

**RAILROAD ACCIDENT INVESTIGATION**

**Report No 3850**

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THE PENNSYLVANIA RAILROAD COMPANY

DILLE, OHIO

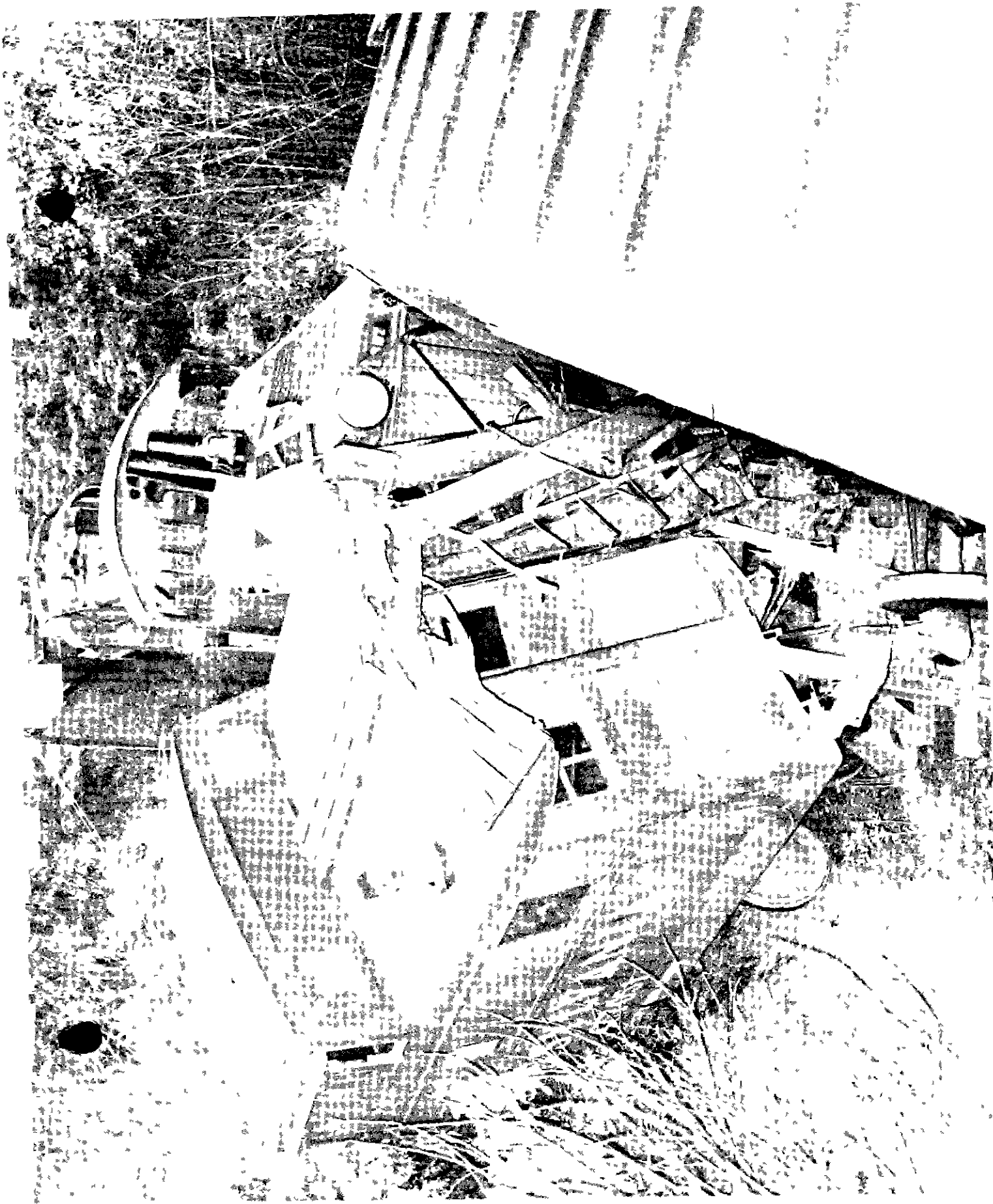
JUNE 23, 1959

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**INTERSTATE COMMERCE COMMISSION**

