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RAILROAD ACCIDENT INVESTIGATION,

Report No. 4124

THE CHESAPEAKE AND OHIO RAILWAY COMPANY

THOMPSONVILLE, MICH.

JUNE 10, 1967

W. S. ...

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

Washington, D C.

Summary

DATE: June 10, 1967

RAILROAD: Chesapeake and Ohio

LOCATION: Thompsonville, Mich

KIND OF ACCIDENT: Collision

EQUIPMENT INVOLVED: Freight train Motortruck

TRAIN NUMBER: 145

LOCOMOTIVE NUMBERS: Diesel-electric units
3539, 3036, 3520

CONSIST: 17 cars, caboose

SPEEDS: 37 m p.h 35-40 m p.h.

OPERATION: Timetable, train
orders

TRACK: Single; tangent; level

HIGHWAY: 2-lane; tangent; level;
crosses track at angle
of 56°38'

WEATHER: Raining

TIME: 12:17 p m.

CASUALTIES: 4 killed; 28 injured

CAUSE: Failure of the truck
driver to stop his
vehicle short of the
rail-highway grade
crossing, as required by
State law and Federal
regulations

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION
RAILROAD SAFETY BOARD

RAILROAD ACCIDENT INVESTIGATION
REPORT NO. 4124

THE CHESAPEAKE AND OHIO RAILWAY COMPANY

JUNE 10, 1967

Synopsis

On June 10, 1967, a motortruck transporting a group of migrant farm workers struck a Chesapeake and Ohio Railway Company freight train moving over a rail-highway grade crossing near Thompsonville, Mich , resulting in death to four, and injury to twenty-eight, persons aboard the motortruck

The accident was caused by failure of the truck driver to stop his vehicle short of the rail-highway grade crossing, as required by State law and Federal regulations.

Location and Method of Operation

The accident occurred on that part of the Grand Rapids Division extending between Manistee and Traverse City, Mich , a distance of 56.9 miles. This is a single-track line over which trains operate by timetable and train orders. There is no block-signal system in use.

The collision occurred on the main track, 27.2 miles north of Manistee and 2.9 miles south of Thompsonville, where the railroad is crossed at grade by County Road 669.

As an eastbound vehicle on the county road approaches the crossing, the driver's view of the railroad southward is obstructed by a wooded area in the southwest angle of the crossing, as indicated in the sketch appended to this

report However, as the vehicle approaches the track within 150 feet, the driver has an unobstructed view of the railroad throughout a distance of 500 to 600 feet south of the crossing (See Photo No. 1)

Details concerning the main track, County Road 669 and crossing, crossing-warning signs, railroad carrier's operating rules, Michigan State traffic regulations, Federal Highway Administration's Motor Carrier Safety Regulations, motor vehicle and driver involved, damages, and other factors are set forth in the appendix

Description and Discussion

No 145, a northbound second-class freight train consisting of road-switcher type diesel-electric units 3539, 3036 and 3520, coupled in multiple-unit control, 19 cars and a caboose, left Manistee at 10:58 a. m. (E.D.T.) the day of the accident after its brakes were tested and were found to be functioning properly. After stopping at Kaleva, 19 3 miles north of Manistee, to set out two cars the train continued northward on the main track at 37 to 40 miles per hour, as indicated by the speed-recording tape. About 12:17 p.m., while moving at 37 miles per hour in a heavy rain, it neared the point where County Road 669 crosses the main track at grade. The engineer and front brakeman the only crew members on the locomotive, were in the control compartment of the first diesel-electric unit. The conductor and flagman were in the caboose. According to statements of the engineer and front brakeman, the headlight was lighted and the locomotive bell was ringing. The engineer also stated that he began to sound the prescribed signal on the locomotive horn when the train reached the crossing-whistle sign located 1,325 south of the county road crossing, and that he sounded the horn continuously as the locomotive approached and moved over the crossing. These statements were confirmed by the front brakeman.

