IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE ATLANTIC COAST LINE RAILROAD, NEAR TIMMONSVILLE, S.C., ON JULY 18, 1918.

November 25, 1918.

On July 18, 1918, there was a rear-end collision between two freight trains on the Atlantic Coast Line Railroad at Timmonsville, S. C., which resulted in the death of one employee and the injury of two employees. After investigation, the Chief of the Bureau of Safety reports as follows:

This accident occurred on that part of the Columbia district of the first division of the Atlantic Coast Line Railroad which extends between Florence, S. C., and Robbins, S. C., a distance of 138 miles. It is a single track line over which trains are operated by time-table and train orders transmitted by telegraph. The general direction is north and south. No block signal system is in use, and trains in the same direction are spaced by rule which requires them to keep at least ten minutes apart, except in closing up at stations.

Southbound freight train No. 209, in charge of Conductor Foxworth and Engineman Cappell, consisted of engine 1019, 39 cars and a caboose. It left Florence at about 3.30 a.m. en route for Augusta, Ga., and while passing Timmonsville, 11.4 miles south of Florence, was struck by southbound freight train No. 219 at about 4.25 a.m.

Southbound train No. 219 consisted of U. S. A. locomotive 1062, 38 cars and a caboose, in charge of Conductor Jackson and

Engineman Creech. The engine was built in accordance with Russian specifications, and was equipped with an oil headlight and had no lights in the cab. This train left Florence at about 3.40 a.m. and was running at a speed estimated at 12 miles an hour when it collided with No. 209.

The air brakes on both trains were inspected before departure and reported in good condition.

As a result of the collision the caboose of train No. 209 was telescoped by the steel underframe box car immediately ahead of it for almost its entire length, and the flagman who was riding in the caboose was killed, while the conductor who was with him was seriously injured. The impact broke the brake pipe on the rear of train 209, causing the air brakes to apply and resulting in a drawbar being pulled out on about the tenth car back from the engine. The pilot on engine 1062 of train 219 was destroyed, the front end of engine damaged and all but the rear pair of drivers derailed to the left or east side track, the engine remaining in an upright position on the roadbed. The third car from the engine of train 219 was thrown off its trucks and lay on its side west of the track, while the fourth car of that train was crushed between the second and fifth cars and practically destroyed.

North of the point of accident the track is straight for a distance of three miles and on a slightly ascending grade for a distance of a little over one mile.

About 930 feet north of the station at Timmonsville the

Seaboard Air Line tracks cross the tracks of the Atlantic Coast Line at right angles. Movements over this crossing and switches connected therewith are governed by an interlocking plant, the operating tower of which is located in the southwestern corner of the intersection formed by the two roads. The home signal governing southbound movements on the Atlantic Coast Line is located about 375 feet north of this tower and the distant signal is located 2145 feet north of the home signal. About 560 feet north of the distant signal is the north switch leading to the northbound passing track at Timmonsville. There is a dwarf signal located between the main and passing tracks 84 feet south of the home signal, the color indication of which was red at the time of the accident. The collision occurred about 166 feet south of the intersection of the two roads. All the signal lights of the interlocking plant and the switch lights were burning and in good condition. The weather was dark and slightly hazy.

Conductor Foxworth of No. 209 stated that he left Florence at 3.30 a.m. and on approaching Timmonsville the interlocking signals were against him and his train slowed down considerably before the home signal cleared. He was sitting in the caboose with Flagman Killian opposite and observed that No. 219 was following them right along. The flagman went to the rear of the cab and called to him "look out," but before the conductor could get off his seat the train was struck. Conductor Foxworth stated that he saw no reason for the collision, as No. 219 followed them from Florence yard to Timmonsville at a safe distance, and

his train had a good pair of markers, though he did not know whether the markers had been given any attention between Florence and Timmonsville. He further stated that both trains were running at about the same speed and had often run close together without spacing each other with fusees. He stated that in cases where trains follow each other the rear train sees the train ahead and keeps within safe distance, but if the leading train stops the other is flagged with a fusee at night; in this instance he saw no need for a fusee as train 219 was not close enough. He said the headlight of 219 was not very bright, and was burning dimmer than the usual light. He said his train was moving at a speed of about 8 miles an hour when the collision occurred. His markers were equipped with 8-day burners with a globe to protect light from the wind and prevent flickering, and when markers are kept clean they give a very bright light. He did not examine the markers after the flagman lighted them on this trip, but felt satisfied that if they had not been all right the flagman would have said something about it, if the protecting globe had become broken or cracked so as to permit air to get to the flame the light would have flickered, but he had never had one of these globes break in a lamp. His train made no stops between Florence and Timmonsville, and he said Flagman Killian was a first-class flagman.