**Washington**



## SUMMARY

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DATE	June 23, 1959	
RAILROAD	Pennsylvania	
LOCATION	Dille, Ohio	
KIND OF ACCIDENT	Head-end collision	
TRAINS INVOLVED	Freight	Freight
TRAIN NUMBERS	Extra 8915 West	Extra 8867 East
LOCOMOTIVE NUMBERS	Diesel-electric units 8915, 8903	Diesel-electric unit 8867
CONSISTS	50 cars, caboose	17 cars, caboose
SPEEDS	9 m p h	5 m p h
OPERATION	Manual block-signal system	
TRACK	Single, 3°00' curve, 0.40 percent descending grade westward	
WEATHER	Clear	
TIME	4 30 p m	
CASUALTIES	5 injured	
CAUSE	Westbound train occupying a block without authority	

## INTERSTATE COMMERCE COMMISSION

REPORT NO 3850

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

THE PENNSYLVANIA RAILROAD COMPANY

October 13, 1959

Accident at Dille, Ohio, on June 23, 1959, caused by a westbound train occupying a block without authority

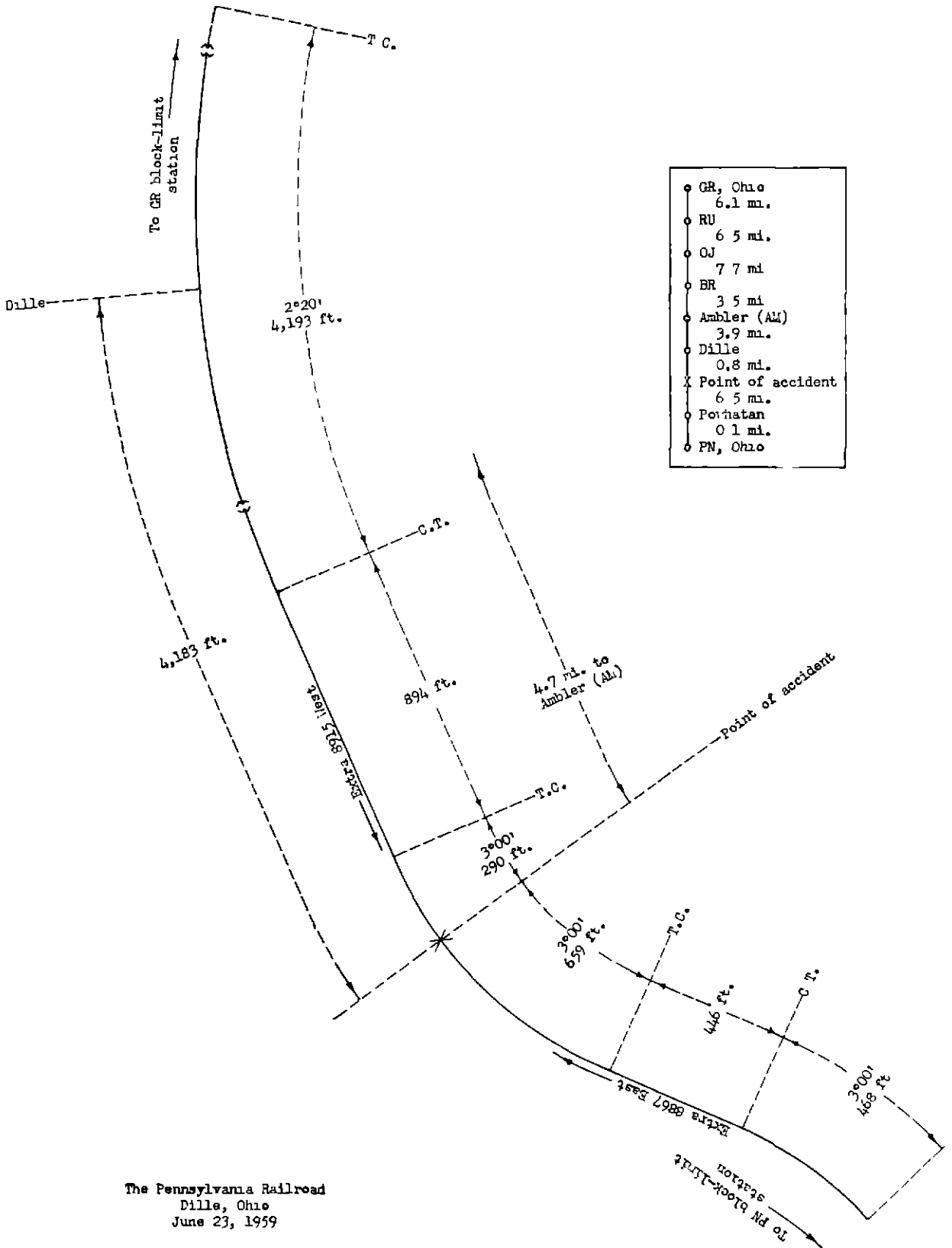
REPORT OF THE COMMISSION<sup>1</sup>

*FREAS, Commissioner*

On June 23, 1959, at Dille, Ohio, there was a head-end collision between two freight trains on the Pennsylvania Railroad, which resulted in the injury of 5 train-service employees. This accident was investigated in conjunction with representatives of the Public Utilities Commission of Ohio.

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



The Pennsylvania Railroad  
 Dille, Ohio  
 June 23, 1959

### Location of Accident and Method of Operation

This accident occurred on that part of the Pittsburgh Region extending between GR block-limit station and PN block-limit station near Powhatan, Ohio, 35.1 miles. This is a single-track line designated as the Powhatan Secondary Track over which trains are operated by a manual block-signal system. Block-limit stations RU, OJ, BR, and AM are located, respectively, 6.1 miles, 12.6 miles, 20.3 miles, and 23.8 miles west of GR block-limit station. At Ambler, the location of AM block-limit station, a yard consisting of seven yard tracks parallels the secondary track on the south. The west lead track of the yard connects with the secondary track at Switch 2, about 2,665 feet west of AM block-limit station.

The accident occurred on the secondary track at a point 4.7 miles west of AM block-limit station and 4,183 feet west of Dille, Ohio. From the east there are, in succession, a compound curve to the left 4,193 feet in length, having a maximum curvature of  $2^{\circ}20'$ , a tangent 894 feet and a  $3^{\circ}00'$  curve to the left 290 feet to the point of accident and 659 feet westward. From the west there are, in succession, a  $3^{\circ}00'$  curve to the left 468 feet in length, a tangent 446 feet, and the curve on which the accident occurred. The grade is 0.40 percent descending westward in the vicinity of the point of accident.

