RAILROAD ACCIDENT INVESTIGATION

REPORT NO 4148

SEABOARD COAST LINE RAILROAD COMPANY WINTER HAVEN, FLA

AUGUST 5, 1968

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION
Washington, D C 20591

Summary

DATE: August 5, 1968

RAILROAD: Seaboard Coast Line

Winter Haven, Fla LOCATION:

KIND OF ACCIDENT: Head-end collision

TRAINS: Passenger Passenger

57 58 TRAIN NUMBERS:

LOCOMOTIVE NUMBERS: Diesel-electric units

527, 668B, 528

507, 571, 564, 529

Diesel-elec-

tric units

CONSISTS: 17 cars 18 cars

SPEEDS: Standing 45-55 m p.h.

OPERATION: Traffic control system

Single; tangent; level TRACK:

WEATHER: Clear

TIME: 12:47 p m

CASUALTIES: 1 killed; 381 injured

CAUSE:

Failure of the engineer of No 58 to stop his train short of a stop

signal

DEPARTMENT OF TRANSPORTATION FEDERAL RAILROAD ADMINISTRATION RAILROAD SAFETY BOARD

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Synopsis

On August 5, 1968, a head-end collision occurred between two passenger trains on the Seaboard Coast Line Railroad at Winter Haven, Florida, resulting in death to one passenger and in injury to 381 passengers and railroad employees

The accident was caused by failure of the engineer of passenger train No 58 to stop his train short of a stop signal

Location of Accident and Method of Operation

The accident occurred on that part of the railroad extending between Wildwood and Miami, Florida, a distance of 278 8 miles — In the accident area this is a single-track line over which trains operate by signal indications of a traffic control system

At Winter Haven, 65 0 miles south of Wildwood, a siding 1 3 miles long parallels the main track on the west The south siding-switch is 1 7 miles south of the station

The collision occurred on the main track, 485 feet north of the south switch of the Winter Haven siding.

Time and Weather

The collision took place at $12:47\ p.m.$ The weather was clear and visibility was unrestricted

Track

The main track is tangent and practically level throughout a distance of 2,771 feet north and about 8 miles south of the collision point

Traffic Control System

The siding switches at Winter Haven are power operated. These switches and the controlled wayside signals are controlled by the train dispatcher at Jacksonville, Fla , 125.8 miles north of Wildwood.

Signals

Controlled signal R-110, governing southward movements on the main track, is 343 feet north of the south sidingswitch at Winter Haven. Automatic signal X-8298 and controlled signal L-110, governing northward movements on the main track, are 1.9 miles and 15 feet south of the aforesaid switch, respectively

The signals are of the color-light type and are approach lighted. The aspects applicable to this report and the corresponding indications and names are as follows:

Signal	Aspect	Indication	Name
R-110	Red	Stop	Stop
x-8298	Yellow-over-red	Proceed preparing to stop at next signal Train exceeding 40 miles per hour must at once reduce to that speed***	Approach
	Yellow-over- green	Proceed approaching next signal at me- dium speed	Approach Medium
L-110	Red-over-red	Stop	Stop
	Red-over- yellow	Proceed preparing to stop at second sig- nal; medium speed through turnouts	Medium Advance Approach

The signal circuits are so arranged that when the route has been established by the dispatcher for a northbound train to enter the Winter Haven siding at the south switch, signal R-110 will indicate Stop for any approaching southbound movement, and signals X-8298 and L-110 will display Approach and Medium-Advance-Approach aspects, respectively, for the northbound train If a southbound train has stopped short of signal R-110, and the route has been established for a northbound train to proceed to Winter Haven, but not to enter the siding at the south switch, signals X-8298 and L-110 will display Approach and Stop aspects, respectively, for the northbound train

Authorized Speed

The maximum authorized speed for passenger trains in the accident area is 79 miles per hour

Carrier's Operating Rules

Medium Speed - A speed not exceeding 30 miles per hour

17 The headlight will be displayed on the front of every train by day and by night, except it must be extinguished *** when standing on main track at end of siding *** vaiting to meet a train and route has been lined for opposing train

Dispatchers

789 They will promptly take action to afford protection against any known condition which may affect the safe operation of trains and engines

