

INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT OF THE DIRECTOR

BUREAU OF SAFETY

ACCIDENT ON THE

CLINCHFIELD RAILROAD

DANTE, VA.

AUGUST 11, 1936

INVESTIGATION NO. 2091

SUMMARY

Railroad: Clinchfield
Date: August 11, 1936
Location: Dante, Va.
Kind of accident: Head-end collision
Trains involved: Work : Work
Train numbers Extra 512 : Extra 510
Engine numbers: 512 : 510
Consist: 20 cars : 7 cars and caboose
Speed: 3-10 m.p.h. : 7-20 m.p.h.
Track: 8°30' curve; 1.5 percent descending
grade for south-bound trains
Weather: Clear
Time: 10:54 a.m.
Casualties: 1 killed and 6 injured
Cause: Work Extra 510 entered initial limits
prescribed by train order approximately
6 minutes before the time given in the
order; a contributing cause was the
action of the operator in delivering
this order when the train was being
moved in violation of the order.

September 21, 1936

To the Commission:

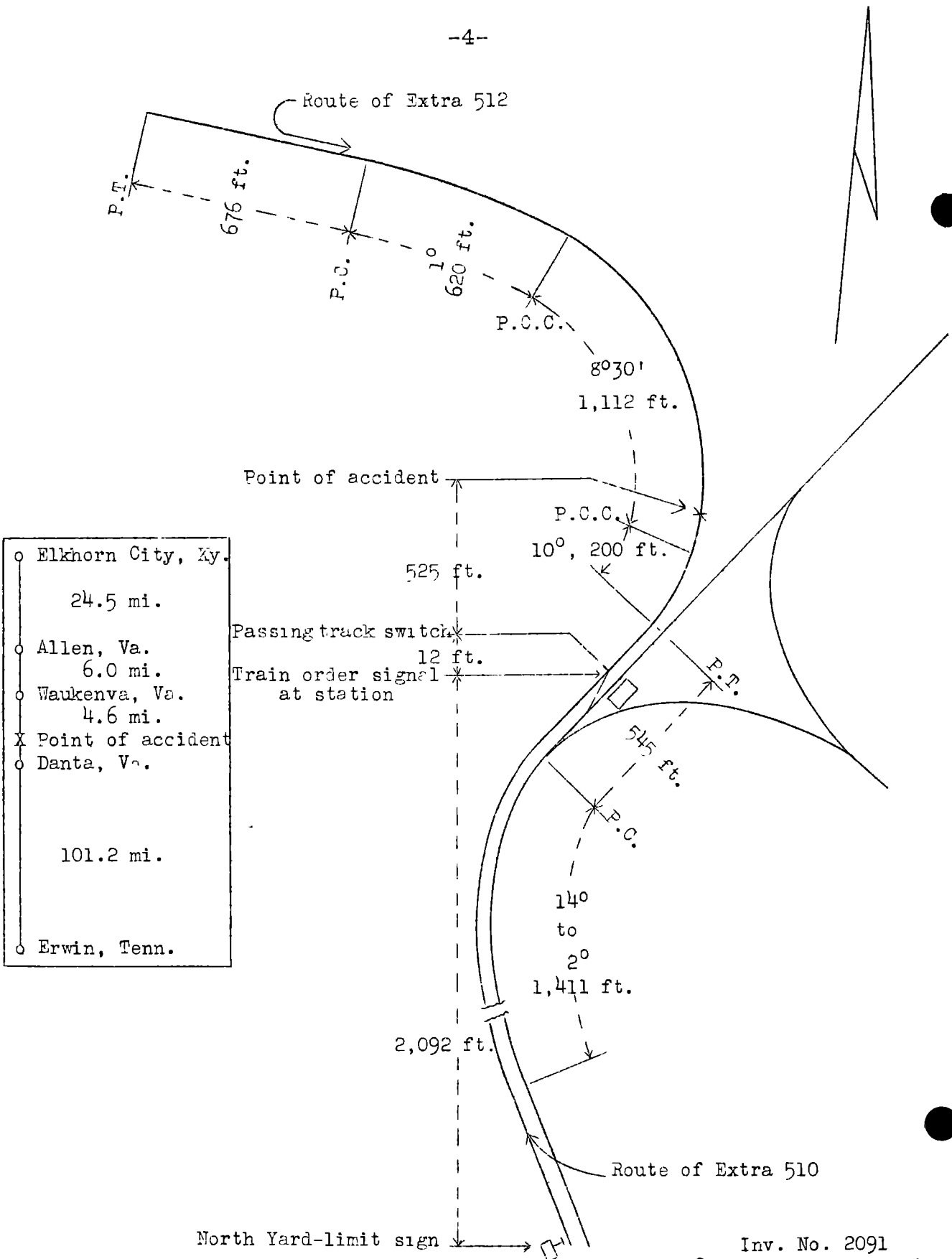
On August 11, 1936, there was a head-end collision between two work trains on the Clinchfield Railroad at Dante, Va., which resulted in the death of 1 employee and the injury of 5 employees and 1 trespasser.

