began to shove 14 cars into track 6 and while doing so he heard a sound that gave him the impression that the cut had struck other cars on track 6 or that the engine had become derailed.

Yard Helpers Gayne and Sullivan, of switch engine 647, made statements similar to those of Yard Foreman O'Riordan with regard to the work performed on track 7.

Assistant Yard Master Silver, in charge of the lower end of Yard 9, judged by the squealing he heard that some hand brakes were set on cars on the lower end of track 7 when cars on that track were being spotted to the air line, but could not say that any brakes had been set on the cars placed on that track by engine 647. He said the last car placed on

track 7 by switch engine 647 left a space of 12 to 15 feet between the clearance point and the east end of that car.

Engineman Fletcher, of switch engine 647, stated that the cars on track 7 were into clear the last time he observed them. When backing into track 6, just prior to the accident, the fireman was on his seat-box on the left side of the engine, apparently alert. Both headlights were burning, and there was no steam escaping to obscure the vision of the engineman or fireman. His first intimation of danger was when he heard a crash on the left side of the engine at which time they were moving about 6 miles per hour.

Discussion

The investigation developed that some time prior to the accident the hump crew had spotted 24 cars to the air line on track 7, leaving a space of about 70 feet between the clearance point and the east end of the first car; four of these cars had been placed on the east end of track 7 by engine 647, and hand brakes were set on two of them. Later, another car was placed on the east end of track 7, thereby reducing the clearance space to not more than 30 feet, and the brake was not set on this car. According to Skateman Jay's statement, he had set the brakes on 4 of the 20 cars which were on track 7 before any were placed there by engine 647. A cut of 14 cars, aggregating 551 tons, was dropped from the hump at a speed of not more than 1 mile per hour; this cut was accompanied by one skateman who set only one brake because that was sufficient to control the speed of the cut to less than 1 mile per hour. The impact with the standing cars was not great, but they were moved eastward a distance estimated at between 25 and 40 feet, and sideswiped engine 647 which was engaged in shoving a cut of cars into track 6. In preparing to move the cars away from the side of engine 647, brakes were set on an additional 7 or 8 cars. At that time there were about 40 cars weighing approximately 1,100 tons in track 7, and in pulling these cars away from engine 647 they were moved without difficulty around a 14° 30' curve on an ascending grade of about 0.5 percent. In view of this fact it is scarcely credible that hand brakes were effectively applied on 12 or 13 of these cars, as indicated by statements of employees.

Special timetable instructions provide that it shall be the duty of field men to see that skates are in place on the lower ends of all classification tracks in Yard 9, but that after a track has been shoved down, and a sufficient number of

brakes applied the skate should be removed. These instructions further provide that crews setting and leaving cars on a classification track at the lower end of Yard 9, shall remove skates, couple the cars to the cars already on the track and leave them properly secured. These rules were not complied with.

Conclusion

This accident was caused by the failure to apply a sufficient number of hand brakes on cars at the lower end of a gravity yard.

Respectfully submitted,

W. J. PATTERSON,

Director.