According to statements of all the crew members, they did not see any highway vehicle on the county road as the train approached and moved over the crossing. Immediately after the train entered the crossing at 37 miles per hour, it was struck on the west side, between the third diesel-electric unit and first car, by an eastbound motortruck transporting a group of migrant farm workers. The rear locomotive unit and first car were only slightly damaged by the impact. None of the train crew members observed or noticed the accident and the train continued northward at unreduced speed to Thompsonville, where it stopped to set out the first car. When the front brakeman left the locomotive to detach the first car from the second car, he discovered a jacket lying on the drawbar at the rear of the third diesel-electric unit and blood on the front of the first car. Soon afterward, while the conductor was reporting the front brakeman's discovery to the train dispatcher, the crew members learned from a radio broadcast that a motortruck had collided with their train at the county road crossing.

The driver and 27 of the migrant farm workers aboard the motortruck were injured. Three other migrant workers and the driver's wife were killed.

According to the owner of a farm house located in the northeast angle of the crossing, it was raining heavily at the time of the accident. He stated that he had heard the locomotive horn being sounded as the train approached the crossing.

The motortruck (See Photo No. 2) had left Laredo, Texas, on June 6, 1967, and had proceeded to San Antonio, Texas, picking up migrant farm workers en route. It arrived at San Antonio about 2:00 a.m., June 8th, and departed approximately 3 hours 30 minutes later with the owner and his wife in the cab and with 30 migrant farm workers riding the canvas-covered truck body behind the cab. Its destination was a farm near Copemish, Mich., approximately four miles east of the crossing where the accident occurred. Since the transportation being performed involved migrant farm workers, exceeded 75 miles, and crossed State boundaries, the motortruck was subject to the Federal Highway Administration's Motor Carrier Safety Regulations.

The owner and his wife alternately drove the motortruck after leaving San Antonio, and they occasionally stopped for 30-minute rest periods. On one other occasion, according to the owner, the vehicle was stopped at Hope, Ark., for a rest period of about four hours duration. After entering Michigan and proceeding to the northern area of that State, the motortruck stopped at Manistee for engine repairs, apparently sometime in the afternoon or evening of June 9th, the day before the accident. The owner's statement indicates that sometime later, between 12:00 midnight and 1:00 a.m. (E.D.T.) the day of the accident, the motortruck again stopped for engine repairs at Bear Lake, which is approximately 15 miles by highway from the crossing where the accident occurred. His statements further indicate that the motortruck remained at Bear Lake for several hours and departed from that point about 11:50 a.m. Soon afterward, it turned eastward onto County Road 669 and approached the railroad crossing. The owner who was driving the vehicle, remembered from his trip to Copemish the year before, that there was a railroad crossing to traverse shortly before reaching his destination. At the time, however, he could not remember the exact location of the crossing.

According to the owner-driver, the motortruck neared the railroad crossing at 35 to 40 miles per hour under heavy rain and poor visibility conditions. He stated that he did not see the railroad-crossing warning signs located west of the crossing (See Photos No. 3 and No. 4), and neither saw nor heard the train involved until he suddenly saw its locomotive crossing the county road immediately in front of his vehicle. The owner-driver further stated that he did not know he was in close proximity to the crossing before this time, and that he immediately turned his vehicle northward and applied its brakes. Apparently before its speed was materially reduced, the motortruck entered the crossing from the westward highway lane and struck the train. The

impact caused the motortruck to spin around and throw most of its occupants to the ground, or against or under the train, resulting in the casualties.

Examination of the county road after the accident disclosed skid marks, 37 feet long, in the westward lane immediately west of the crossing. These marks apparently were caused by the motortruck involved as a result of its brakes being applied while the driver swerved the vehicle from the eastward lane in an unsuccessful attempt to avoid the collision by turning parallel to the track.

Examination of the motortruck after the accident disclosed that the brakes for the wheels of the rear tandem axle were inoperative, due to not being connected to the brake system. This defective condition, however, apparently has no significant bearing on the accident.

Findings

It is evident that the accident was caused by failure of the truck driver to stop his vehicle short of the railroad crossing, as required.

