

RAILROAD ACCIDENT INVESTIGATION

Report No 3776

SOUTHERN RAILWAY COMPANY

ATLANTA, GA

AUGUST 26, 1957

INTERSTATE COMMERCE COMMISSION

Washington

SUMMARY

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DATE	August 26, 1957	
RAILROAD	Southern	
LOCATION	Atlanta, Ga	
KIND OF ACCIDENT	Side collision	
EQUIPMENT INVOLVED	Locomotive with cars	Locomotive with cars
LOCOMOTIVE NUMBERS	Diesel-electric units 2065 and 2468	Diesel-electric unit 2206
CONSISTS	37 cars	7 cars
ESTIMATED SPEEDS	4 m p h	3 m p h
OPERATION	Operating rules	
TRACK	Yard leads, tangent, 0 10 percent ascending grade southward	
WEATHER	Clear	
TIME	8 04 a m	
CASUALTIES	4 killed; 2 injured	
CAUSE	Power-operated switch being operated in advance of closely approaching yard movement diverting movement from intended route to occupied track	

INTERSTATE COMMERCE COMMISSION

REPORT NO 3776

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS UNDER
THE ACCIDENT REPORTS ACT OF MAY 6, 1910

SOUTHERN RAILWAY COMPANY

March 17, 1958

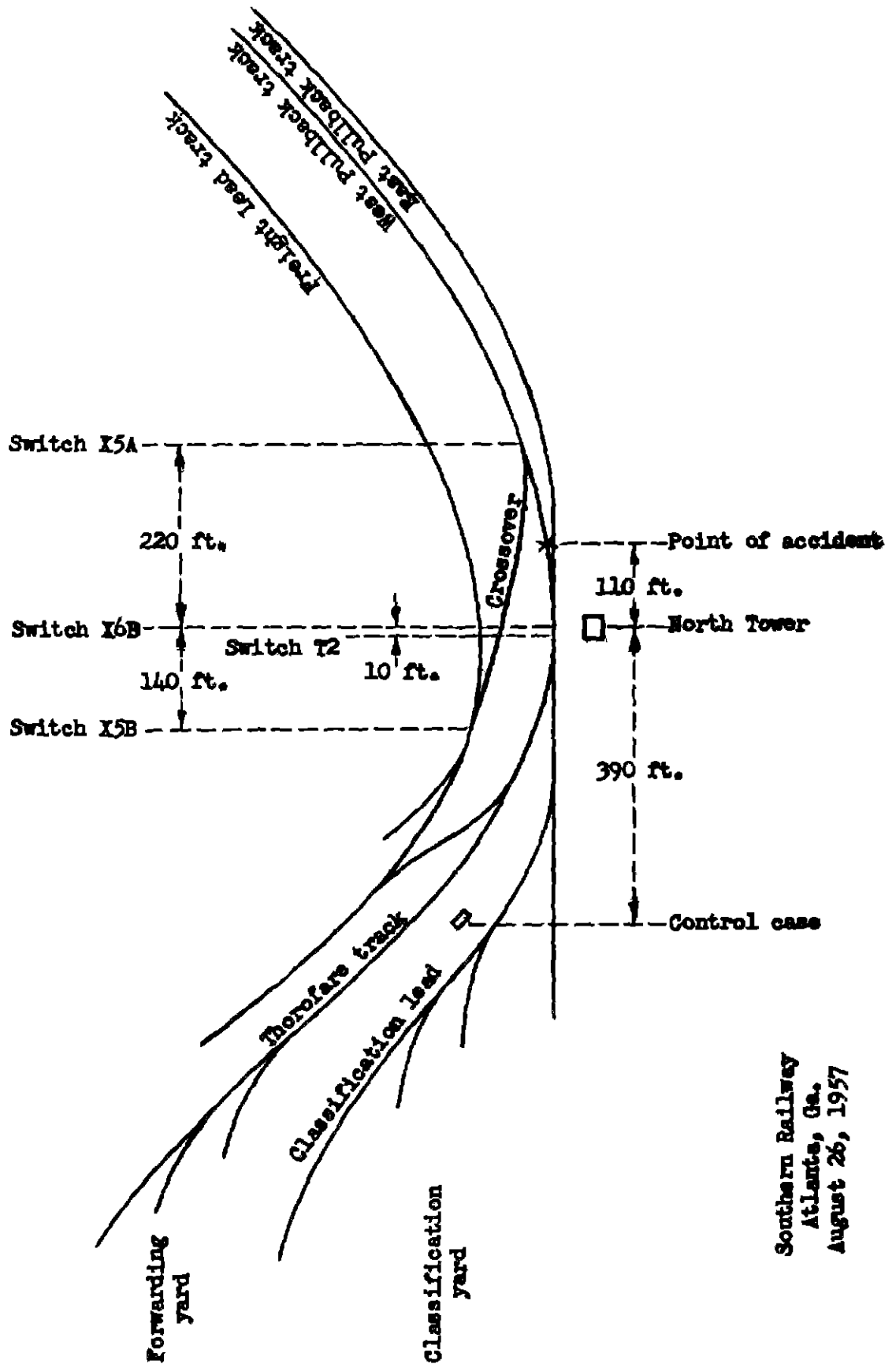
Accident at Atlanta, Ga , on August 26, 1957, caused by a power-operated switch being operated in advance of a closely approaching yard movement diverting the movement from the intended route to an occupied track