Each block-limit station is provided with a block-limit signal having a single aspect, which indicates "Limit of the block." All movements within the manual block-signal system are controlled by the operator at the block station in Rockville, Ohio, 4.2 miles east of GR block-limit station. Wayside telephones are provided at each block-limit station.

This carrier's operating rules read in part as follows:

Block - A length of track of defined limits, the use of which by trains is governed by \* \* \* block-limit signals, \* \* \*

Manual Block Signal System - A block signal system wherein the use of each block is governed by \* \* \* block-limit signals \* \* \* upon information by telephone or other means of communication.

Block-Limit Signal - A fixed signal indicating the limit of a block the use of which by trains is prescribed by manual block signal system rules.

Block-Limit Station - A place at which a block-limit signal is displayed.

Secondary Track - A designated track upon which trains and engines may be operated without time-table authority, train orders or block signals.

271 On designated secondary tracks so specified on the time-table, movements of trains will be made on verbal permission of the operator when authorized by the Superintendent of Transportation, governed by Block Signal System Rules.

289 (Permissive-block signal)

<u>Indication</u>	<u>Name</u>
Block occupied, * * * for trains other than passenger trains, proceed prepared to stop short of a train or obstruction, but not exceeding 15 miles per hour	Permissive-block

305 At a block-limit station trains will be governed in their use of the block by instructions of the operator in charge of the block-limit station as indicated on the time-table

317 \* \* \*

Before admitting a train other than a passenger train to a block, the operator in charge of the \* \* \* block-limit station at the entrance of the block must know that the block is clear of opposing trains \* \* \* and that no opposing train \* \* \* has been given permission or a signal to enter the block \* \* \* The operator in charge of a block-limit station may give a train or engine at that block-limit station verbal permission to enter one block. The operator, when authorized by the Superintendent of Transportation will issue Clearance Card (Form K) to a train not governed by Clear-block signal to pass one or more block-limit stations as though Permissive-block signal were displayed