From all indications, driver fatigue contributed to the cause of the accident. The investigation disclosed that the motortruck transported the migrant farm workers in excess of 600 miles without stopping for a rest period of at least eight consecutive hours, as required by the Federal Highway Administration Motor Carrier Safety Regulations. In addition, while en route from Texas to Michigan, the owner apparently had driven the motortruck in excess of the maximum 10-hour aggregate time permitted in any 24-hour period under the aforesaid regulations and had not taken any eight consecutive hours rest period, as required after driving ten hours in the aggregate within a 24-hour period. After reaching northern Michigan, the motortruck stopped on two occasions for engine repairs. Since the investigation disclosed nothing to indicate that he obtained rest during these stops, it appears that after the second engine repairs were made at Bear Lake the owner again drove the motortruck without having had proper rest since sometime before reaching San Antonio, about 54 hours previously. Soon after leaving Bear Lake, the motortruck neared the railroad crossing under heavy rain conditions. The owner-driver apparently was somewhat fatigued at this time, due to the cumulative effects of his excessive driving time, his being engaged in engine repairs during the stops at Manistee and Bear Lake, and not having rested sufficiently while en route. Because of his fatigued condition, while driving in a heavy rain, the owner-driver did not notice the approaching train or notice that his vehicle was nearing the crossing until he saw the train locomotive move over the county road a short distance ahead. He then attempted to avoid a collision by swerving his vehicle northward and applying its brakes, but this action was taken too late to stop the vehicle short of the crossing, as required by State and Federal regulations, resulting in the motortruck entering the crossing and striking the west side of the train.

Cause

This accident was caused by failure of the truck driver to stop his vehicle short of the rail-highway grade crossing, as required by State law and Federal regulations.

Dated at Washington, D. C , this 18th
day of January 1968.
By the Federal Railroad Administration,
Railroad Safety Board

Bette E. Holt
Acting Executive Secretary

(SEAL)

Appendix

Track

The main track is tangent a considerable distance north and south of the crossing. The grade in this area is practically level.

County Road 669 and Crossing

County Road 669, a two-lane highway, is tangent a considerable distance east and west of the crossing and its grade is practically level to and over the crossing. The road is surfaced with bituminous material to a width of 20 feet and crosses the railroad at an angle of $56^{\circ}38'$.

The crossing is about 33 feet wide. Planking is laid between the rails and along the field side of each rail throughout the width of the crossing. The planking is surfaced with bituminous material to about the level of the tops of the rails.

Railroad-Crossing Warning Signs

A circular railroad-crossing advance-warning sign, 36 inches in diameter, is adjacent to the south side of the county road, 402 feet west of the crossing. It is mounted on a mast 4 feet above the road surface and bears two intersecting diagonal stripes and the letters "RR". The letters and stripes are painted black on a yellow background.

A white stripe is painted across the eastward lane of the road, 355 feet west of the crossing. A similar stripe is painted across this lane 302 feet west of the crossing. Between these lines, the eastward lane is painted with two intersecting diagonal white stripes and the letters "RR" in white. The letters are 2 feet wide and 5 feet long.

A standard crossbuck railroad-crossing warning sign, bearing the words "RAILROAD CROSSING" in black letters on a reflectorized background, is mounted on a mast adjacent to the south side of the road, 17 feet west of the track centerline. The crossbuck is about 9 feet above ground level.

Railroad Operating Rules

14. ENGINE WHISTLE SIGNALS

Note. - The signals prescribed are illustrated by "o" for short sounds; "—" for longer sounds. ***

Sound

Indication

(1) — — o —

Approaching public crossings at grade. To be prolonged or repeated until crossing is reached.

17-A The headlight must be displayed to the front of every train by day and by night

30 The engine bell must be rung when an engine is about to move and while approaching and passing public crossings at grade, ***

Michigan Vehicle Code

SPECIAL STOPS REQUIRED

257 667 Railroad grade crossings; obedience to signal

Sec. 667 (a) Whenever any person driving a vehicle approaches a railroad grade crossing under any of the following circumstances the driver shall stop within 50 feet but not less than 15 feet from the nearest rail of the railroad, and shall not proceed until he can do so safely

(3) A railroad train approaching within approximately 1,500 feet of the highway crossing gives a signal audible from such distance and the train, by reason of its speed or nearness of such crossing, is an immediate hazard.