REPORT OF THE COMMISSION¹

TUGGLE, Commissioner

On August 26, 1957, there was a side collision between two yard movements on the Southern Railway at Atlanta, Ga , which resulted in the death of 4 mechanical department employees, and the injury of 2 mechanical department employees

¹Under authority of section 17 (2) of the *Interstate Commerce Act* the above-entitled proceeding was referred by the Commission to Commissioner Tuggle for consideration and disposition



Southern Railway
 Atlanta, Ga.
 August 26, 1957

Location of Accident and Method of Operation

This accident occurred on the line of the Atlanta Terminal in Inman Yards, Atlanta, Ga. Movements within Inman Yards are made under the rules governing movements within yard limits. The tracks of the yards extend north and south. At the north end of Inman Yards a classification yard is located immediately east of a forwarding yard. A tower designated as North Tower is located northeast of the classification yard and approximately 4.7 miles north of the station at Atlanta. North of North Tower three lead tracks parallel each other and are designated from west to east as Freight Lead track, West Pullback track, and East Pullback track. The south end of the West Pullback track converges and connects with the East Pullback track at switch X6B located directly opposite North Tower. Tracks of the classification yard converge and connect with a classification lead track, and tracks of the forwarding yard converge and connect with a lead track designated as the Thorofare track. The classification lead track and the Thorofare track converge and join the south end of the East Pullback track at switch T2 located 10 feet south of switch X6B. A crossover connects the West Pullback track and the Freight Lead track. The north switch of the crossover designated as X5A, which is facing-point for southbound movements on the West Pullback track, is located about 220 feet north of North Tower. The south switch of the crossover designated as X5B is located about 140 feet south of North Tower. The accident occurred at the fouling point near the turnout connecting the East Pullback track and the West Pullback track at a point 110 feet north of North Tower. In the immediate vicinity of the point of accident the West Pullback track is practically tangent. The grade for southbound movements on the West Pullback track is 0.10 percent ascending at the point of accident.