361 \* \* \*

Except as \* \* \* authorized by Clearance Card (Form K) to proceed, trains must stop at block-limit stations and the conductor or engineman must communicate with the operator in charge as to the condition of the next block \* \* \*

The maximum authorized speed in the vicinity of the point of accident is 25 miles per hour

### Description of Accident

Extra 8915 West, a westbound freight train, consisted of road-switcher type diesel-electric units 8915 and 8903, coupled in multiple-unit control, 50 cars and a caboose. This train departed from GR block-limit station at 2 33 p m , departed from RU block-limit station at 3 08 p m , and at 3 27 p m , it stopped at OJ block-limit station, where the engineer communicated by telephone with the operator at Rockville, and was issued a Form K Clearance Card, which read in part as follows

Rockville Block Station,                    3 29 p m ,                    6-23,1959  
 Train C & E Extra, Engine 8915 West  
 Proceed at OJ and BR  
 As though Permissive block signal were displayed  
 Do not report clear at OJ or BR

This train departed from OJ block-limit station at 3 31 p m , passed BR block-limit station as authorized by the clearance card, passed the block-limit signal at AM block-limit station, where it was required to stop and receive authorization to proceed, and then passed switch 2 at Ambler. About 4 30 p m , while moving on the secondary track at an estimated speed of 9 miles per hour, it collided with Extra 8867 East at a point 4 7 miles west of AM block-limit station at Ambler and 4,183 feet west of Dille

Extra 8867 East, an eastbound freight train, consisted of switcher-type diesel-electric unit 8867, a caboose, and 17 cars, in the order named. This train departed from Ormal, Ohio, 14 miles west of Powhatan, at 2 35 p m , and about 4 00 p m it arrived at PN block-limit station, where the conductor communicated by telephone with the operator at the block station in Rockville. After receiving verbal authority from the operator to proceed to Switch 2 at Ambler and enter the west lead track of the yard at that point, the train departed from PN block-limit station at 4 03 p m. About 27 minutes later, while moving on the secondary track at an estimated speed of 5 miles per hour, it collided with Extra 8915 West

The locomotive and the 1st car of Extra 8915 West, and the locomotive, the caboose, the 1st car and the 2nd car of Extra 8867 East were derailed. The derailed equipment of both trains stopped in positions as shown in PLATE I. The diesel-electric units of both trains were considerably damaged. The caboose of Extra 8867 East was destroyed, and the 1st car was considerably damaged.

The fireman, the conductor, the front brakeman and the flagman of Extra 8867 East, and the fireman of Extra 8915 West, were injured.

The weather was clear at the time of the accident, which occurred about 4:30 p. m.

During the 30-day period immediately preceding the day of the accident, the average daily movement in the vicinity of the point of accident was 2.7 trains eastward and 2.8 trains westward.

In the vicinity of the point of accident, the view from locomotives moving in either direction is considerably restricted by vegetation and the curvature of the track.

### Discussion

On the day of the accident, the operator at the block station in Rockville issued instructions by telephone to the crew of Extra 8915 West, authorizing that train to depart from GR block-limit station, pass RU block-limit station, and proceed to OJ block-limit station. At 3:29 p. m., after Extra 8915 West had arrived at OJ block-limit station, the operator received the following message from the train dispatcher:

Extra 8915 West proceed OJ to PN Form K BR

The operator then communicated by telephone with the engineer of Extra 8915 West at OJ block-limit station and issued to him a Form K Clearance Card, which authorized the train to depart from OJ block-limit station, pass BR block-limit station, and proceed to AM block-limit station. Under the rules of the carrier, when the train arrived at AM block-limit station it was required to be stopped short of the block-limit signal at that point, and either the conductor or the engineer was required to communicate by telephone with the operator at Rockville to obtain authority to proceed to PN block-limit station.