Circumstances Prior to Accident

Train No. 57

No 57, a southbound first-class passenger train consisting of 3 car-body type diesel-electric units, 2 mail and baggage cars, 2 dining cars, 8 coaches, 4 sleeping cars, and 1 observation car, left Wildwood at 11:37 a m the day of the accident Approximately one hour later, it stopped on the main track at Winter Haven with the front end 142 feet north of signal R-110, which displayed a Stop aspect At that time, the engineer and fireman were in the control compartment at the front of the first diesel-electric unit; the conductor, flagman and baggagemaster (a trainman) were at various locations in the cars

Train No. 58

No 58, a northbound first-class passenger train consisting of 4 car-body type diesel-electric units, 1 dormitory-baggage car, 2 dining cars, 9 coaches, 5 sleeping cars, and 1 observation car, left Miami at 9:00 a m, the day of the accident, after receiving the prescribed brake

test At 12:40 p m., it passed the north switch of the controlled siding at West Lake Wales About six minutes after passing that switch, which is approximately 6.5 miles south of the Winter Haven siding, No 58 approached signals X-8298 and L-110 while moving at an estimated speed of 70-79 m p h The engineer was in the control compartment at the front of the first diesel-electric unit. The fireman was in the engine room of that unit, in response to an engine alarm bell which rang shortly after the train passed West Lake Wales The conductor, flagman and baggagemaster (a trainman) were at various locations in the cars

Dispatcher's Loss of Control of the Traffic Control System

After No 57 passed the controlled signals at Noxon, 10.5 miles north of Winter Haven, the train dispatcher at the traffic control machine in Jacksonville lost control of that portion of the traffic control system between Noxon and Winter Haven including the Winter Haven controlled signals and siding switches (See "Post-Accident Examinations and Tests")

The traffic control system is so designed that in event of loss of control by the dispatcher, controlled signals already cleared by him will remain cleared for a train Signals not previously cleared in advance of a train will display proceed aspects on the approach of the train; provided, that (a) switches are properly lined in signal blocks immediately ahead (b) blocks ahead are unoccupied and (c) signals have not been cleared for an opposing or conflicting movement in the blocks ahead By virtue of this arrangement, No. 57 continued southward from Noxon on proceed signal indications to signal R-110 near the south siding-switch at Winter Haven. It stopped short of signal R-110, as that signal was displaying a Stop aspect due to the dispatcher having cleared northward controlled signals at West Lake Wales for the movement of No 58 to Winter Haven

Having lost control of the switches of the Winter Haven siding, the dispatcher could not operate his traffic control machine to establish the route for No 58 to enter the siding at the south switch and clear the main track for No 57, or for No. 57 to enter the siding at the north switch and clear the main track for No 58

Meetings Between No. 57 and No. 58 on Prior Occasions

According to the dispatcher, No $\,$ 57 normally takes siding when the route is established for that train to meet No $\,$ 58 at Winter Haven $\,$ He stated that had it not been for loss of control of the traffic control system, he would have routed No $\,$ 57 to the siding on the day of the accident to meet No. $\,$ 58.

The engineer of No 58 the day of the accident was on a regular assignment As an engineer of No 58, he had met No 57 at Winter Haven on several past occasions He could not recall any occasion when his train had been required to enter the Winter Haven siding to meet No 57

The Accident

Train No. 57

After this southbound train stopped on the main track short of signal R-110, which indicated Stop, the baggagemaster went ahead to a wayside telephone booth near the Winter Haven south siding-switch and called the train dispatcher for instructions The dispatcher informed him that (a) the Noxon-Winter Haven portion of the traffic control system was "off line", (b) his train would meet
No 58 at Winter Haven, and (c) the route had been established for No 58 to proceed northward to Winter Haven, accounting for signal R-110 displaying a Stop aspect for master anticipated (a) signal L-110 would display a Stop aspect for No 58, (b) No 58 would stop short of the signal, and (c) one of its crew members would then manually line the south siding-switch for entry of his train to the siding as required under the circumstances The baggagemaster made no arrangement with the dispatcher to manually line the switch for movement to the siding before the arrival of No. 58

Soon after being informed that No. 58 was proceeding to Winter Haven to meet his train, the baggagemaster advised the dispatcher that No 58 was seen to be approaching and that the south siding-switch was still in normal position, lined for movements on the main track. He then left the telephone booth At that time, according to his statements, the baggagemaster say No 58 approaching at a distance of about 700 feet and at a speed between 50 and 55 mp.h He further saw that the oscillating red light at the front of No 58 was illuminated, indicating that the brakes of the oncoming train were applied in emergency Realizing No 58 could not stop short of signal L-110 or a collision with his train, the baggagemaster ran away from the track structure to safety

