

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE NEW YORK CENTRAL RAILROAD AT RICHARDS, OHIO, ON MAY 8, 1931

JULY 27, 1931

To the Commission

On May 8, 1931, there was a collision between a passenger train and an automobile tank truck at a grade crossing on the New York Central Railroad at Richards, Ohio, which resulted in the death of two employees and the driver of the truck

LOCATION AND METHOD OF OPERATION

This accident occurred on the Old Road of the Toledo Division, extending between Toledo, Ohio, and Elkhart, Ind, a distance of 142.42 miles, in the vicinity of the point of accident this is a single-track line over which trains are operated by time-table, train orders, and a manual block-signal system. The point of accident was at Richards road crossing, a public highway crossing at grade, approaching the crossing from either direction the railroad track is tangent for about 1 1/2 miles, while the grade at the crossing is practically level.

Richards road is an improved highway which crosses the main track and passing track of the New York Central Railroad, and also the track of the Toledo, Angola & Western Railroad, which parallels the New York Central Railroad on the south at a distance of about 65 feet. The highway runs nearly north and south, and the railroad tracks nearly east and west. Approaching the crossing from the south, the highway is tangent for about 1 mile, while the grade is practically level as far as the track of the Toledo, Angola & Western Railroad, and from that point northward to the New York Central crossing the grade is 4.8 per cent ascending. The passing track is about 3,460 feet in length and parallels the main track on the south.

At the time of the accident two separate cuts of box cars, one of 5 cars and the other of 10 cars, stood on the passing track east of the crossing, the west end of the cut of 5 cars was 300.5 feet east of the center of the crossing, and the west end of the cut of 10 cars

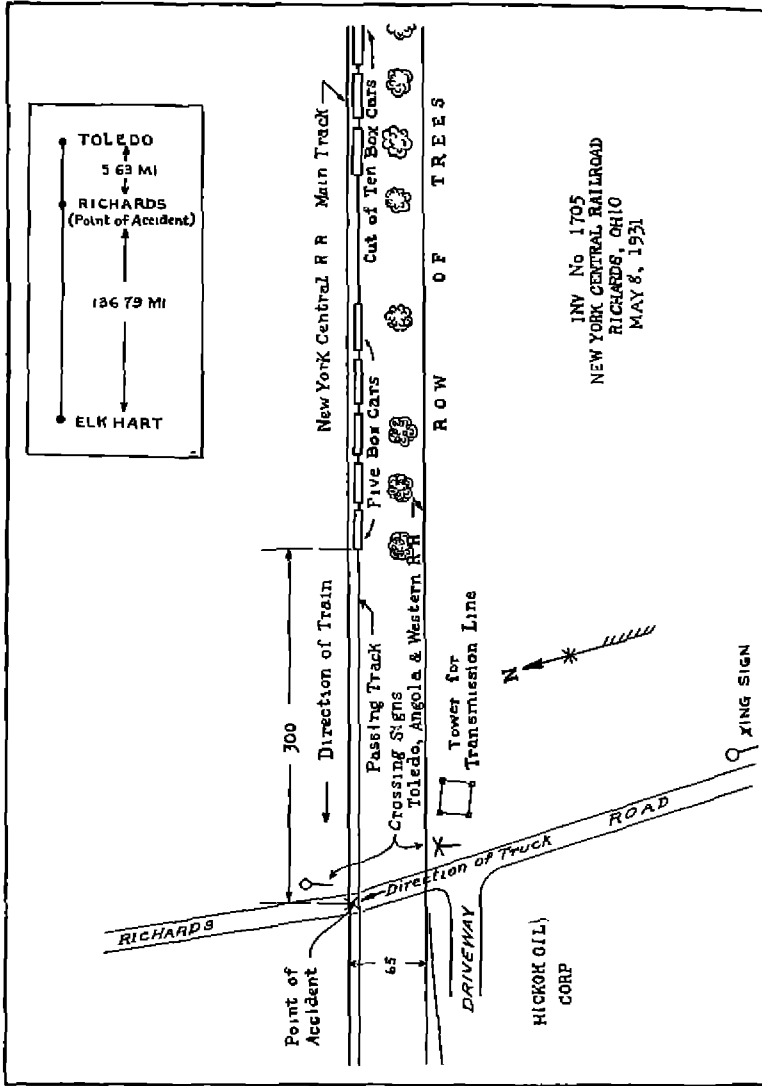


FIGURE 1—Track layout and other physical conditions as they existed at time of accident