Switches X6B, X5A, X5B, and T2 are so arranged that they can be operated either manually or electrically. A control case is provided for the electrical operation of these switches. It is located between the classification lead track and the Thorofare track at a point approximately 390 feet south of North Tower. The control case is approximately 2 feet wide and 3 feet high and is mounted on a mast. The panel is hooded and contains six switch levers which are numbered from left to right, consecutively, 1 to 6. The levers are approximately 5 feet 10 inches above ground level. Normal position for each lever is down and reverse position is up. Each lever is provided with three lights. When a lever and the switch or switches it controls are in normal position a green light becomes lighted, and when in reverse position a red light becomes lighted. Track occupancy is indicated by a white light. A detector track circuit is provided for each power-operated switch and is so arranged that when an approaching movement is approximately 3 feet from the switch points of the switch involved the track-occupancy light becomes extinguished and the switch cannot be operated electrically until after the movement passes the switch.

Levers 1 and 3 control the operation of switches X6B and T2, respectively. When these levers are in reverse position the route is lined for a northbound movement from the Thorofare track to the East Pullback track. Lever 2 controls the operation of switches X5A and X5B. When this lever is in reverse position the route is lined for a southbound movement from the West Pullback track over the crossover to the Freight Lead track. When this lever is in normal position the route is lined for continued movement on the West Pullback track.

A track diagram and instructions for the operation of the switches is posted on the panel.

Description of Accident

Yard diesel-electric unit 2206, assigned to extra yard work, headed north, was coupled to the north end of a cut of cars in the forwarding yard. The cut of cars from north to south consisted of a water car, a tool car, two flat cars, a derrick, and two flat cars, in the order named. This movement proceeded northward from the forwarding yard, entered the Thorofare track and was entering the East Pullback track, moving at an estimated speed of 3 miles per hour, when the right rear corner of the locomotive was struck by the south car of a movement proceeding southward on the West Pullback track.

Road-switcher diesel-electric unit 2065 coupled in multiple-unit control with booster diesel-electric unit 2468 was assigned to yard Run 1-CY. This locomotive was coupled to the north end of a cut of 37 cars. These cars had been moved northward from the classification yard to the West Pullback track and stopped with the south end of the cut of cars immediately north of switch X5A. Shortly after, the movement proceeded southward on the West Pullback track and while moving at an estimated speed of 4 miles per hour the south car of the cut struck the movement proceeding northward into the East Pullback track.

The south car of the cut of cars moving on the West Pullback track was a flat car. This car struck the right rear handhold of locomotive 2206, scraped the side of the water car and mounted the underframe of the tool car demolishing the superstructure of the tool car. The two cars at the south end of the cut of cars moving on the West Pullback track were also damaged.

Four car repairmen were killed, and a gang foreman and a car repairman were injured. These employees were in the tool car when the accident occurred.

The weather was clear at the time of the accident, which occurred at 8 04 a m.

The tool car, Southern T-494, was a converted box car having a steel underframe and a composite wood and steel superstructure. It was 41 feet 10 inches long, 8 feet 10 inches wide, and 12 feet 8 inches high. The car was provided with a side door on each side in the center of the car 6 feet 8 inches high and 43 inches wide, and an end door at each end 6 feet 4 inches high and 25 inches wide. A partition was constructed across the inside of the car approximately 8 feet from one end and this space was equipped with seats and a stove. The other portion of the car was equipped with a work bench and containers for materials and tools.

The locomotive of Yard Run 1-CY was equipped with a radio and the conductor was provided with a portable radio with which he could communicate with the engine crew.

Discussion

Prior to the time the accident occurred construction work was being performed in the vicinity of the point of accident which included the installation of several power-operated switches. The switches involved in the accident were placed in operation on August 12, 1957. A bulletin was issued August 8, 1957, informing yard employees that the power-operated switches would be placed in operation and instructing the conductors of yard crews when using the switches to operate them from the control panel. An assistant signal supervisor was assigned to instruct conductors in the operation of the control levers.