The engineer and fireman of No. 57 remained in the control compartment of the first diesel-electric unit after their train stopped short of signal R-110 Assuming that his train had been stopped to meet an opposing train at Winter Haven, the engineer left the locomotive light shining brightly to indicate to the enginemen of the opposing train that his train was occupying the main track at Winter Haven Approximately six minutes after stopping short of signal R-110, both enginemen saw No 58 approaching at an estimated distance of three or four miles They felt no concern about the approaching train until it neared signal L-110. The enginemen then realized No 58 was moving too fast to stop short of signal L-110 or their train, and hurriedly

alighted from their locomotive $\,$ Immediately afterward, at 12:47 p m , No 58 passed signal L-110, which displayed a Stop aspect; passed the south siding-switch and collided with No 57 at a point 485 feet north of that switch

Train No. 58

Soon after No 58 passed the controlled signals and siding at West Lake Wales, the engine alarm bell rang because of an overheated engine of the first locomotive unit, and the fireman went back into the engine room of that unit The train approached signal X-8298, 1 9 miles south of signal L-110 and the Winter Haven siding, at 70 to 79 m p.h as estimated by crew members The investigation revealed signal X-8298 evidently displayed an Approach aspect (yellow-over-red) for No 58 The engineer, however, said that it had displayed an Approach-Medium aspect (yellow-over-green) and that he had considered this normal, apparently due to assuming from past experiences that his train would meet No: 57 at Winter Haven and that it was routed to hold the main track at the meeting point

Although statements of the conductor and trainmen indicate otherwise, the engineer said he initiated a service brake application as his train passed signal X-8298 He further said he released the brakes when the speed was reduced to about 40 m p h. Upon reaching a point 1 0 mile beyond signal X-8298 and 0 9 mile from signal L-110, No 58 activated the latter signal, causing it to display a Stop aspect (red-over-red) The engineer said that because this signal was improperly focused, he thought for a while that it was displaying an Approach aspect (yellow-over-red). This misreading of signal L-110 apparently had the effect of confirming the engineer's belief his train was routed to hold the main track at Winter Haven for the anticipated meet with No 57

While No. 58 was approaching signal L-110 and the south switch of the Winter Haven siding, the engineer saw the lighted headlight of No 57 ahead For a short period, he thought 57 was occupying the siding He said he then realized that signal L-110 was displaying a Stop aspect and that No. 57 was on the main track, instead of the siding time, according to his statements, the engineer concluded that the route had been established for his train to enter the siding at the south switch He stated that he did not realize otherwise until his train was about 300 feet from the switch, when he saw the switch rails were in normal position, lined for movements on the main track He said that he immediately realized a collision was inevitable and applied the train brakes in emergency He further said that he then ran back into the engine compartment of the first locomotive unit after noticing the speed indicator showed a speed of 30 m p.h Both the engineer and the fireman were in the engine room when 58 collided with No 57 while moving at a speed apparently considerably higher than that implied by the engineer's statements

A wayside defect detector is located 2,954 feet north of signal X-8298 The flagman of No 58 was in the vestibule of the next to last car as his train passed the defect detector, and he estimated the train speed to be about 79 mp.h at that time The flagman said he observed that the white light of the defect detector was illuminated, indicating no defective condition of the train had been detected. He further said he then radioed the engineer and told him the defect detector had displayed a white light. At that time, the front of the train apparently was approximately 10 mile from signal L-110 and the south switch of the Winter Haven siding. The front brakeman said that about 30 seconds after he concluded his radio conversation with the engineer, the brakes of No 58 became applied in emergency. He did not notice any service brake application before the emergency brake application, and estimated that the latter brake application had reduced the speed of No 58 to between 55 and 60 mp h at the time of the collision

According to estimates of the conductor and baggage-master, No 58 was moving between 70 and 79 miles per hour when it passed the wayside defect detector in the block of signal X-8298 Shortly thereafter, both the conductor and baggagemaster felt a slight service application of the brakes, followed immediately by an emergency application. The conductor estimated the speed was reduced to about 50 m p h at the time of the collision; the baggagemaster estimated it was reduced to about 40 m p h at that time

