Federal Railroad Administration
Office of Safety
Headquarters Assigned
Accident Investigation Report
HQ-2007-83

CSX Transportation (CSX)
Willard, Ohio
December 20, 2007

Note that 49 U.S.C. §20903 provides that no part of an accident or incident report made by the Secretary of Transportation/Federal Railroad Administration under 49 U.S.C. §20902 may be used in a civil action for damages resulting from a matter mentioned in the report.

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

FRA FACTUAL RAILROAD ACCIDENT REPORT

FRA File # HQ-2007-83

1.Name of Railroad Operating Train #1: CSX Transportation [CSX]	1a. Alphabetic Code: CSX	1b. Railroad Accident/Incident No.: 00041076
2.Name of Railroad Operating Train #2: CSX Transportation [CSX]	2a. Alphabetic Code: CSX	2b. Railroad Accident/Incident No.: 00041076
3.Name of Railroad Operating Train #3: N/A	3a. Alphabetic Code: N/A	3b. Railroad Accident/Incident No.: N/A
4.Name of Railroad Responsible for Track Maintenance: CSX Transportation [CSX]	4a. Alphabetic Code: CSX	4b. Railroad Accident/Incident No.: 00041076
5. U.S. DOT_AAR Grade Crossing Identification Number:	6. Date of Accident/Incident: Month 12 | Day 20 | Year 2007	7. Time of Accident/Incident: 07:16:00 ☐ AM ☑ PM

8. Type of Accident/Indicent (single entry in code box): 1. Derailment; 2. Head on collision; 3. Rear end collision; 4. Side collision; 5. Raking collision; 6. Broken Train collision; 7. Hwy-rail crossing; 8. RR grade crossing; 9. Obstruction; 10. Explosion-detonation; 11. Fire/violent rupture; 12. Other impacts; 13. Other (describe in narrative) — Code: 03

9. Cars Carrying HAZMAT	10. HAZMAT Cars Damaged/Derailed	11. Cars Releasing HAZMAT	12. People Evacuated	13. Division
35	N/A	N/A	0	Great Lakes

14. Nearest City/Town	15. Milepost (to nearest tenth)	16. State Abbr	16. State Code	17. County
WILLARD	BI 5.8	N/A	OH	HURON

18. Temperature (F) (specify if minus)	19. Visibility (single entry) 1. Dawn 2. Day 3.Dusk 4.Dark — Code	20. Weather (single entry) 1. Clear 2. Cloudy 3. Rain 4. Fog 5.Sleet 6.Snow — Code	21. Type of Track 1. Main 2. Yard 3. Siding 4. Industry — Code
34 F	4	1	1

22. Track Name/Number	23. FRA Track Class (1-9, X) — Code	24. Annual Track Density (gross tons in millions)	25. Time Table Direction 1. North 2. South 3. East 4. West — Code
No. 2	4	141.1	3

OPERATING TRAIN #1

26. Type of Equipment Consist (single entry) 1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/switching 8. Light loco(s). 9. Maint./inspect.car	A. Spec. MoW Equip. — Code	27. Was Equipment Attended? 1. Yes 2. No — Code	28. Train Number/Symbol
	1	1	Q34820

29. Speed (recorded speed, if available) R - Recorded E - Estimated	Code	31. Method(s) of Operation (enter code(s) that apply)	31a. Remotely Controlled Locomotive?
12 MPH	R	a. ATCS; b. Auto train control; c. Auto train stop; d. Cab; e. Traffic; f. Interlocking; g. Automatic block; h. Current of traffic; i. Time table/train orders; j.Track warrant control; k. Direct traffic control; l.Yard limits; m.Special instructions; n. Other than main track; o. Positive train control; p. Other (Specify in narrative)	0 = Not a remotely controlled; 1 = Remote control portable; 2 = Remote control tower; 3 = Remote control transmitter - more than one remote control transmitter: 0

30. Trailing Tons (gross tonnage, excluding power units): 6753

Code(s): e | N/A | N/A | N/A | N/A

32. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded (yes/no)
(1) First involved (derailed, struck, etc)	UTLX 13775	13	no
(2) Causing (if mechanical cause reported)	0	0	N/A

33. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.