Engineman Cappell of No. 209 stated that his train left Florence at about 3.30 a.m. When he reached the station board at Timmonsville he sounded the whistle and saw the distant signal of the interlocking plant showed green. He sounded four

blasts of the whistle for the signal and it still remained green. He then sounded two blasts for the signal and had reduced speed to about 4 or 5 miles per hour before it changed to white, whereupon he applied the steam and moved ahead about two train lengths and was running 6 or 8 miles an hour when he felt the air apply. Thinking an air hose had burst, he sounded whistle for the flagman, got down on the ground with a torch, and went back about ten car lengths, when he found a drawhead pulled out. Having disposed of the disabled car, which took eight to ten minutes, he came back and coupled on and found that No. 219 had run into the rear of his train. He did not know just when the collision occurred, but is of the opinion that it happened while the train was in motion. He stated that he could see the distant signal about one-half a mile, but could not see the home signal until after passing the distant signal on account of the home signal being in line with the semaphore signal. The weather did not interfere with the observance of signals, and thought his caboose could have been seen a distance of half a mile.

Fireman Commander stated that at the time they were approaching Timmonsville engineer was blowing for block. Their speed then was about 18 or 20 miles an hour. He kept looking out ahead and noted that the distant signal was green and the home signal red. The engineer called for home signal twice and in the meantime slowed down to nearly stop position. The engine was about 100 or 150 feet from signal board when it got signal. After train slowed down one of the cars had to be set off on account of drawhead trouble and on coming back he found that a collision had

occurred. He did not hear the whistle of 219 and further stated that on getting into Timmonsville it is difficult to distinguish the station semaphore from the home signal for the reason that they are in line and opposite each other.

Brakeman McLendon of No. 209 stated that the speed of his train from Florence to Timmonsville was 18 to 20 miles an hour. He rode on the engine all the way. On approaching Timmonsville the engineer had to blow twice for distant signal. After first whistle he reduced speed considerably and at time of passing Seaboard Air Line crossing his speed was from 6 to 7 miles an hour. He then came to a standstill and air went down. He got down on engineer's side, went back 10 car lengths, and found a drawhead out of one of the coal cars. After setting this bad order car off, he went back to couple up and was informed by brakeman of No. 219 that the rear of his train had been run into. He stated that when he looked back at Ebenezer (which is 5½ miles from Florence) his marker on left side was a little dim.

Conductor Jackson of 219 stated that his train pulled out on the main line ten minutes after No. 209 had left and his caboose passed the terminal board at about 3.45 a.m. He proceeded at a speed of from 12 to 14 miles an hour until the train reached Revells Curve, about 2 miles from the terminal board; then speed was increased to 18 or 20 miles an hour until the station board at Timmonsville was reached, when steam was shut off and speed reduced to 10 or 12 miles an hour. Shortly thereafter he felt the air brakes being applied in emergency, followed by the collision. He was sure his train did not leave until ten

minutes after No. 209, and stated that when the latter left Florence he noticed that while the right hand marker was burning fairly well, the left hand one was flickering. He thought, however, the markers could be seen for at least half a mile. He also stated that it was not the practice to follow a preceding train too closely outside yard limits.