About 4:00 p. m., after Extra 8915 West had departed from OJ block-limit station, the train dispatcher was informed that Extra 8867 East was prepared to depart eastward from PN block-limit station. At 4:01 p. m., he transmitted the following message to the operator at Rockville:

Extra 8915 West AM to PN is annulled  
Extra 8867 East proceed PN to Switch 2 Ambler

This message annulled the operator's authority to permit Extra 8915 West to operate between AM and PN block-limit stations, and authorized the movement of Extra 8867 East from PN block-limit station to Switch 2 at Ambler. After receiving the message, the operator communicated by telephone with the conductor of Extra 8867 East and provided verbal authority for the movement of that train from PN block-limit station to Switch 2 at Ambler. He also instructed the conductor to report by telephone when the train cleared the secondary track at Switch 2.



As Extra 8915 West was approaching the point where the accident occurred, the enginemen were in the control compartment at the west end of the first diesel-electric unit, the front brakeman was in the control compartment at the east end of the second unit, and the conductor and the flagman were in the caboose. The brakes of the train had been tested and had functioned properly when used en route. The headlight was lighted. When this train stopped at OJ block-limit station, the engineer communicated with the operator at Rockville by means of a wayside telephone. He then copied on a Form K Clearance Card the operator's instructions authorizing the train to "Proceed at OJ and BR block-limit stations as though Permissive block signal were displayed." The engineer said that while he was copying these instructions he understood the operator to say "report clear at PN" and that he included this phrase when he repeated the copied instructions to the operator. He said although he was aware that the Form K Clearance Card did not authorize movement of Extra 8915 West beyond AM block-limit station, he had assumed on the day of the accident that the train was authorized to proceed to PN block-limit station because he understood that the operator had instructed him to report clear at that point. The operator said that he did not at any time instruct the engineer to report clear at PN block-limit station. After receiving the Form K Clearance Card at OJ block-limit station, the engineer returned to the locomotive but did not show the clearance card to any other member of the crew. The fireman and the front brakeman did not ask to see the clearance card, and they said the engineer informed them that the train was authorized to proceed to PN block-limit station.

Extra 8915 West departed from OJ block-limit station, passed BR block-limit station, passed AM block-limit station, where it was required to stop until authorized to proceed, passed Switch 2 at Ambler, and as it was moving on the curve where the accident occurred the engineer observed Extra 8867 East approaching at a distance of about 300 feet. He immediately applied the brakes in emergency and the speed of Extra 8915 West was reduced to an estimated 9 miles per hour when the collision occurred.

As Extra 8867 East was approaching the point where the accident occurred its speed was about 15 miles per hour. The enginemen were in the control compartment at the east end of the locomotive, and the conductor, the front brakeman, and the flagman were in the caboose. The brakes of this train had been tested and had functioned properly when used en route. The headlight was lighted. The fireman observed Extra 8915 West approaching on the track ahead and he called a warning to the engineer, who immediately initiated an emergency application of the brakes about 250 feet east of the point of accident. The enginemen alighted from the locomotive immediately before the collision occurred. The speed of the train was reduced to about 5 miles per hour when the collision occurred.

When the engineer of Extra 8915 West was issued the Form K Clearance Card at OJ block-limit station, the train was authorized to pass OJ and BR block-limit stations and proceed to AM block-limit station. The instructions printed on the Form K Clearance Card as shown in the book of operating rules required the engineer to show the card to the fireman and the front brakeman. However, the Form K Clearance Cards used by the engineer and the operator at Rockville on the day of the accident do not contain the revised instruction, which requires the engineer to show the card to other members of the crew when practicable. Under the rules of the carrier, when the train arrived at AM block-limit station, it was required to be stopped short of the block-limit signal at that point and the engineer or the conductor was required to communicate by telephone with the operator at Rockville as to the conditions of the next block. The engineer did not show the front brakeman or the fireman the Form K Clearance Card that was issued at OJ block-limit station, and, as a result, all the members of the crew on the locomotive did not have a proper understanding of the block authority which had

been issued by the operator for the movement of their train. The fireman and the front brakeman assumed when their train passed AM block-limit station that block authority for its movement extended beyond that point. If these employees had read, or been informed of the instructions as to the block authority which were contained on the Form K Clearance Card, they would have known that their train was required to be stopped at AM block-limit station until additional block authority was obtained and it is probable that this accident would have been averted.

#### **Cause**

This accident was caused by a westbound train occupying a block without authority.

Dated at Washington, D C , this thirteenth  
day of October, 1959

By the Commission, Commissioner Freas

(SEAL)

HAROLD D McCOY,  
Secretary