Damages

Train No. 57

fhe impact caused the first two cars of No $\,$ 57 to derail to the east side of the main track structure and the front truck of the third car to derail also In addition, it derailed the three diesel-electric units and moved them backwaid about 95 feet The first unit overturned onto its right side It stopped with the front end on the siding and the rear end on the main track. The second and third units stopped upright and in line on the main track structure with the rear end of the third unit against the west side of the second derailed car This car stopped in a tilted position to the east, with the rear end on the main track structure, coupled to the front of the third car, and with the front end about 10 feet east of the main track structure The third car stopped upright on and in line with the main track structure The first car separated from the second car and stopped upright on the east side of the main track structure, diagonally in line with the second car and about 10 feet ahead of that car

The first diesel-electric unit and first car were destroyed, with particularly heavy damage at their front ends. The second and third diesel-electric units and the second car were considerably damaged. The third car was slightly damaged.

Train No. 58

All four diesel-electric units and the first 11 cars of No 58 derailed. The first diesel-electric unit overturned onto its left side, and stopped about 180 feet north of the collision point with its front and rear ends, respectively, about 55 and 30 feet east of the main track. second unit stopped in a tilted position to the east, crosswise against the rear of the first unit, and with its front end on the east side of the main track structure unit stopped upright with its front end against the rear of the second unit, and with its rear end on the main track structure. The fourth unit stopped upright, leaning to the west, on and in line with the main track structure immediately behind the third unit. The first four cars jackknifed toward the east and remained upright. The first and fourth cars each stopped with one end on the main track structure and with the other extending diagonally eastward, forming an inverted "V". The second and third cars stopped upright about midway in the inverted "V", across and about right angles to the main track and siding The remaining seven derailed cars stopped upright on and in line with the main track structure to the rear of the fourth car

The first and second diesel-electric units were destroyed. The third and fourth units and the first six cars were heavily damaged, and the damage to the remaining five derailed cars ranged between moderate and light

According to the carrier's estimate, the total cost of damage to the track, the trains and signal equipment was about \$494,500

Employee Casualties

Train No. 57

Sixteen dining-car employees and one passenger department employee (nurse) on No 57 were injured None was injured seriously enough to require hospitalization

Train No. 58

The engineer, fireman, conductor, flagman, 21 dining-car employees, and 3 sleeping-car employees on No 58 were injured Four were hospitalized. They were the engineer (fractured ribs, left arm, facial bones, and lower back strain and miscellaneous bruises and lacerations), the fireman (head and lip lacerations, and burns and bruises), the dining-car steward (fractured left leg), and a dining-car waiter (forehead and back lacerations)

Passenger Casualties

One female coach passenger of No 58 was killed She apparently was seated at a lounge table at the time of the collision and was thrown forward, striking her lower chest against the table edge and rupturing her liver

Approximately 134 passengers on No 57 and 202 passengers on No 58 were injured or claimed injury Of these 336 passengers, 117 were examined, treated and released after the accident; 100 claimed minor injuries while continuing their journeys on relief trains; 95 subsequently claimed injuries by letters to the railroad carrier, and 25 were hospitalized due to head injuries, fractured ribs, broken hip, fractured clavicles, minor limb fractures, generalized bruises, or a shaken-up condition

Train Crews' Hours of Service

According to the carrier's records, the engineer and fireman of No 57 had been on duty 1 hour 47 minutes at the time of the accident The conductor, flagman and baggage-master had been on duty 4 hours 17 minutes at that time. All the crew members had been previously off duty over 24 hours

All crew members of No $\,$ 58 had been on duty 4 hours 17 minutes at the time of the accident, after having been off duty over 15 hours

Post-Accident Examinations and Tests

<u>Track</u>

Examination of the undamaged track between signal X-8298 and L-110 revealed no evidence of heavy braking by No $\,\,$ 58

Equipment of No. 58

Examination of the seven non-derailed cars of No 58 also revealed no evidence of heavy braking before the accident

Focus of Signal L-110

A sight test was made of this signal to determine whether it was improperly focused, as alleged by the engineer of No 58 It revealed that from the moment a northbound locomotive activates signal L-110, the aspect displayed by the signal can be distinctly seen from the control compartment throughout the approach of the locomotive to the signal

