

## INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE  
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE  
SEABOARD AIR LINE RAILROAD AT HELENA, GA., ON  
JANUARY 22, 1929.

April 27, 1929.

To the Commission:

On January 22, 1929, there was a head-end collision between a freight train and a yard engine on the Seaboard Air Line Railroad at Helena, Ga., which resulted in the injury of one employee.

Location and method of operation

This accident occurred on that part of the South Carolina Division extending between Savannah and Shops, a distance of 198.3 miles. In the vicinity of the point of accident this is a single-track line over which trains are operated by time-table and train orders, no block-signal system being in use. At Helena a single-track line of the Southern Railway crosses the track of the Seaboard Air Line at grade; the accident occurred at a point 466 feet west of this crossing. The east switch of what is known as the house track is located 966 feet west of the crossing; this track parallels the main track on the south. There is a Hayes derail on the house track, located 154 feet west of the east switch. In the vicinity of the point of accident the track is tangent and the grade is practically level.

The weather was slightly foggy at the time of the accident, which occurred at about 5.23 a.m.

Description

Westbound freight train No. 81 consisted of 51 cars and a caboose, hauled by engine 509, and was in charge of Conductor Joiner and Engineman Lee. This train arrived at Helena at 5.10 a.m. and was brought to a stop on the main track, where it was still standing when it was struck by yard engine No. 1.

G.F.& A. yard engine 1 was stationed at Helena to be used by local freight crews, who tie up at that point tri-weekly, in switching their trains as some of the industry tracks are not in condition to support the road engines, which are of a larger type. The last service performed by this engine was during the afternoon of January 19 after which it was placed on the house track west of the derail,

headed east, and was left in charge of Engine Watchman Cray, who pulled the fire. On the morning of the accident Watchman Cray started a fire, and as soon as the steam pressure became high enough the engine started forward and ran over chocks which had been placed on each side of one of the driving wheels, passed over the derail without derailling any wheels except the rear truck of the tender, ran through the house track switch and continued eastward on the main track until it collided with train No. 81 while traveling at a speed of about 20 miles per hour.

Engine 509 sustained only slight damage to its front end but engine 1 was considerably damaged. None of the cars was damaged and none of the equipment involved was derailed as a result of the collision.

#### Summary of evidence

Engineman Lee, of train No. 81, stated that his train was brought to a stop at Helena for the purpose of meeting train No. 14, the stop being made on the main track a sufficient distance east of the passing track switch to allow train No. 14 to pull by and back in. While awaiting the arrival of that train he started oiling around his engine and was still so engaged when he heard an engine moving rather rapidly down in the yard, and upon looking in that direction he noticed an engine approaching. As he had dimmed the headlight of his own engine in order to keep from interfering with the view of the engine crew of train No. 14 he thought perhaps that whoever was operating the approaching engine did not see his train consequently he stepped to the front of his engine and began waving stop signals with his torch but these signals were not acknowledged and the collision occurred shortly afterwards. He estimated the speed of engine 1 at the time of the accident at 20 miles per hour. Engineman Lee said that after the accident he boarded the yard engine and found the throttle wide open and the reverse lever in the forward position, although he did not think it was entirely down on the quadrant, he noticed that the steam gauge registered 90 pounds pressure. About five minutes later he examined the derail on the house track and observed that it was locked in the derailling position and that there were several marks on it, he also noticed a wooden block about 2 inches thick lying on the rail. Engineman Lee questioned the engine watchman, who told him that he was in the cab of the yard engine, and that when the steam pressure reached about 140 pounds he heard a click and the throttle flew open, he started towards the engineman's side to close it but was thrown off at about that time.

Head Brakeman Fuller, of train No. 81, stated that after his train came to a stop at Helena, he started ahead to flag train No. 14 and when he passed the yard engine, which was then standing on the house track west of the derail, he noticed steam escaping from the cylinders but as it was only a small amount he did not mention it to the engine watchman, although they spoke to each other, the watchman was on the fireman's side of the engine cab at the time. Brakeman Fuller continued westward and upon reaching a point about four or five car-lengths beyond the yard engine he heard it start and shortly afterwards the watchman jumped from the engine on the fireman's side. After the accident Brakeman Fuller noticed that the derail on the house track was on the rail and that it bore marks indicating that a wheel had passed over it.

The statements of Conductor Joiner, of train No. 81, who was in the caboose at the time of the accident, were to the effect that after the accident he examined the derail on the house track and found that there were flange marks on it, the flanges then dropped on top of the rail and ran for a distance of about 18 inches before dropping back on the gauge side to their normal position. He also noticed that the rear tender truck of the yard engine was derailed and had caused considerable damage to the track between the derail and the point of accident. He inquired of the engine watchman as to what caused the accident and the watchman replied that the throttle worked open and he did not know how to close it.