Federal Highway Administration Motor Carrier Safety Regulations

Part 298 - Transportation of Migrant Workers

§298 4 Driving of motor vehicles -

(c) Driving while ill or fatigued No driver shall drive or be permitted to drive a motor vehicle while his ability or alertness is so impaired through fatigue, ***, or any other cause as to make it unsafe for him to begin or continue to drive, except in case of grave emergency where the hazard to passengers would be increased by observance of this section

(g) Safe loading ***

(5) Maximum passengers on motor vehicles No motor vehicles shall be driven if the total number of passengers exceeds the seating capacity ***

(j) Limitation on distance of travel in trucks. Any

truck when used for the transportation of migrant workers, if such workers are being transported in excess of 600 miles, shall be stopped for a period of not less than eight consecutive hours either before or upon completion of 600 miles travel, and either before or upon completion of any subsequent 600 miles travel to provide rest for drivers and passengers

(q) Railroad grade crossing; stopping required; *** Every motor vehicle shall, upon approaching any railroad grade crossing, make a full stop no more than 50 feet, nor less than 15 feet from the nearest rail of such railroad grade crossing, and shall not proceed until due caution has been taken to ascertain that the course is clear; ***

§298 6 Hours of service of drivers; maximum driving time No person shall drive *** for more than 10 hours in the aggregate (excluding rest stops and stops for meals) in any period of 24 consecutive hours, unless such driver be afforded eight consecutive hours rest immediately following the 10 hours aggregate driving. The term "24 consecutive hours" as used in this part means any such period starting at the time the driver reports for duty

§293 42 Brakes required on all wheels Every motor vehicle shall be equipped with brakes acting on all wheels, ***

Motor Vehicle

The vehicle involved was a 1965 Chevrolet motortruck of the flat-bed type, and carried Texas State License No. 3L-3463. It was powered by an 8-cylinder gasoline engine and had a conventional cab provided with rear-view mirrors and windshield wipers on both sides. The body had removable solid side panels, 60 inches high, and was covered with a tarpaulin (See Photo No 2) The truck chassis had tandem rear axles with dual wheels. The brakes of the rear axle were not operative, as required by Federal Highway Administration Motor Carrier Safety Regulation The body did not have a sufficient number of seats for the migrant farm workers, as also required by the aforesaid regulations.

Driver

The driver, a farm-labor contractor, was 49 years of age and resided in Laredo, Texas He possessed valid Texas Commercial Operator's License No 5189674, and had 20 years experience driving vehicles similar to the one involved in the accident. According to the Texas Department of Public Safety, he was issued a citation for failure to yield the right of way in the state of Michigan on August 19, 1966 He was also involved in a vehicle accident in Laredo, Texas on Jan. 29, 1967 and another in LaSalle County, Texas, on May 7, 1967

Damages

None of the train equipment was derailed. The rear of the third diesel-electric unit and the front of the first car were slightly damaged.

The motortruck stopped upright in the northwest angle of the crossing, about 50 feet west and 70 feet north of the track and county road centerlines, respectively. It was heavily damaged.

Other Factors

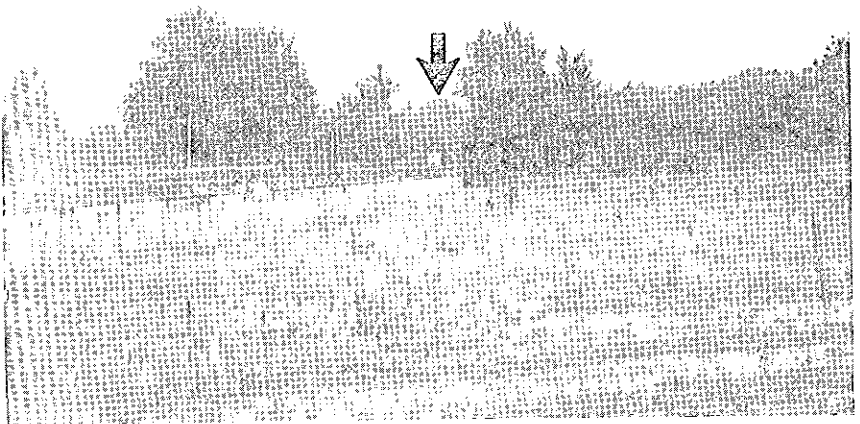
The accident occurred at 11:17 a m , in heavy rain.