Alcohol	Drugs
N/A	N/A

34. Was this consist transporting passengers? (Y/N): N

35. Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End c. Remote
(1) Total in Train	2	0	0	0	0
(2) Total Derailed	0	0	0	0	0

36. Cars	Loaded a. Freight	Loaded b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Equipment Consist	49	0	22	0	0
(2) Total Derailed	0	0	1	0	0

37. Equipment Damage This Consist	38. Track, Signal, Way, & Structure Damage	39. Primary Cause Code	40. Contributing Cause Code
$29,982.00	$0.00	H605	E99C

Number of Crew Members

41. Engineer/ Operators	42. Firemen	43. Conductors	44. Brakemen
1	0	1	0

Length of Time on Duty

45. Engineer/Operator	46. Conductor
Hrs 5 Mi 31	Hrs 5 Mi 31

Casualties to:	47. Railroad Employees	48. Train Passengers	49. Other
Fatal	0	0	0
Nonfatal	0	0	0

50. EOT Device? 1. Yes 2. No	51. Was EOT Device Properly Armed? 1. Yes 2. No
1	1

52. Caboose Occupied by Crew? 1. Yes 2. No: 2

OPERATING TRAIN #2

53. Type of Equipment Consist (single entry) 1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/switching 8. Light loco(s). 9. Maint./inspect.car	A. Spec. MoW Equip. — Code	54. Was Equipment Attended? 1. Yes 2. No — Code	55. Train Number/Symbol
	1	1	Q39620

56. Speed (recorded speed, if available) R - Recorded E - Estimated	Code	58. Method(s) of Operation (enter code(s) that apply)	58a. Remotely Controlled Locomotive?
0 MPH	R	a. ATCS; b. Auto train control; g. Automatic block; h. Current of traffic; m.Special instructions; n. Other than main track	0 = Not a remotely controlled; 1 = Remote control portable

DEPARTMENT OF TRANSPORTATION
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FRA FACTUAL RAILROAD ACCIDENT REPORT

FRA File # HQ-2007-83

57. Trailing Tons (gross tonnage, excluding power units): N/A

c. Auto train stop; d. Cab; e. Traffic; f. Interlocking; i. Time table/train orders; j.Track warrant control; k. Direct traffic control; l.Yard limits; o. Positive train control; p. Other (Specify in narrative) Code(s): e | N/A | N/A | N/A | N/A

2 = Remote control tower
3 = Remote control transmitter - more than one remote control transmitter: 0

59. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded (yes/no)
(1) First involved (derailed, struck, etc)	CSXT498299	90	yes
(2) Causing (if mechanical cause reported)	0	0	N/A

60. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.

Alcohol	Drugs
N/A	N/A

61. Was this consist transporting passengers? (Y/N): N

62. Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End c. Remote
(1) Total in Train	2	0	0	0	0
(2) Total Derailed	0	0	0	0	0

63. Cars	Loaded a. Freight	Loaded b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Equipment Consist	61	0	29	0	0
(2) Total Derailed	0	0	0	0	0

64. Equipment Damage This Consist: $18,000.00

65. Track, Signal, Way, & Structure Damage: $0.00

66. Primary Cause Code: H605

67. Contributing Cause Code: E99C

Number of Crew Members

68. Engineer/ Operators	69. Firemen	70. Conductors	71. Brakemen
1	0	1	0

Length of Time on Duty

72. Engineer/Operator: Hrs 4 Mi 31

73. Conductor: Hrs 4 Mi 31

Casualties to:	74. Railroad Employees	75. Train Passengers	76. Other
Fatal	0	0	0
Nonfatal	0	0	0

77. EOT Device? 1. Yes 2. No: 1

78. Was EOT Device Properly Armed? 1. Yes 2. No: 1

79. Caboose Occupied by Crew? 1. Yes 2. No: 2

OPERATING TRAIN #3

80. Type of Equipment Consist (single entry): 1. Freight train; 2. Passenger train; 3. Commuter train; 4. Work train; 5. Single car; 6. Cut of cars; 7. Yard/switching; 8. Light loco(s); 9. Maint./inspect.car; A. Spec. MoW Equip. Code: N/A

