

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 2703
THE SEABOARD AIR LINE RAILWAY COMPANY
REPORT IN RE ACCIDENT
NEAR GARLINGTON, S. C., ON
JUNE 1, 1943

SUMMARY

Railroad: Seaboard Air Line
Date: June 1, 1943
Location: Garlington, S. C.
Kind of accident: Head-end collision
Trains involved: Freight : Freight
Train numbers: First 90 : Second 95
Engine numbers: 361 : 2302-2464
Consist: 32 cars, caboose : 2 cabooses
Speed: 30-35 m. p. h. : 10-18 m. p. h.
Operation: Timetable and train orders, and
manual-block system for follow-
ing passenger trains only
Track: Single; 1° curve; 0.80 percent
ascending grade northward
Weather: Clear
Time: 1:57 a. m.
Casualties: 3 killed; 3 injured
Cause: Failure to deliver meet order to
superior train
Recommendation: That the Seaboard Air Line Railway
Company establish an adequate
block-signal system on the line
on which this accident occurred

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2703

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

THE SEABOARD AIR LINE RAILWAY COMPANY

July 14, 1943.

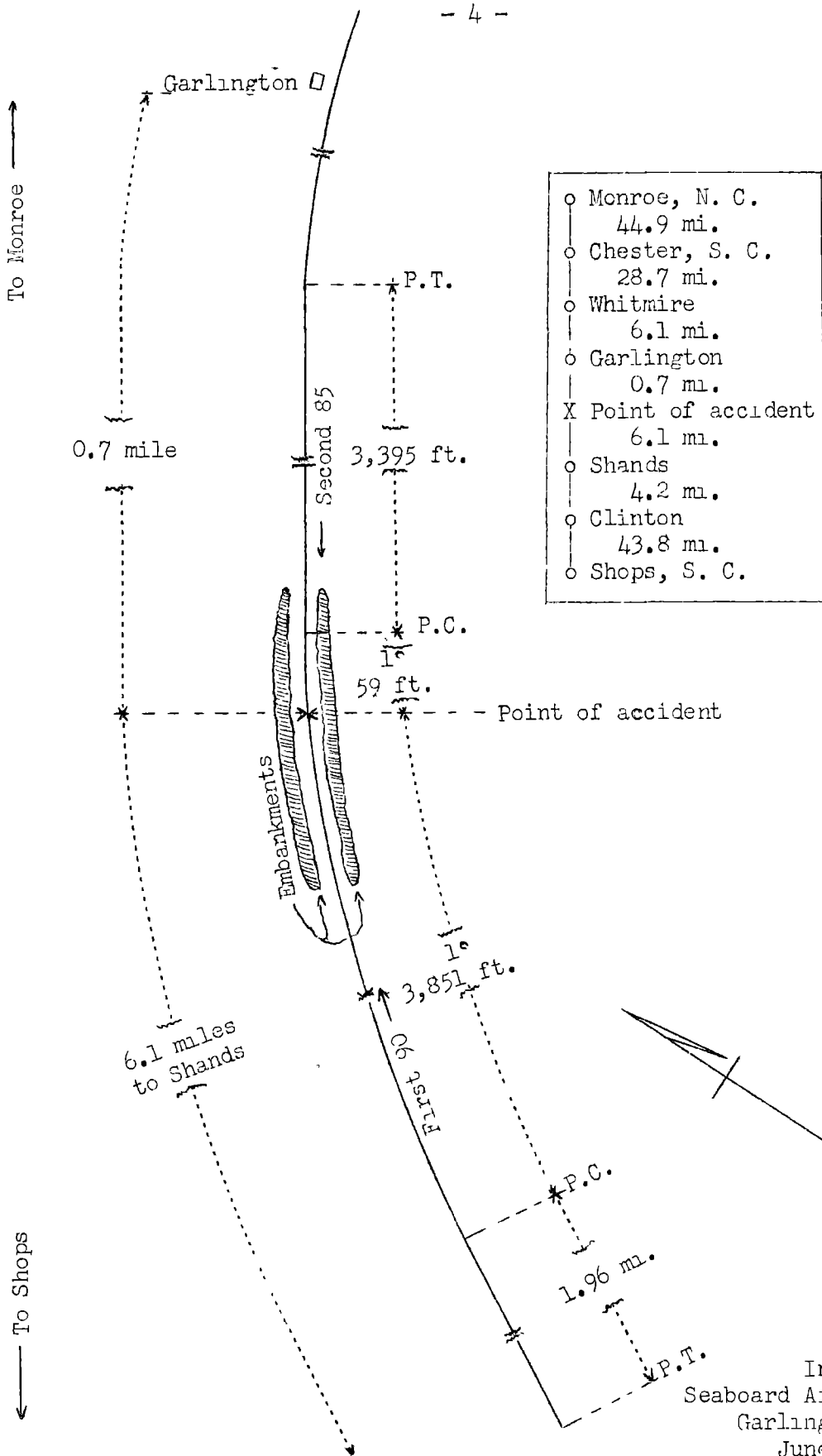
Accident near Garlington, S. C., on June 1, 1943, caused
by failure to deliver a meet order to the superior
train.