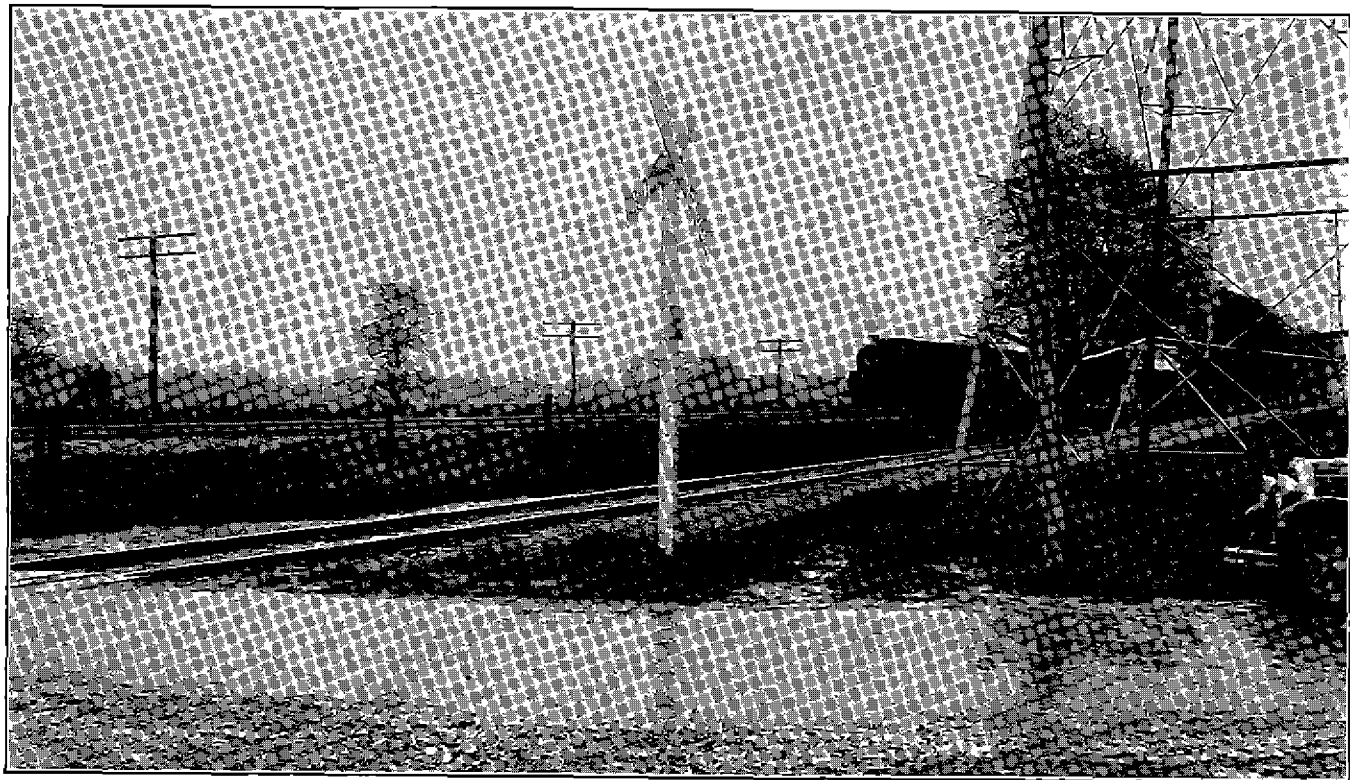


FIGURE 2—View from Hickok Oil Corporation plant driveway showing higaway and engine on New York Central track east of crossing, almost completely obscured by cars standing on passing track