At the time the locomotive and the cut of cars had moved northward to the West Pullback track the conductor alighted and went to the control panel to operate the power-switch controls. He placed lever 2 in reverse position lining the route from the West Pullback track over the cross-over to the Freight Lead track. He also placed levers 1 and 3 in reverse position in order to insure that a movement could not enter the south end of the West Pullback track and collide with the cut of cars. He instructed the engineer by radio to move the cut southward and while he was proceeding southward to line hand-operated switches he observed the locomotive and cut of cars moving northward on the Thorofare track. Shortly afterward he heard the collision and immediately instructed his engineer by radio to stop. He said that he then went to the control case and observed that lever 2 was in the normal position instead of reverse position as necessary for the intended movement. The engineer and the fireman of Yard Run 1-CY, and a road foreman of engines who was on the locomotive were unable to see the locomotive and cut of cars moving northward from the Thorofare track to the East Pullback track because of curvature of the track and cars standing on an adjacent track. The first they became aware of anything being wrong was when the conductor instructed the engine crew to stop.

The extra yard crew was instructed to move work equipment from the forwarding yard to a track in the classification yard. The crew intended to move the cut of cars northward over the Thorofare track into the East Pullback track and then southward on the classification lead track. As the locomotive and the cut of cars proceeded northward on the Thorofare track the fireman observed that the route was properly lined and so informed the engineer. The conductor and a switchman alighted and proceeded to the control case. The conductor said that he did not know how to line routes by the operation of the switch levers in the control case but that the switchman had worked in this vicinity as a conductor and was familiar with the panel board. He said that the collision occurred while the switchman was explaining the operation of the levers to him. As the movement was entering the East Pullback track the fireman observed that the southbound movement on the West Pullback track had passed switch X5A and that it was continuing southward on that track. He immediately called a warning to the engineer and the engineer applied the brakes in emergency.

When the conductor and the switchman of the extra yard crew arrived at the control case a road foreman of engines and the assistant signal supervisor were standing nearby. The road foreman of engines said that he observed the switchman, whom he assumed was the conductor, touch lever 3 and then move his hand to lever 2 and place the lever in normal position instead of reverse position as it had been placed for the intended movement. He said that when he saw the position of lever 2 he looked northward and saw the first car on the West Pullback track was over switch X5A and lever 2 could not be restored to its former position. The conductor said that the switchman placed his hand on lever 3 while explaining the operation of the levers and indicated that the lever would have to be returned to normal position to line the route for movement from the East Pullback track to the classification lead track. He said that he did not observe the switchman operate any lever but after the accident occurred he observed that lever 2 was in normal position instead of reverse position as necessary for the intended movement. The assistant signal supervisor said that as the movements were approaching the point where the accident occurred he observed that the switch levers were in their proper position. He then turned from the control panel to observe the movements. He said that immediately before the collision occurred he observed that the track-occupancy light under lever 2 was extinguished and that the lever was in normal position instead of reverse position for the intended movement.

The power-operated switches involved were tested after the accident occurred and were found to function as intended

During the investigation the switchman said that he did not move any of the levers, however, it is evident that lever 2 was moved from reverse position to normal position as the south-bound movement on the West Pullback track was closely approaching switch X5A diverting the movement from the crossover track, the intended route, to the junction of the West Pullback track and the East Pullback track which was occupied by another movement

The power-operated switches involved in this accident are remotely controlled and the control circuits so arranged that they can be operated immediately in front of an approaching movement without any warning to the members of the crew. Such switches are not provided with all the protective features which usually surround the use of interlocked power-operated switches, nor do they appear to have the degree of safety associated with the use of hand-operated switches, since after a hand operated switch is properly lined for a movement it is improbable that the switch could be reversed without some member of the crew being aware of it. Consideration should be given to such measures as are necessary to prevent improper operation of power-operated switches in installations of the type involved in this accident

Cause

This accident was caused by a power-operated switch being operated in advance of a closely approaching yard movement diverting the movement from the intended route to an occupied track

Dated at Washington, D C , this seventeenth
day of March, 1958

By the Commission, Commissioner Tuggle

(SEAL)

HAROLD D McCOY,
Secretary