Traffic Control System

Examinations and tests revealed no condition which could have caused signals X-8298 and L-110 to display other than Approach and Stop aspects, respectively, for No 58 as that train approached the signals

Examination of carrier's records revealed that about 11:00 p.m. July 31, five days before the accident, the train dispatcher reported he was experiencing trouble with the traffic control system A few hours later, a signal maintainer found the trouble was caused by an opening in the cable (code line) near Auburndale, or approximately midway between Noxon and Winter Haven This cable is buried about two feet

deep alongside the ties of the main track. The signal maintainer corrected the trouble by replacing about one-half mile of the damaged cable with a temporary cable strung along one side of the surface of the main track structure, completing this work about 4:00 a m , August 1st

The dispatcher experienced no further trouble with the traffic control system until he lost control of that part of the system extending between Noxon and Winter Haven when No 57 passed the location of the temporary cable on the day of the accident

Approximately two hours after the accident, the signal maintainer found that the temporary cable had been cut, apparently as a result of being run over by No 57. Consequently, it appears that sometime prior to passage of No 57 the day of the accident, one or more unknown persons pulled a portion of the temporary cable onto the main track and laid it on top of the east rail, resulting in the dispatcher losing control of the Noxon-Winter Haven portion of the traffic control system when No 57 ran over the temporary cable.

Engineer of No. 58

This engineer was 69 years 4 months old at the time of the accident, and was first employed by the carrier as a fireman in April 1920 The carrier's personnel records for ten years prior to the accident revealed that in 1964 and 1965 the engineer was reprimanded for, respectively, failure to sound a crossing-warning whistle signal as required, and failure to stop his train at a station to detrain passengers. It also revealed that in May 1966, he was suspended from service for 15 days for failure to properly report an imperfectly displayed signal The record was free of any disciplinary action taken against the engineer between May 1966 and the day of the accident at Winter Haven

Age 70 is the compulsory retirement age for SCL trainand engine-service employees By agreement between labor organizations and the SCL, such employees are required (within 30 days of their birthdays) to undergo a physical examination every two years until they become 55 years old, and annually thereafter until reaching retirement age A physical examination includes vision; hearing; color-sense; urinalysis; blood pressure; heart, and lung tests, with a recommendation from the attending physician as to whether the employee is safe to perform his duties.

The engineer of No 58 had undergone and passed annual physical examinations from 1963 to 1968, inc , including one on April 4, 1968, approximately one week after his 69th birthday and four months before the accident.

Analysis of Accident

Train No. 57

This train proceeded southward to Winter Haven in accordance with the carrier's rules and stopped on the main track short of signal R-110, which indicated Stop It was standing short of that signal, as required, at the time of the collision

Train No. 58

By manipulating controls of the traffic control machine, the dispatcher established the route for No 58 to proceed northward to signal L-110 at Winter Haven However, having lost control of signal L-110 and the south siding-switch at Winter Haven he was unable to establish the route for No 58 to enter the siding at the south switch and clear the main track for No As a result, signals X-8298 and L-110 displayed Approach and Stop aspects, respectively, during the approach of No. 58, and the south siding-switch remained in normal position, lined for movements on the main track these circumstances, No 58 was authorized to proceed in the block of signal X-8298 at a speed not exceeding 40 m p h , preparing to stop at signal L-110 required to stop at the latter signal, then enter the Winter Haven siding at the south switch after that switch was manually moved to reverse position

The engineer, who was alone in the locomotive control compartment as No 58 approached signal X-8298 apparently mistook the Approach aspect being displayed by that signal to be an Approach-Medium aspect and, consequently, assumed that signal L-110 was displaying an aspect other than Stop Although the engineer claimed he initiated a service brake application while passing signal X-8298 and reduced speed to about 40 m p h , the preponderance of evidence indicates that he did not and that the train continued northward at 70 to 79 m p.h , or considerably in excess of the speed authorized by either an Approach or Approach - Medium signal aspect.