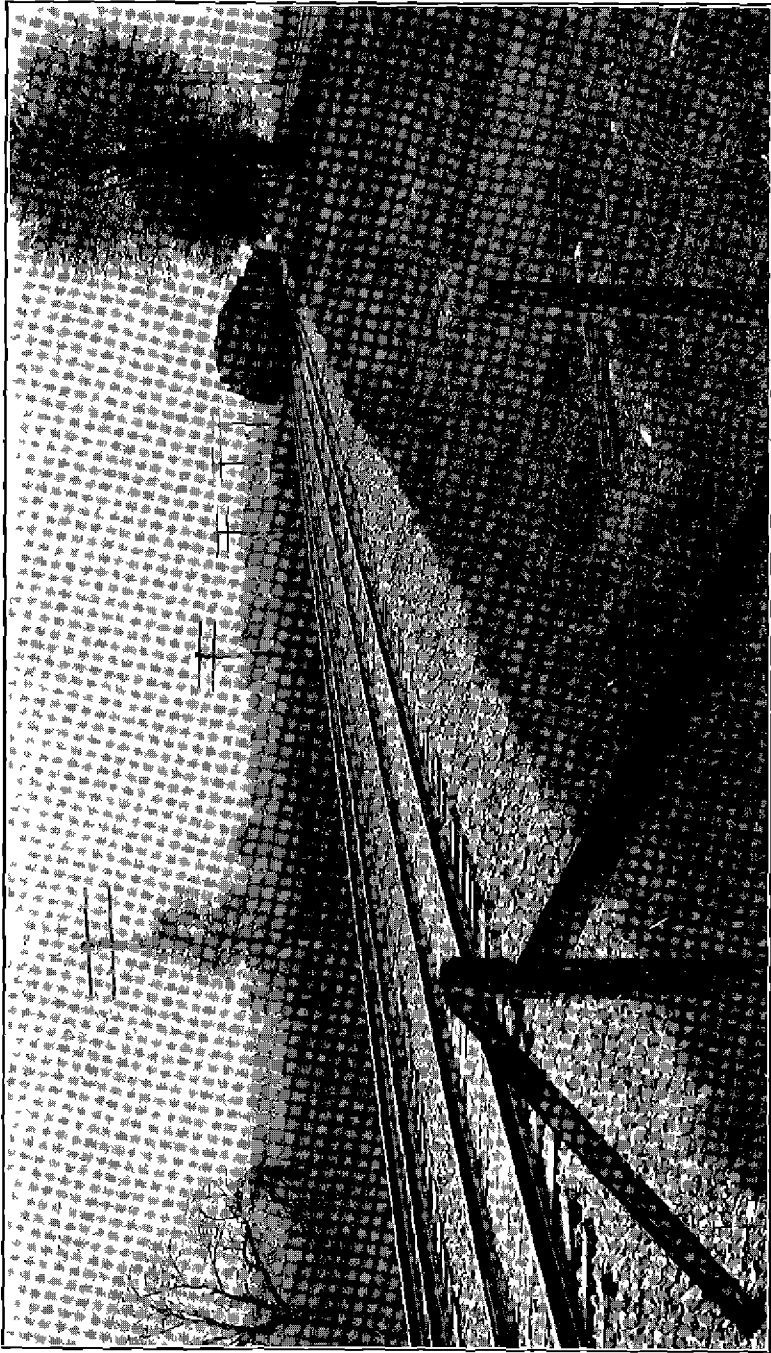


FIGURE 3 --View from center of highway 33 feet south of New York Central main track, looking east

was separated from the east end of the cut of 5 cars by a distance of about 113 feet. There was a row of good sized trees, about half leaved out, located between the tracks of the New York Central Railroad and the Toledo, Angola & Western Railroad, starting at a point opposite the west end of the cut of 5 box cars and extending almost to the east switch, 1,400 feet from the crossing. Railroad crossing signs of the crossbar type are located on the east side of the highway at points just north of the New York Central crossing and just south of the Toledo, Angola & Western crossing. There was another sign south of the tracks, but this was south of where the tank truck entered on the highway. Various buildings of the Hickok Oil Corporation are located west of the highway and south of the Toledo, Angola & Western Railroad, the main driveway thereto leading off the west side of the highway, immediately south of the Toledo, Angola & Western crossing.

On account of the box cars standing on the passing track and the row of trees, the view of the approaching westbound train on the track of the New York Central Railroad was almost entirely obscured from the driver of the northbound automobile tank truck on the highway, from a point about 75 feet south of the New York Central crossing until a point about 18 feet south of that crossing was reached, or until such train appeared from behind the west end of the cars.

The weather was clear and it was daylight at the time of the accident, which occurred about 6:30 a. m.