The maximum authorized speed for freight trains in the accident area is 35 miles per hour.

During the 30-day period preceding the day of the accident, the average daily railroad movement over the crossing was 20 trains. In the 24-hour period beginning 11:00 a m , June 19, 1967, a traffic count disclosed 440 highway vehicles moved over the crossing.

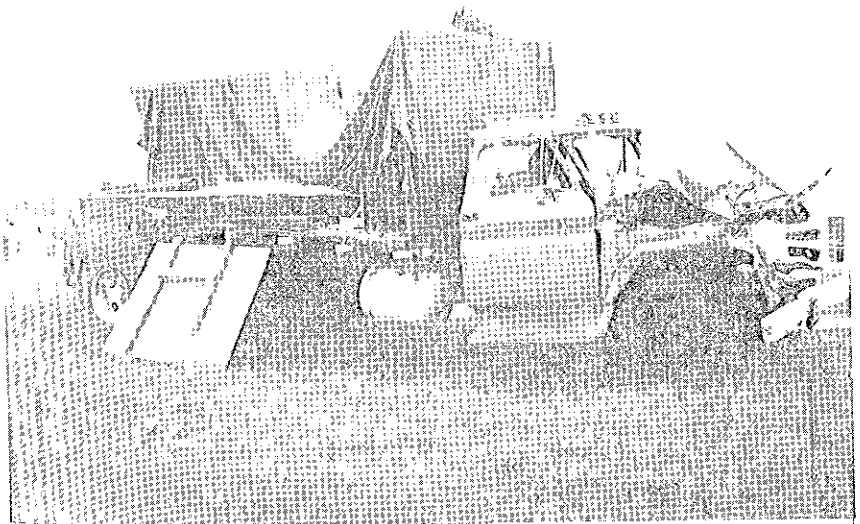
According to the daily time returns of the crew members of No. 145, the engineer had been on duty 5 hours 32 minutes in the aggregate at the time of the accident, after having been off duty 13 hours. The conductor, front brakeman, and flagman had been continuously on duty 9 hours 17 minutes, after having been off duty eight hours.

Photo No. 1

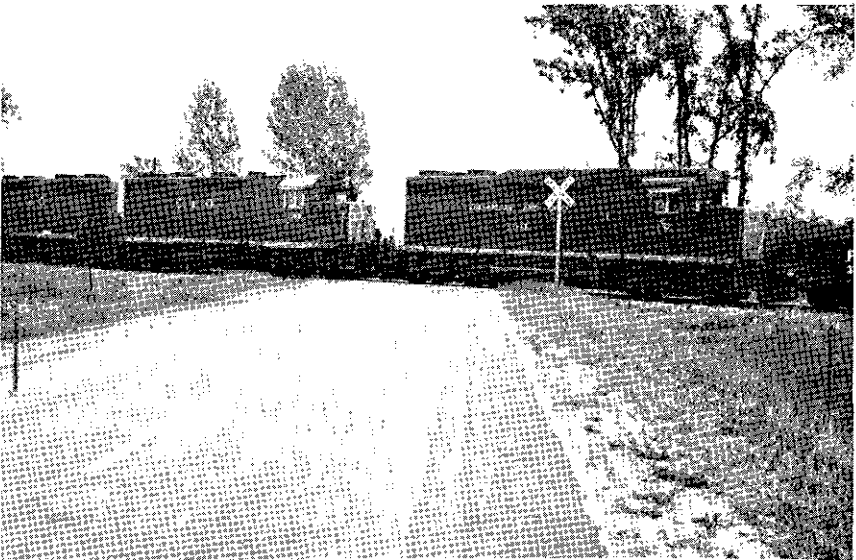


View southward from point on county road 100 feet west of the crossing. Train (arrow) is about 600 feet from the crossing.