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REPORT OF THE COMMISSION

PATTERSON, Commissioner:

On June 1, 1943, there was a head-end collision between two freight trains on the Seaboard Air Line Railway near Garlington, S. C., which resulted in the death of three employees and the injury of three employees.

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



Inv-2703
 Seaboard Air Line Railway
 Garlington, S. C.
 June 1, 1943

Location of Accident and Method of Operation

This accident occurred on that part of the Georgia Division designated as the Abbeville Sub-division and extending between Monroe, N. C., and Shops, S. C., 134.5 miles. This was a single-track line over which trains were operated by timetable and train orders, and a manual-block system for following passenger trains only. The accident occurred 0.7 mile south of Garlington and 6.1 miles north of Shands. Approaching from the south there was a tangent 1.96 miles in length, which was followed by a 1° curve to the right 3,851 feet to the point of accident and 59 feet beyond. Approaching from the north there was a tangent 7,395 feet in length, which was followed by the curve on which the accident occurred. The grade for north-bound trains varied between 0.50 and 0.80 percent ascending 1,441 feet to the point of accident, and was 0.80 percent at that point. The grade for south-bound trains was, successively, 1.30 percent ascending 2,100 feet, level 200 feet and 0.80 percent descending 659 feet to the point of accident. The accident occurred in a cut, the walls of which rose to a maximum height of 12 feet.

Operating rules read in part as follows:

204. Train orders must be addressed to those who are to execute them, naming the place at which each is to receive his copy. Those for a train must be addressed to the Conductor and Engineman, * * *. A copy for each employee addressed must be supplied by the Operator.

* * *

205. Each train order must be written in full in a book provided for the purpose at the office of the Superintendent, and with it recorded the names of those who have signed for the order; the time and the signals which show when and from what offices the order was repeated and the responses transmitted; and the train dispatcher's initials. These records must be made at once, and never from memory or memoranda.

206. * * *

When train orders are transmitted by telegraph, the train dispatcher must underscore each word and figure in the body of the order at the time it is repeated. When transmitted by telephone, he must write the order as he transmits it and underscore as prescribed above.

211. When a "19" train order has been transmitted, operators must (unless otherwise directed) repeat it at once from the manifold copy, in the succession in which the several offices have been addressed. Each operator receiving the order must observe whether the others repeat correctly. When the order has been repeated correctly by an operator, the response "complete" and the time with the initials of the Superintendent, will be given by the dispatcher. * * *.

* * *

211-B. When train orders are delivered, operators will deliver clearance card, Form 255, to the conductor and enginemen (or pilot) noting thereon the numbers of all orders delivered, * * *.

211-C. * * *

Before arrival of a train at an office where "19" orders are placed for delivery the operator will transmit from clearance card form 255 to the dispatcher the number of approaching train with the number or numbers of the orders to be delivered as follows:

"Clear No. 1 with orders 2-12-13 and 15."
 If correct the dispatcher will reply
 "clear No. 1 with orders 2-12-13 and 15"
 giving the time and superintendent's initials. The operator may then deliver the orders in accordance with Rules 211, * * * and 211-B.

* * *

GENERAL REGULATIONS.

TRAIN DISPATCHERS.