#### DESCRIPTION

Hickok Oil Corporation automobile tank truck No. 5, a Mack truck, had three containers, two of 400 gallons capacity each and the other of 200 gallons capacity. It was loaded to its full capacity with 1,000 gallons of gasoline, and was being operated by Melvin McCormick, en route to Toledo. After leaving the driveway of the oil company at a speed estimated to have been about 4 miles per hour, the tank truck was turned northward on Richards road and was brought to a stop with the rear wheels on or near the track of the Toledo, Angola & Western Railroad, it then proceeded, crossed the passing track of the New York Central Railroad and was passing over the main track when it was struck by train No. 31.

Westbound passenger train No. 31 consisted of 1 combination mail, express and baggage car, 1 smoker, and 1 coach, all of steel construction, hauled by engine 4891, and was in charge of Conductor Cairns and Engineman Mann. This train left Toledo, 5.63 miles east of Richards, at 6:15 a. m., according to the train sheet, on time, passed Vulcan, 3.8 miles beyond and the last open office, at 6:27 a. m.,

according to the train sheet, six minutes late, and struck the tank truck on the crossing at Richards while traveling at a speed variously estimated to have been between 35 and 60 miles per hour

The body of the truck was demolished and scattered along both sides of the right-of-way for a distance of about 1,175 feet, to where the passenger train, which was not derailed, came to a stop. Holes were punched in three of the containers of the tank truck, one of the 400-gallon containers lodged on the front end of the engine, while the other two containers were thrown from 100 to 150 feet west of the crossing and from 30 to 45 feet south of the main track. The engine and cars were sprayed with the gasoline, which immediately caught fire, considerably scorching the equipment. The employees killed were the engineman and fireman, who were sprayed with the burning gasoline and afterwards died of their burns, the truck driver died en route to the hospital, within a few minutes after the accident.

#### SUMMARY OF EVIDENCE

Conductor Carens stated that he was riding in the second car approaching Richards Road, and estimated the speed of his train to have been about 50 miles per hour. The crossing signal was sounded on the engine whistle and shortly afterwards the air brakes were applied in emergency and an alarm signal sounded, consisting of two or three blasts, following which the crash occurred, and then the train was ablaze. Conductor Carens did not hear the engine bell ringing, but was positive that the crossing signal was sounded. Baggage man Blaisdell was busy sorting mail and checking baggage and express just prior to the accident, he estimated the speed to have been about 50 miles per hour. While he did not actually hear the crossing signal sounded, he said that it could have been sounded and he might not have noticed it, the first he knew of anything wrong was on hearing a short blast of the whistle as the train was passing the box cars that stood on the passing track, about the time the air brakes were applied in emergency, and then the crash occurred. Baggage man Blaisdell could not say whether or not the engine bell was ringing. Brakeman Stokes was riding in the last car, he could not say whether the crossing signal was sounded approaching Richards Road, but said he knew that it was sounded prior to that, for Don Street, as at that time he was riding on the rear end of the train and heard it sounded. He estimated the speed to have been between 50 and 60 miles per hour. Just prior to the accident he heard two or three short blasts sounded and the air brakes were applied in emergency, he did not know whether the engine bell was ringing.

Engineer Draftsman Jones, Freight Claim Department Employee Stroupe, and Car Cleaner Foreman Howe, all employees of the New York Central Railroad, were passengers on train No 31. Mr Jones, who was riding in the first car, was paying particular attention to the whistling being done en route, his attention having been called to it by some children who were riding in the same car, and he stated positively that he heard the crossing signal sounded approaching Richards road, a few seconds afterwards the air brakes were applied and then another whistle signal was started, but not finished when the accident occurred, he could not say whether the engine bell was ringing. Mr Stroupe was riding in the last car, he was not paying any attention to whether the engine whistle was sounded or the bell ringing, saying that the whistle could have been sounded and he might not have heard it, he estimated the speed to have been about 35 to 40 miles per hour. Mr Howe was riding in the second car and had been reading a newspaper, but had put it down approaching Richards road, he thought that the first whistle signal he heard was an alarm signal, immediately followed by an air-brake application, he could not say whether the engine bell was ringing.