Photo No. 2

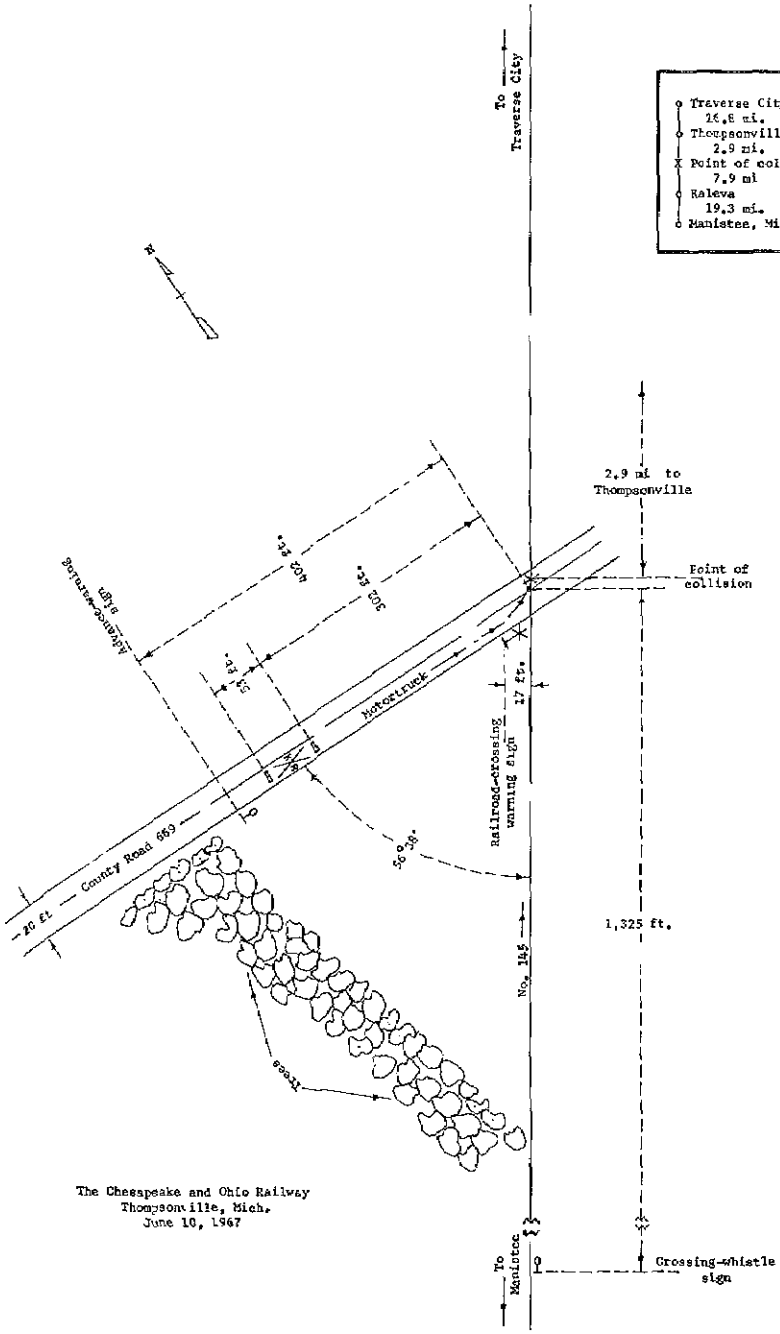


Motortruck involved in accident



Truck driver's view approaching the crossing.
Train approached from the right.

- Traverse City, Mich
26.8 mi.
- Thompsonville
2.9 mi.
- X Point of collision
7.9 mi
- Kaleva
19.3 mi.
- Manistee, Mich.



The Chesapeake and Ohio Railway
Thompsonville, Mich.
June 10, 1967