792. * * *. They will carefully note operators repeating orders to observe that they are correctly repeated.

Time-table instructions read in part as follows:

All northward trains are superior to trains of the same class in opposite direction.

Dispatcher's authorized record of clearance cards contained the following instructions:

Entry of trains and order numbers must be made at time of transmission and checked by Dispatcher when Operator transmits them before clearing train.

The maximum authorized speed for the trains involved was 40 miles per hour.

Description of Accident

At Clinton, 11 miles south of Garlington, the crew of First 90, a north-bound second-class freight train, received copies of a clearance card and five train orders, but they did not receive copies of an order requiring their train to meet Second 85 at Snands, 6.8 miles south of Garlington. First 90, consisting of engine 361, 28 loaded and 4 empty cars and a caboose, departed from Clinton at 1:38 a. m., according to the dispatcher's record of movement of trains, 2 hours 23 minutes late, passed Snands and while moving at a speed variously estimated as 30 to 35 miles per hour it collided with Second 85 at a point 0.7 mile south of Garlington.

At Whitmire, 6.1 miles north of Garlington, the crew of Second 85, a south-bound second-class freight train, received a clearance card and, among others, copies of train order No. 21, Form 19, reading as follows:

Second 85 Engs 2302-2464 Coupled
Meet First 90 Eng 361 at Snands
Second 90 Eng 331 at McDowell and
No 82 Eng Unknown at Shops

Second 85, consisting of engines 2302 and 2464, coupled, and two cabooses, departed from Whitmire at 1:44 a. m., according to the dispatcher's record of movement of trains, 6 hours 49 minutes late, passed Garlington at 1:54 a. m., 6 hours 29 minutes late, and while moving at a speed variously estimated as 10 to 18 miles per hour it collided with First 90.

The air brakes of each train had been tested and had functioned properly at all points where used en route.

From an engine moving in either direction in the vicinity of the point of accident, the view of an engine approaching from the opposite direction was restricted to 870 feet, because of a cut and track curvature.

The engine of First 90 and its tender were derailed to the east, stopped on their right sides and parallel to the track. The engine-truck frame and the cab were demolished, and the smokebox, both cylinders, the drawbar and the trailer-truck cradle were broken. The tender cistern was badly damaged. The first 11 cars were derailed. Of these cars 6 were destroyed and the remainder were badly damaged. The front truck of the twelfth car was derailed. The caboose was slightly damaged.

The force of the impact moved Second 85 backward 80 feet. The smokebox of the first engine was telescoped about 4 feet. The boiler was shifted backward about 15 inches from its normal position on the frame. Both cylinders were demolished, and the engine-truck frame, the rear deck-casting and the steam admission pipes were broken. The main engine-frame and the tender-frame were bent, and the cab was crushed. The tender cistern was shifted about 8 inches from its normal position on the frame, and the rear-end sheet was crushed inward. The second engine was considerably damaged.

It was clear at the time of the accident, which occurred about 1:57 a. m.

The engineer, the fireman and the front brakeman of First 90 were killed. The engineer of the first engine of Second 85, and the conductor and the brakeman of Second 85 were injured.

During the 30-day period preceding the day of the accident, the average daily movement in the vicinity of the point of accident was 16.86 trains.

Discussion

The rules governing operation on this line required that train orders must be addressed to the conductors and the engineers of the trains affected. At the time of transmission, the train dispatcher must write the orders in full in a book provided for that purpose. Operators receiving an order must write it during transmission on the prescribed form, then repeat it to the dispatcher in the succession in which their offices were addressed. Each operator receiving the order must observe whether the other operators repeat correctly. During repetition, the dispatcher must underscore in his train-order book each word and figure in the body of the order, then record on a designated form the trains addressed, the office designation, and the numbers of the train orders to be entered by the operators on the prescribed clearance card. Before train orders and a clearance card are delivered to a train, the operator must transmit to the dispatcher the number of the train and the number of each order to be delivered to that train, then the dispatcher must check his record to ascertain if the operator has included the correct numbers of all orders on the clearance before he authorizes the operator to clear the train. The dispatcher and the operators concerned in this investigation understood these requirements.