Various other witnesses who were in the immediate vicinity of the point of accident at the time of its occurrence were interviewed, some of them saw the truck prior to the accident while others did not. Most of these witnesses, one of whom was the general manager of the Toledo, Angola & Western Railroad, heard the regular crossing signal sounded on the engine whistle at about the usual distance from the crossing, followed by an alarm signal, consisting of two or three short blasts, and then the occurrence of the collision, at which time the whistle was being sounded. The engine whistle was also sounded for Secor road crossing, the next crossing east, located a short distance from Richards road. These witnesses could not state whether the automatic engine bell was ringing prior to the accident, but after the accident it was observed that it was then ringing. Three of the witnesses interviewed saw the truck prior to the accident, one of these witnesses, a village employee, stated that the truck turned out of the driveway at a speed of about 4 miles per hour and continued over the tracks at that speed without making a stop for the crossing, but the other two, both employees of the oil company, stated that they saw the truck make a stop for the crossing, with the rear wheels on the track of the Toledo, Angola & Western Railroad, and then it started ahead just as the train was about 800 to 1,000 feet from the crossing, passing the box cars that stood on the passing track. Two others of the witnesses interviewed considered the crossing dangerous, when used by a vehicle moving from south to north, on account of the obstructed view, due principally to box cars standing on the passing track both east and west of the highway, particu-

larly to the east. One of these witnesses stated that he almost had an accident at this particular crossing, the other one stated that he rarely used it going northward, preferring to go out of his way an extra mile or so in order to cross at another crossing.

Stationary Engineer Linn, of the Hickok Oil Corporation, arrived at the engine shortly after the occurrence of the accident, he found the throttle partly open, the brakes set, the injector open, the automatic bell ringing, and the blower on. He closed the throttle and injector, eased off the blower, and turned off the bell.

Superintendent Housel, of the Hickok Oil Corporation, stated that all truck drivers are required to stop before passing over railroad crossings at grade. While they had no written or printed instructions to this effect, every new driver was schooled by an experienced driver and known to be competent in every way before being allowed to operate a truck alone. The driver of the truck in question, Melvin McCormick, had been schooled accordingly for about two weeks, was an experienced driver, single, had been in the service of the company for a little over a year, and had been on duty in this instance about one-half hour at the time of the accident. Superintendent Housel further stated that in each 24-hour period about 200 or more vehicles used this crossing in each direction, about 35 of the vehicles being oil trucks.

Tests were conducted at the crossing which showed that a loaded tank truck similar to the one involved in this accident, when stopped with its rear end just clear of the Toledo, Angola & Western crossing, would consume from 7 to 9 seconds in starting ahead and clearing the New York Central crossing, while under the same circumstances they would foul the New York Central crossing in 4 or 5 seconds. This latter period of time would allow a train traveling at a speed of 50 miles per hour to move a distance of from 293 to 367 feet. Under these circumstances, with the cut of five box cars only 300 feet from the center line of the crossing, it is apparent that a driver starting from a point just clear of the Toledo, Angola & Western crossing, from which point he could not have seen the approaching train, and with a train then behind the box cars, would just about reach the crossing in time to be struck by the train.

#### CONCLUSIONS

This accident was caused by an automobile tank truck being driven upon a railroad crossing at grade directly in front of an approaching passenger train.

As a result of the accident the truck driver and the engineman and fireman of the passenger train were killed, consequently, nothing is



known as to their observations approaching the crossing. The evidence warrants the conclusion that the proper whistle signal was sounded as the train was approaching the crossing, as well as an alarm signal, and that the northbound truck stopped, as required, before passing over the crossing, obviously, however, the truck driver did not definitely ascertain that the way was clear before starting across. While the view of the truck driver to the east was almost entirely obscured by trees and the box cars that stood on the passing track, until the truck reached a point about 18 feet south of the crossing, nevertheless he was an experienced driver, familiar with the crossing, and he should have realized that on this account extreme caution needed to be exercised in passing over this particular crossing.

According to the record, movements over this crossing average about 11 trains and 400 vehicles daily. While this amount of traffic is relatively light, a considerable number of tank trucks loaded with gasoline pass over this crossing and frequently the view is obstructed, as in this instance, by cars standing on the passing siding. At the time of this accident this crossing was not protected except by fixed signs, the installation of crossing signals to indicate the approach of trains would materially reduce the hazard at this crossing and both the railroad officials and local authorities having jurisdiction should give consideration to the need for such protective devices at this point. Cars left standing on this passing siding should, whenever practicable, be placed at a sufficient distance from the crossing to avoid obstructing the view from the highway of a closely approaching train.