Location and method of operation

This accident occurred on that part of the Clinchfield Railroad which extends between Elkhorn City, Ky., and Erwin, Tenn., a distance of 136.3 miles; in the vicinity of the point of accident this is a single-track line over which trains are operated by timetable and train orders, no form of block-signal system being in use. At Dante there is a yard from which trains serving an adjacent coal producing territory are operated. The yard is located east of the main track, and the lead track, designated in the timetable as a passing track, parallels the main track on the east and extends from the station to the engine coal chute, a distance of 6,313 feet. The north switch of this track is opposite the station and constitutes the northern entrance to the yard, although the north yard limit sign is located 2,104 feet south of this switch. The accident occurred at a point 525 feet north of the north switch of the passing track; approaching this point from the south there are several curves and short tangents, followed by a compound curve to the left, consisting of a 10° curve for 200 feet, an $8^{\circ}30'$ curve for 1,112 feet, and a 1° curve for 620 feet, the accident occurring on the $8^{\circ}30'$ portion of the curve at a point 73 feet from its southern end. Approaching from the north the track is tangent for a distance of 676 feet, followed by the compound curve on which the accident occurred. The grade for south-bound trains is 1.5 percent descending.

Due to the track being laid through a side cut on the west or inside of the curve in the immediate vicinity of the point of accident, the view of opposing trains is limited to less than 200 feet.

Dante station is a train order office equipped with a 2-arm, 2-position semaphore signal; one arm applies to north-bound trains and the other to south-bound trains; their indications are stop and proceed. The mast of this signal is also equipped with a supplemental train order signal. Rule 221 provides that a fixed signal must be used at each train order office, which shall indicate "stop" at all times



- | | |
|---|-------------------|
| ○ | Elkhorn City, Ky. |
| | 24.5 mi. |
| ○ | Allen, Va. |
| | 6.0 mi. |
| ○ | Waukenva, Va. |
| | 4.6 mi. |
| X | Point of accident |
| ○ | Danta, Va. |
| | 101.2 mi. |
| ○ | Erwin, Tenn. |

Inv. No. 2091
 Clinchfield Railroad
 Danta, Va.
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when the operator is on duty except when changed to "proceed" to permit a train to pass for which there are no orders, and the same rule requires the operator to display the supplemental train order signal when there are orders for delivery to a train. The interpretation placed on the rules by this railroad relative to work trains is that a work train must be clear five minutes before the expiration of the work order.

The weather was clear at the time of the accident, which occurred about 10:54 a.m.

Description

Extra 512, a south-bound work train, consisted of 20 loaded cars, hauled by engine 512, and was in charge of Conductor Morton and Engineman Owen. Before leaving Dante on its north-bound trip at 8:45 a.m., the conductor received train order 12, form 19, by telephone, from the train dispatcher at Erwin, reading as follows:

Eng 512 will work extra eight thirty
8:30 am until eleven 11:00 am between Dante
and Allen.

The train then proceeded to Waukenva, a coal mine track located 4.6 miles north of Dante and departed from that point, south-bound, at 10:30 a.m., according to the train sheet, with the engine headed north and pulling the train. The train was approaching Dante preparatory to entering the yard at the station when it collided with north-bound Extra 510 while traveling at a speed variously estimated to have been between 3 and 10 miles per hour.

Extra 510, a north-bound work train, consisted of 7 empty cars and a caboose, hauled by engine 510, and was in charge of Conductor Robinette and Engineman Reedy. This crew went on duty at Dante Yard at 10:30 a.m., and the train departed from the vicinity of the coal chute, using the main track under authority of yard rules to the yard limit board, and then continued on the main track to the station without timetable or train order authority, passed the station at a speed estimated to have been about 10 miles per hour where a copy of train order 16, form 19, together with a clearance card, was received from the operator by hoop, the train order reading in part as follows:

Engine 510 will work extra eleven 11:00
a.m. until eleven 11:00 p.m. between Dante
and Elkhorn Yard.

Before the engineman had observed that the order was not effective for several minutes, the train collided with Extra 512, at a point 525 feet beyond the station while traveling at a speed variously estimated to have been from 7 to 20 miles per hour.

Both engines were badly damaged; the engine truck of engine 510 was derailed and demolished and the rear tender-truck of engine 512 was derailed. The first and second cars of Extra 510 were derailed to the right at an angle of 45 degrees to the track. The forward truck of the third car was derailed and several of the following cars in that train were off center. The front end of the first car in Extra 512 crushed in the front of the engine and was held suspended above the track. The employee killed was the conductor of Extra 510; the employees injured were the conductor of Extra 512 and the engineman, fireman, and two brakemen of Extra 510.