Train order No. 21 established Shands, a blind siding, as the meeting point between First 90, a north-bound second-class freight train, and Second 85, a south-bound second-class freight train. First 90 was superior by direction. When this order was transmitted at 1:24 a. m., it was intended that it be addressed to First 90 at Clinton, 4.2 miles south of Shands, and it was addressed to Second 85 at Whitmire, 12.9 miles north of

Shands. The order also was addressed to trains at two other stations. At 1:31 a. m. the dispatcher authorized the operator at Clinton to clear First 90 with five orders, not including order No. 21, and at 1:41 a. m. he authorized the operator at Whitmire to clear Second 85 with four orders, including order No. 21.

First 90 departed from Clinton at 1:38 a. m., and Second 85 departed from Whitmire at 1:44 a. m. First 90 passed Shands, the intended meeting point between these trains, and collided with Second 85 at a point 6.1 miles north of Shands. Because of track curvature and a cut, the members of the crews on the engines of each train were unable to see the other train more than a few hundred feet. Action to stop their respective trains was taken by the engineers, but the distance was not sufficient to avert the collision.

The dispatcher's train-order book indicated that train order No. 21 was addressed simultaneously by the dispatcher to First 90 at Clinton, to two other stations, and to Second 85 at Whitmire, in that succession. Three of the four operators who copied the order and the dispatcher said that when the order was being sent it was addressed to First 90 at Clinton. The dispatcher said the operator at Clinton repeated the order as being addressed to First 90. Two operators thought the operator at Clinton repeated the address as First 90 but they were not certain. The operator at Whitmire said he left his office to deliver a clearance to a train which was not involved, and did not hear the operator at Clinton repeat order No. 21. The operator at Clinton said that when he wrote the address of order No. 21 the dispatcher was already transmitting the body of the order. He understood the order was addressed to Second 85 and prepared it with that address, and thought he had repeated it as being addressed to that train. He said he may have been confused and nervous because of handling orders for a number of trains, one of which he had to flag for a restricting order. In addition, he prepared a number of complicated tickets for passengers, and there was considerable confusion in the waiting room adjacent to his office. If the operator had written the address correctly, this accident would have been prevented.

Under the rules, when the operator at Clinton transmitted the order numbers from the clearance, the dispatcher was required to check the number of each order to be delivered to First 90 to see that all orders intended for delivery to that train were properly listed on the clearance. Order No. 21 was not included among the order numbers entered on the clearance issued by the operator at Clinton for delivery to First 90, and the omission was not detected by the dispatcher when he authorized the operator to clear First 90. If the dispatcher had properly checked the clearance, the omission of order No. 21 from the clearance and the error in the address of that order would have been detected before First 90 was cleared, and the

accident would have been averted. The rules of this carrier require the dispatcher to underscore each word and figure in the body of an order when it is being repeated by the operator. The dispatcher's train-order book indicated that he had underscored each word and figure in the body of order No. 21, but the words and figures of the address were not underscored. The rules of many railroads require each word and figure of an order to be underscored. If each word and figure of the entire order in the present case had been underscored, the incorrect address undoubtedly would have been discovered when the operator at Clinton was repeating it, and the accident would have been averted.

The manual-block system used on this line applies to following movements of first-class trains and passenger trains only. The book of operating rules of this railroad contains manual-block rules which provide for the blocking of opposing movements as well as following movements, but these rules are not in effect in the territory involved. During a 16-month period immediately preceding the day of the accident, six other accidents, resulting in the death of 7 persons and the injury of 136 persons, occurred on lines of this carrier under the same system of operation as the one in the present case. On November 4, 1942, there was a head-end collision between two freight trains at Heardmont, Ca., on the same division as Swards and other stations previously mentioned. In its report of the investigation of that accident the Commission recommended that the Seaboard Air Line Railway Company establish an adequate block-signal system on the line involved. In the instant case, if an adequate block system had been in use in this territory, the accident would not have occurred.

Cause

It is found that this accident was caused by failure to deliver a meet order to the superior train.

Recommendation

It is recommended that the Seaboard Air Line Railway Company establish an adequate block-signal system on the line on which this accident occurred.

Dated at Washington, D. C., this fourteenth day of July, 1943.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. EARTEL,
Secretary.