Engine Watchman Cray stated that on the morning of the accident he started a fire in the yard engine at about 12.30 a.m., banked it, and then left the engine. About 4 a.m. he returned for the purpose of getting up steam and while this was being done there appeared to be something wrong with the engine as steam was escaping from the cylinder cocks, which were open. As a result he particularly looked at the throttle and satisfied himself that it was closed. He also looked at the reverse lever and it appeared to be on center, although he thought it might have been slightly forward but not enough for him to detect it, he did not touch either of these appurtenances and did not examine them closely but decided that the trouble was caused by the leaking of the throttle. When the steam pressure reached about 135 pounds and while he was sitting on the fireman's seatbox he heard a noise behind him and then the engine suddenly started forward, he immediately started towards the reverse lever but before reaching it the thought occurred to him that the engine would be derailed at the derail and for his own safety he jumped off. As the engine did not derail he made an effort to catch it but was unable to do so. As soon as

he reached the engine after the accident he entered the cab and observed that the throttle was not wide open and that the reverse lever appeared to be in the same position as it was when he looked at it while the engine was standing on the house track. Watchman Cray further stated that he has had about 12 months' experience as an engine watchman and hostler helper and knew how to start and stop an engine, and would have stopped the engine in this instance had it not been for his fear that the engine would be derailed at the derail. He explained that the noise he heard just before the engine started probably was caused by the throttle flying open, although he did not hear the throttle ratchet slipping. He also said that he had been instructed by the road foreman of engines that before firing up an engine he was always to ascertain that chocks were under it, that the reverse lever was on center, that the cylinder cocks were open, and that if steam was seen to be coming from the cylinder cocks the throttle was evidently open, in which event he should not attempt to move the engine but should go and notify the engineman immediately.

The statements of Road Foreman of Engines Moore substantiated those of Watchman Cray as to what instructions had been issued with regard to firing up an engine and as to what he should do if any difficulty arose. During the course of the investigation Watchman Cray was required to demonstrate his knowledge of an engine, he showed that he knew the open and closed positions of the throttle and cylinder cocks, and how to operate the reverse lever to the different positions. The testimony of the engine watchman, however, was such as to make it doubtful whether he knew anything about the position of the throttle, reverse lever or cylinder cocks at the time he was firing up the engine.

Track Foreman Mason stated that he inspected the derail on January 19 and at that time it was in good condition. He again examined this derail at about 6.a.m. on the day of the accident and found it in the derailing position with the lock in the hasp, in closed position, but with the lock broken. The only damage caused by the engine running over the derail was the bending of the spikes holding the derail mounting.

It was developed that some boys had been in the cab of engine 1 on January 20 while the engine was standing on the house track. This matter was investigated by a special agent who found three boys who made statements that they were on the engine on that date but none of them would admit having touched any of the mechanism. One of the

boys, however, stated that he had been on this engine on a previous occasion and at that time he had opened the throttle but it was closed shortly afterwards by another party.

During the investigation it was learned that there had been two other occasions on this railroad when Hayes derails failed to derail equipment when they were encountered. Engineman Powers testified that some time ago he was the engineman on a passenger train when the entire train, consisting of the engine and seven cars, passed over a derail without any part of it being derailed except the rear truck of the rear car, and this truck dropped between the rails due to the track having been knocked out of line by the preceding cars striking the derail, the speed of the train at the time was between 20 and 25 miles per hour. General Superintendent Carlton cited an instance when a cut of about nine cars ran away and the first four of them, which were lightly loaded, passed over a derail without derailing.

An inspection of the house track was made by the Commission's inspectors subsequent to the accident and so far as they could determine it was properly installed. Flange marks showed that the wheels of the engine mounted the derail as intended, passed over it and then continued along on top of the rail for about 18 inches, before dropping back on the gauge side of the rail. Two blocks of pine wood 2" x 4" were found at the location at which the yard engine had been standing on the house track and both of these blocks were flange marked, indicating that the wheels of the engine had run over them. An examination was also made of engine 1 and no defects were found which would have contributed to the cause of the accident. The throttle and reverse lever were of the standard type; the ratchets and springs were in good condition and all teeth engaged perfectly. The flanges of the wheels were also in good condition.

#### Conclusions

This accident was caused by the yard engine being fired up with the throttle and reverse lever apparently in positions that permitted the engine to start when sufficient steam pressure was generated, for which Engine Watchman Cray is responsible.

According to the testimony Watchman Cray was left in charge of engine 1 after it was last used on January 19. After starting a fire in it on the morning of the accident and while the steam pressure was being increased he noticed steam escaping from the cylinder cocks which caused him to become alarmed but after looking at the throttle, which he thought was closed, and the reverse lever, which appeared

to be in the center of the quadrant, he concluded it was due to a leaking throttle. He said he was sitting on the fireman's seat box at the time the engine started and immediately started to take action to bring it to a stop, but before reaching the engineman's side of the cab he realized that the engine probably would be derailed upon encountering the derail and jumped off. After the accident he observed the positions of the throttle and reverse lever and was of the opinion that those levers were in practically the same position as they were at the time he examined them while the engine was standing on the house track. Engineman Lee, however, stated that he boarded the yard engine with Watchman Cray after the accident and noticed that the throttle was wide open and the reverse lever well in the forward position. An examination of the engine revealed no defects that could have contributed to the occurrence of the accident but it was established that some boys had been playing in the cab of the engine on January 20; those boys admitted they had been in the cab but denied having moved any of the levers. It was apparent, however, that the throttle and the reverse lever had been moved by some one and that they were in such position that the engine started forward when the steam pressure became great enough to overcome the resistance of the pieces of wood used as chocks.

Examination of the derail subsequent to the accident clearly showed that it had been run over, although only the rear tender truck was actually derailed. Flange marks on the surface of the rail beyond the derail showed that after passing over the derail the flange had run along on the surface of the rail for a distance of about 18 inches and then dropped back in its normal position on the gauge side of the rail. No damage was done at this point with the exception of the bending of some of the spikes, and no one was able to offer any explanation for the failure of the derail to perform its intended function.

Engine watchman Cray had been employed about 15 years as a coach cleaner, call boy, trucker in a warehouse, and as engine watchman, entering the latter branch of the service in April, 1928.

Respectfully submitted,

W. P. Borland,

Director.