This bureau has investigated a number of grade-crossing accidents in which trucks carrying inflammable liquids and explosives were involved, as shown in the following statement:

*Grade crossing accidents investigated involving trucks carrying inflammable liquids and explosives*

File No	Date	Railroad	Location	Persons—		Notes
				Killed	Injured	
863	Aug 12, 1922	M, St P & S S M	Annandale, Minn	10	49	Passenger train gasoline, no fire
1108	Dec 3 1924	Detroit United	Wyandotte, Mich	5	10	2-car electric train, turpentine fire
1353	Aug 13, 1927	B & O	Cridersville, Ohio	4	0	Passenger train, gasoline and kerosene fire
1521	Apr 20, 1929	St L S F	Spaulding, Okla	1	6	Passenger train gasoline fire
1575	Dec 9, 1929	S P	Famoso, Calif	3	1	Do
1685	Feb 3, 1931	D & R G W	North Salt Lake, Utah	3	17	Passenger train blasting caps explosion
1705	May 8 1931	N Y C	Richards, Ohio	3	0	Passenger train gasoline, fire

Monthly reports of accidents filed with the commission by the carriers include a considerable number of grade-crossing accidents involving trucks used for the transportation of explosives and inflammable liquids. In some instances the information is not sufficiently complete to permit an exact classification to be made, and in some cases it is not clear whether gasoline mentioned was lading or the contents of the truck fuel tanks. During the years 1929, 1930, and the first quarter of 1931, a total of 52 accidents of this nature were reported. In many other accidents involving trucks no information as to the kind of truck was furnished.

Accidents of this nature are peculiarly horrifying because of the agony which the injured suffer as a result of burns, and because of the hazard to all persons on the trains involved and in the immediate vicinity resulting from explosions and from the spread and ignition of quantities of highly inflammable liquids.

Because of the potential danger to the traveling public, special precautions should be taken to safeguard the passage over railroad crossings at grade of trucks loaded with these commodities. It is not sufficient merely to "stop, look, and listen," it should be definitely known that no train is closely approaching before such a vehicle is permitted to start over a crossing. At a crossing such as the one involved in this accident, where there were no signal devices to indicate the approach of a train and the view was obstructed, safe crossing for the truck could be assured only by having some person go forward upon the track and signal to the driver whether or not a train was approaching. In the absence of adequate grade crossing protection for all vehicles, the public interest requires that special precautions be taken to safeguard the movement of these commodities which involve unusual and widespread dangers, and authorities responsible for supervision and control of highway traffic should give careful consideration to the necessity for requiring flag protection at grade crossing for vehicles carrying explosives and inflammable liquids. Any person, firm, or corporation using the public highways for the transportation of these dangerous articles should be required to conform with practices and regulations necessary to safeguard associated and conflicting traffic both on highways and on railroads.

In the report of February 27, 1930, upon the Famoso accident, listed above, the following statement was made:

The Commission has investigated other accidents involving collisions between passenger trains and motor vehicles carrying gasoline or other inflammable articles, and it is understood that several similar accidents occurred within the State of California during the few months preceding the date of the accident here under investigation, although they did not result in such serious consequences. That the results were not as serious, however, is nothing but

a matter of good fortune, for there is no doubt that a catastrophe involving great loss of life and untold suffering might result should a passenger train composed of wooden equipment be sprayed with burning gasoline. There is also the possibility that the train might be derailed as a result of the collision in which event the plight of passengers would be dangerous in the extreme. Taken altogether, the hazards surrounding the operation of motor vehicles carrying explosives or inflammables can hardly be overestimated. Transportation of explosives and inflammables on railroads engaged in interstate commerce is strictly regulated by federal laws (U S Code, Title 18, Sections 232 to 236, inclusive) and by regulations formulated by the Interstate Commerce Commission under authority contained in those sections, and severe penalties are provided for violation of such laws and regulation. In view of the volume of such articles now being transported over the highways, adequate regulations to promote safety should be provided by authorities having jurisdiction over such transportation and effective means adopted to insure their observance.

The railroad employees involved were experienced men, and at the time of the accident none of them had been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted

W P BORLAND, *Director*