Engineman Creech of No. 219 stated that when No. 209 left Florence he noticed that the markers were very dim, particularly the one on the left side. He followed that train through the yard and when he passed the terminal board at about 3.40 a.m. and moved his train out onto the main line the markers of train 209 had disappeared around a curve about 1½ miles distant. He stated that upon approaching Timmonsville he kept a careful lookout ahead and saw the interlocking signals indicated clear track. He did not see the markers on the caboose of No. 209 until he had passed the home signal and was within about 200 feet of that train. No caution signal was set to indicate that there was anything on the main line. The speed of his train at that time was about 12 miles an hour and he immediately made an emergency application of the air brakes which reduced his speed to about 8 miles an hour when the collision occurred. He stated that the bright signal lights and street lights prevented him from seeing the markers on 209 sooner; also that 209 was permitted to make a speed of 30 miles an hour while his speed, on account of the type of engine he was running, was restricted to 20 miles; he therefore did not expect to find 209 at Timmonsville, at least without protection. He stated that his engine was equipped with an oil

headlight, which was burning properly and that he sounded the whistle at the station board, which was about 60 car lengths from the caboose of No. 209. Before leaving Florence his brakes were tested and found working all right, but when he made the emergency application at Timmonsville the brakes or the engine did not hold very well. He did not think that No. 209 was moving at the time of the collision and stated that it is customary for a leading train to use fusees as a protection when it drags or reduces its speed.

Fireman Brown of No. 219 stated that his train followed No. 209 out of the yard at Florence, and he then noticed that while one of its markers was burning brightly the other was dim and flickering. He did not see any flagman around when the accident occurred, though he understood that 209 had stopped in order to set off a bad order car.

Brakeman Robinson of No. 219 stated that he did not see anything of 209 until he saw a little red light at Timmonsville, which he made out to be one of its markers. This light was dim and when the engineer observed it he cut down speed and put brakes on in emergency.

Flagman Byrd of No. 219 stated that he did not see anything of 209 on the road, though he heard it. The first he knew of accident was when a window fell on his arm. He got out of cab, looked towards engine and saw one red light and one white, the latter soon turning to red. The weather at the time was hazy but not so bad as to interfere with the seeing of signals.

Brakeman Robinson of No. 219 stated that he was riding

on the platform back of the tank when his train approached Timmonsville, and when the engineman sounded the whistle for the station he looked ahead and saw a small red light on the right hand side of the track, which he afterwards discovered was a marker on No. 209. On observing or thinking that he observed this light speed was reduced and air brakes applied in emergency, the engine of 219 being about two car lengths from the caboose of 209 at the time.

Towerman Wilson stated that he was working in the tower at Timmonsville on the night of the accident relieving the regular towerman, and while this was his first night as towerman at Timmonsville he was thoroughly familiar with the operation of the plant. When train 209 approached Timmonsville he was not in the tower, he had gone to the toilet which is about 60 feet from the tower, and when the engineman called for the signals three times he hurried back and cleared the signal when he was near the home signal. He said the engineman of 209 was working a little steam as he passed the tower, the speed of his train being 12 or 15 miles an hour and the rear end of the train had not passed the tower when he saw 219 approaching near the home signal. He first thought it was an engine coupled to the rear of 209, but when he found out it was not he threw the home signal to red. The engine of 219 was then passing the home signal. He thought the speed of 219 was 20 or 25 miles an hour at the time. The caboose of 209 was 20 or 25 yards south of the tower when it was struck, and he thought that the brakes were applied on 219 twenty or twenty-five feet before the caboose was struck. He stated that h saw only one marker on the caboose of 209 when it passed the tower, and it was not bright. He said

that train 209 was moving at the time of the collision.

This accident was caused by the failure of Conductor Foxworth and Flagman Killian to properly protect their train as required by Rule 99(a) of the book of operating rules of the Atlantic Coast Line Railroad, which reads as follows:

> When the speed of a train is reduced and its rear thereby endangered by a following train before the flagman can get off, a lighted fusee must be thrown upon the track at intervals until the flagman can get back to protect his train.

They also neglected to see that the markers on the rear of their train were in good condition. Had these markers been burning properly, it is probable that they would have been seen by the following train for a sufficient distance to enable them to avoid a collision.

Towerman Wilson is also deserving of censure, for had he been at his post and had the signals set properly for No. 209 the speed of this train would not necessarily have been so reduced as to permit No. 219 to close up so rapidly.

Attention is also called to the fact that a test of conditions under which this collision occurred showed that the semaphore signal at the telegraph office in the depot at Timmonsville is in line with the home signal and in a measure obstructs the view of the latter.

All the employees involved were experienced men and had been on duty but a few hours at time of accident.

H. W.