Taking into consideration the baggagemaster's statements, as well as those of the conductor and flagman, the engineer apparently first applied the train brakes in the block of signal X-8298 when his train reached a point about 1500-2000 feet from signal L-110. He either made an emergency brake application, or a service brake application immediately followed by an emergency application, while moving at 70 to 79 m p.h Immediately before the brake application, the engineer evidently realized that signal L-110 was displaying a Stop aspect and/or that the train ahead was occupying the main track at Since signal L-110 began displaying a Winter Haven Stop aspect when No 58 was 0 9 mile distant, this tends to confirm the engineer's statement that for a while he had been under the impression signal L-110 was displaying an Approach aspect, apparently due to assuming from past

experience that his train was routed to hold the main track at Winter Haven for the meet with the opposing train seen ahead

Due to its speed when the brakes were applied in emergency and to insufficient braking distance, No 58 was unable to stop short of signal L-110 as required, resulting in the train passing that signal, the south switch of the Winter Haven siding, and colliding with No 57 while moving at an estimated speed of 45-55 m p h

Causal Factors

Several causal factors are involved in this accident, as outlined in the following:

- 1. Malicious tampering with a temporary cable of the traffic control system, resulting in No 57 cutting the cable on the day of the accident.
- 2 Dispatcher's loss of control of the Noxon-Winter Haven segment of the traffic control system, due to No 57 cutting the temporary cable
- 3 No 57 standing on the main track at Winter Haven with the south syitch of the siding remaining in normal position, lined for movements on the main track

Had this switch been manually moved to reverse position by the baggagemaster of No. 57 (under authority of the dispatcher) in the time available before No. 58 approached Winter Haven, the collision may have been averted.

4. Lack of radio communication between the dispatcher and the engine crews of No $\,$ 57 and 58

The dispatcher lost control of the traffic control system between Noxon and Winter Haven about 12:25 p m , and the collision occurred at 12:47 p m. During this period, the dispatcher made no effort to radio the enginemen of No 57 and No 58, and inform them that he had lost control of the Noxon-Winter Haven segment of the traffic control system Had he done so, the engineer of No 58 would have known that his train was going to meet No 57 at Winter Haven and that his train would be required to enter the siding there at the south switch to meet the opposing train Knowing this, he probably would have not mistaken the aspects displayed by signals X-8298 and L-110 Thus, he probably would have operated his train in accordance with the signal aspects actually displayed, and thereby averted the accident

 $\,$ 5 $\,$ Engineer of No. 58 being accustomed to holding the main track when meeting No. 57 at Winter Haven.

Force of habit apparently caused the engineer of No 58 to assume that this train was routed to hold the main track at Winter Haven and to misread the aspects displayed by signals X-8298 and L-110. As a result, he failed to control the speed of his train as required in the block of signal

x-8298 and was unable to stop the train short of signal L-110 and a collision with No. 57 when he realized signal L-110 was displaying a Stop aspect

6. Age of engineer of No 58

In view of the circumstances involved, there is a possibility that the engineer's age (69 years 4 months) was a significant factor in the accident

Findings

- $1\,$ No. 57 was standing on the main track in accordance with applicable rules of the carrier
- 2 Aspects displayed by signals X-8298 and L-110 required No 58 to proceed in the block of signal X-8298 prepared to stop short of signal L-110 and required the train to stop short of the latter signal
- 3. The engineer of No. 58 failed to properly control the speed of his train in the block of signal X-8298, due to misinterpreting the signal aspect displayed
- 4 The engineer of No 58 for a while also misinterpreted the Stop aspect displayed by signal L-110.
- 5. When the engineer of No 58 realized that signal L-110 was displaying a Stop aspect and applied the brakes in emergency, there was insufficient braking distance for the fast moving train to stop short of the signal, resulting in the collision

Cause

The accident was caused by failure of the engineer to control the speed of No 58 as required by an Approach signal aspect, and to stop his train short of a Stop signal *

Recommendations

It is recommended that the Seaboard Coast Line Rail-road, and any other railroad not having already done so, prescribe and/or enforce rules or regulations requiring —

(a) Train crew members be informed of any unusual condition that might affect the movement of their train, whenever communication facilities are available to so inform the train crew.

> Dated at Washington, D C , this 5th day of November 1969 By the Federal Railroad Administration

Mac E. Rogers, Chairman Railroad Safety Board

*The Federal Railroad Administration has no jurisdic-

tion over railroad operating rules; track structures; bridges; rail-highway grade crossing protection; track clearances; consist of train crews; qualifications or physical condition of railroad employees; running and draft gear on cars, or the construction of cars except those appurtenances within jurisdiction of the Safety Appliance Acts and the Power Brake Law of 1958