Summary of evidence

Engineman Owen, of Extra 512, stated that according to the interpretation of the work order under which he was operating it was required that his train be into clear at 10:55 a.m., five minutes before the expiration of the order. He compared time with the conductor just before leaving Waukenva, and noted that they had 33 minutes in which to clear at Dante. The air was in operation throughout the train and the brakes were applied on leaving that point, and they functioned properly when he made a service application coming out of Sandy Ridge tunnel, located about 1 mile north of Dante. He then reduced speed to about 6 or 8 miles per hour, preparatory to entering the passing track at Dante station. About 1 minute before the occurrence of the accident he asked the conductor and fireman what time they had and they answered "52". The fireman then called a warning and the engineman applied the air brakes in emergency and the collision occurred immediately. He did not see the opposing train prior to the accident.

Fireman Hensley, of Extra 512, stated that while rounding the curve about 1/3 mile north of the station at Dante, the engineman remarked that they would have plenty of time in which to reach Dante. Upon seeing the smoke of the opposing train, he looked a second time, then called a warning to the engineman and jumped, at which time his own train was traveling at a speed of 8 or 10 miles per hour.

Conductor Morton, of Extra 512, stated that he was on the brakeman's seat on the fireman's side of the cab and he thought they were about 3/4 mile from the switch when they

compared time; he again looked at his watch just before they reached a road crossing a short distance north of the point of accident and it was then 10:53 $\frac{1}{2}$. He saw the opposing train when it was about 4 car lengths distant, and he estimated the speed of his train to have been 8 or 10 miles per hour at the time of the accident. The statements of Brakemen Britton, Gouge and Orren, brought out nothing additional of importance except that Brakemen Gouge and Orren estimated the speed to have been from 3 to 5 miles per hour at the time of the accident.

Engineman Reedy, of Extra 510, stated that after getting his train ready he compared time with the conductor who gave him a register check on overdue trains and told him that they would get their orders at the station. He then proceeded on the main track to the station; the train order signal was not displayed, but when about 4 car lengths distant from the station the operator gave a signal with an order hoop, which he interpreted as a proceed signal and on passing the station at a speed of about 10 miles per hour, the operator handed up the orders. Engineman Reedy said he handed the clearance card to the fireman and then began reading the order. Upon seeing that it was effective at 11 a.m., instead of 10:30 as was usually the case, he closed the throttle and as he did so the collision occurred. Engineman Reedy stated that while he had no authority to use the main track between the north yard limit board and the station, it had been his custom to do so since February 27, 1936, the date he commenced working out of Dante.

Fireman Slagle, of Extra 510, stated that he received the orders on passing the station; he checked the clearance card with the order and handed the order to the engineman, but did not read it himself and he did not receive any signal from the operator when he was handed the order. He thought the speed had been reduced to about 7 or 8 miles per hour at the time of the accident. Fireman Slagle stated that he had been working on mine runs out of Dante for about 19 or 20 years and had been on this particular job for about 35 or 40 days; the method of operation in this instance was the customary practice.

Head Brakeman Lane, of Extra 510, stated that as they approached the station he was on the front platform of the caboose looking out on the right side. He saw the operator on the station platform and when the engine approached to within 30 or 40 feet of the operator he saw him wave the order hoop up and down, similar to a proceed signal. Both train-order signals were displaying clear indications. Brakeman Lane estimated the speed of his train to have been

about 10 or 12 miles per hour at the time of the accident.

Flagman Cooper, of Extra 510, stated that he had been on mine runs about 7 years and had been working with Conductor Robinette about 30 days, and when taking this job he called Conductor Robinette's attention to the fact that they had no right on the main line without flag protection or train orders except within yard limits and under yard rules, but the conductor told him that he always called the dispatcher and found out about the orders. Flagman Cooper estimated the speed of the train to have been between 15 and 20 miles per hour at the time of the accident.

Agent-Operator Turbyfill, on duty at Dante station, stated that the order for work extra 510 was made complete to him at 10:21 a.m. He placed the order together with a clearance card on hoops, but did not display either the semaphore or the train order signal, stating that while this is required by the rules it had not been customary to do so because his duties require him to leave the office frequently to deliver Western Union messages. He did not note the time Extra 510 approached nor did he realize that the order was not then effective, stating that sometimes the order for this train is effective at 10:30 and sometimes at 11 a.m. When he heard the engineman of Extra 510 sound the whistle he went out on the platform and handed the orders to the crew as the train passed. He did not give a proceed signal, nor did he think that he made any movement with the hoop that could be taken as a proceed signal. Agent-Operator Turbyfill further stated that he did not have any knowledge of the train order held by Extra 512, and he was not positive whether he had reported the north-bound movement of that train.

Train Dispatcher Beck stated that the mine-run crews operating out of Dante usually call him from the yard telephone booth before leaving, but he did not have any telephone conversation with Conductor Robinette or any member of his crew on the morning of the accident. Assistant Trainmaster Wohlford always calls from the yard office and gives him the information relative to the crews and their reporting time. A train register is maintained in the telephone booth located near the coal wharf and the conductors check the register for overdue trains at that point. Train Dispatcher Beck further stated that when there is nothing to interfere, he issues an order for the work extra, to become effective at the time the crew is called for duty; however, on the morning of the accident he did not make the order effective until 11 a.m. as the order held by Extra 512 was not fulfilled until that time. He stated that there have been other instances in which the fulfillment time of an order held by one work train would be

the same as the initial time of another work order, and if the first work extra does not have sufficient time to get into clear before the time specified in the order, the crew would call the yard office and have all trains held until that train arrived.

Superintendent McIntyre stated that in re-examination of employees in 1931 and again in 1934 they were instructed that under a work order the train must be into clear or protected five minutes before the expiration of the time stated in the order. He further stated that Assistant Trainmaster Wohlford and other employees in the yard office were questioned as to whether Conductor Robinette had talked with any of them regarding the train orders for his train, and each of these men stated that they had had no conversation with the conductor regarding the orders.

A check of the movement covering the run corresponding to that on which Extra 510 was operating on the day of the accident shows that the crew went on duty at various times between 9:45 a.m. and 1 p.m. during the 26 working days including and prior to the day of the accident. Conductor Robinette was in charge of the train on 22 days and Engineman Reedy was the engineman on 21 days. On 17 days the crew reported at 10:30 a.m. and there were only 5 instances including the day of the accident, in which the initial time stated in the order was later than the time the crew went on duty, and out of the 5 instances there were 3, including the one involved in the accident, where an opposing train held orders which expired at the time the order for the run involved became effective. However, with the exception of one instance, the time of departure from Dante was considerably later than the time the order became effective, and in that instance the train left at exactly the time the order became effective. It was further shown that the initial delay at Dante was from 30 minutes to 1 hour 15 minutes with the exception of one instance, although the time of departure was later than the effective time of the order. The initial terminal delay of Extra 510 on the day of the accident was 24 minutes. With the exception of one instance during this 26-day period the orders were received at the station.

Discussion

The investigation developed that Extra 510 was operated on the main track from the north yard limit board to the station, a distance 2,092 feet, without train order, timetable authority, or flag protection; passed the station where neither the semaphore or the train order signal was displayed as required by the rules, at a speed of 10 miles per hour and

received the train order together with a clearance card and entered the working limits provided by the train order approximately 6 minutes before the order authorized the movement to be made, thereby encroaching on the time of an opposing work train.

The engineman stated that the operator signaled him by raising and lowering the hoop, which he interpreted as a proceed signal, and the brakeman, who was on the caboose, also took this to be a proceed signal, although the fireman, who received the orders, stated that he did not see any such signal given by the operator. The operator stated that he did not make any movement with the hoop which could be taken for a signal.

The evidence shows that the operation of Extra 510 on the day of the accident involved practices of long standing that were either in violation of the rules or constituted a custom that led to the exercise of poor judgment. The information given by the conductor that the order was out at the station could have led the engineman to believe that the order was in effect, particularly in view of the fact that with but few exceptions in the past the time at which the orders became effective was either the time the crew went on duty or at an earlier time. The presence of the operator on the station platform prepared to deliver the order, regardless of whether or not he gave a proceed signal, might easily be construed as indicating that the train order contained no restrictions at his station. The train order signal as well as the semaphore signal, however, should have displayed stop indications, and, as provided by rule 27, a signal imperfectly displayed must be regarded as a stop signal, Extra 510 should not have passed these signals; apparently it has been the practice to disregard these rules. Operator Turbyfill stated that it has not been customary for him to display the train order signals because he has to leave the office frequently. He not only violated the rules, but exercised unsound judgment in delivering the work order while the train was moving into its working limits prior to the initial time established by the work order. It is evident that these practices have prevailed for a long time and therefore must or should have been known to the operating officials.

Conclusions

This accident was caused by Work Extra 510 occupying the main track without authority; a contributing cause was the action of the operator in permitting the movement of the

train to be continued in violation of the order at the time he delivered it to the train crew.

Recommendation

It is recommended that the necessary supervision be immediately instituted to enforce the proper observance of rules and the elimination of unsound practices.

Respectfully submitted,

W. J. PATTERSON,

Director.