81. Was Equipment Attended? 1. Yes 2. No Code: N/A

82. Train Number/Symbol: N/A

83. Speed (recorded speed, if available) Code: R - Recorded; E - Estimated: N/A MPH N/A

84. Trailing Tons (gross tonnage, excluding power units): N/A

85. Method(s) of Operation (enter code(s) that apply): a. ATCS; b. Auto train control; c. Auto train stop; d. Cab; e. Traffic; f. Interlocking; g. Automatic block; h. Current of traffic; i. Time table/train orders; j.Track warrant control; k. Direct traffic control; l.Yard limits; m.Special instructions; n. Other than main track; o. Positive train control; p. Other (Specify in narrative) Code(s): N/A | N/A | N/A | N/A | N/A

85a. Remotely Controlled Locomotive?
0 = Not a remotely controlled
1 = Remote control portable
2 = Remote control tower
3 = Remote control transmitter - more than one remote control transmitter: N/A

86. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded (yes/no)
(1) First involved (derailed, struck, etc)	N/A	N/A	N/A
(2) Causing (if mechanical cause reported)	N/A	N/A	N/A

87. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.

Alcohol	Drugs
N/A	N/A

88. Was this consist transporting passengers? (Y/N): N/A

89. Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End c. Remote
(1) Total in Train	N/A	N/A	N/A	N/A	N/A
(2) Total Derailed	N/A	N/A	N/A	N/A	N/A

90. Cars	Loaded a. Freight	Loaded b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Equipment Consist	N/A	N/A	N/A	N/A	N/A
(2) Total Derailed	N/A	N/A	N/A	N/A	N/A

91. Equipment Damage This Consist: N/A

92. Track, Signal, Way, & Structure Damage: N/A

93. Primary Cause Code: N/A

94. Contributing Cause Code: N/A

Number of Crew Members

95. Engineer/ Operators	96. Firemen	97. Conductors	98. Brakemen
N/A	N/A	N/A	N/A

Length of Time on Duty

99. Engineer/Operator: Hrs N/A Mi N/A

100. Conductor: Hrs N/A Mi N/A

Casualties to:	101. Railroad Employees	102. Train	103. Other
Fatal	N/A	N/A	N/A
Nonfatal	N/A	N/A	N/A

104. EOT 1. Yes 2. No: N/A

105. Was EOT Device Properly 1. Yes 2. No: N/A

106. Caboose Occupied by Crew? 1. Yes 2. No: N/A

Highway User Involved

107. Code: N/A
A. Auto; B. Truck; C. Truck-Trailer.; D. Pick-Up Truck; E. Van; F. Bus; G. School Bus; H. Motorcycle; J. Other Motor Vehicle; K. Pedestrian; M. Other (spec. in narrative)

108. Vehicle Speed (est. MPH at impact): N/A

109. geographical) Code: N/A
1.North 2.South 3.East 4.West

Rail Equipment Involved

111. Equipment Code: N/A
1.Train(units pulling); 2.Train(units pushing); 3.Train (standing); 4.Car(s) (moving); 5.Car(s) (standing); 6.Light Loco(s) (moving); 7.Light(s) (standing); 8.Other (specify in narrative)

112. Position of Car Unit in: N/A

110. Position	Code	113. Circumstance	Code
1.Stalled on Crossing 2.Stopped on Crossing 3.Moving Over Crossing 4. Trapped	N/A	1. Rail Equipment Struck Highway User 2. Rail Equipment Struck by Highway User	N/A
114a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? 1. Highway User 2. Rail Equipment 3. Both 4. Neither	N/A	114b. Was there a hazardous materials release 1. Highway User 2. Rail Equipment 3. Both 4. Neither	N/A

114c. State here the name and quantity of the hazardous materials released, if any.

N/A

115. Type Crossing Warning	1.Gates	2.Cantilever FLS	3.Standard FLS	4.Wig Wags	5.Hwy. traffic signals	6.Audible	7.Crossbucks	8.Stop signs	9.Watchman	10.Flagged by crew	11.Other (spec. in narr.)	12.None
Code(s)	N/A	N/A	N/A	N/A	N/A	N/A	N/A					

116. Signaled Crossing (See instructions for codes)	Code	117. Whistle 1. Yes 2. No 3. Unknown	Code
	N/A		N/A

118. Location of Warning 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach	Code	119. Crossing Warning with Highway Signals 1. Yes 2. No 3. Unknown	Code	120. Crossing Illuminated by Street Lights or Special Lights 1. Yes 2. No 3. Unknown	Code
	N/A		N/A		N/A

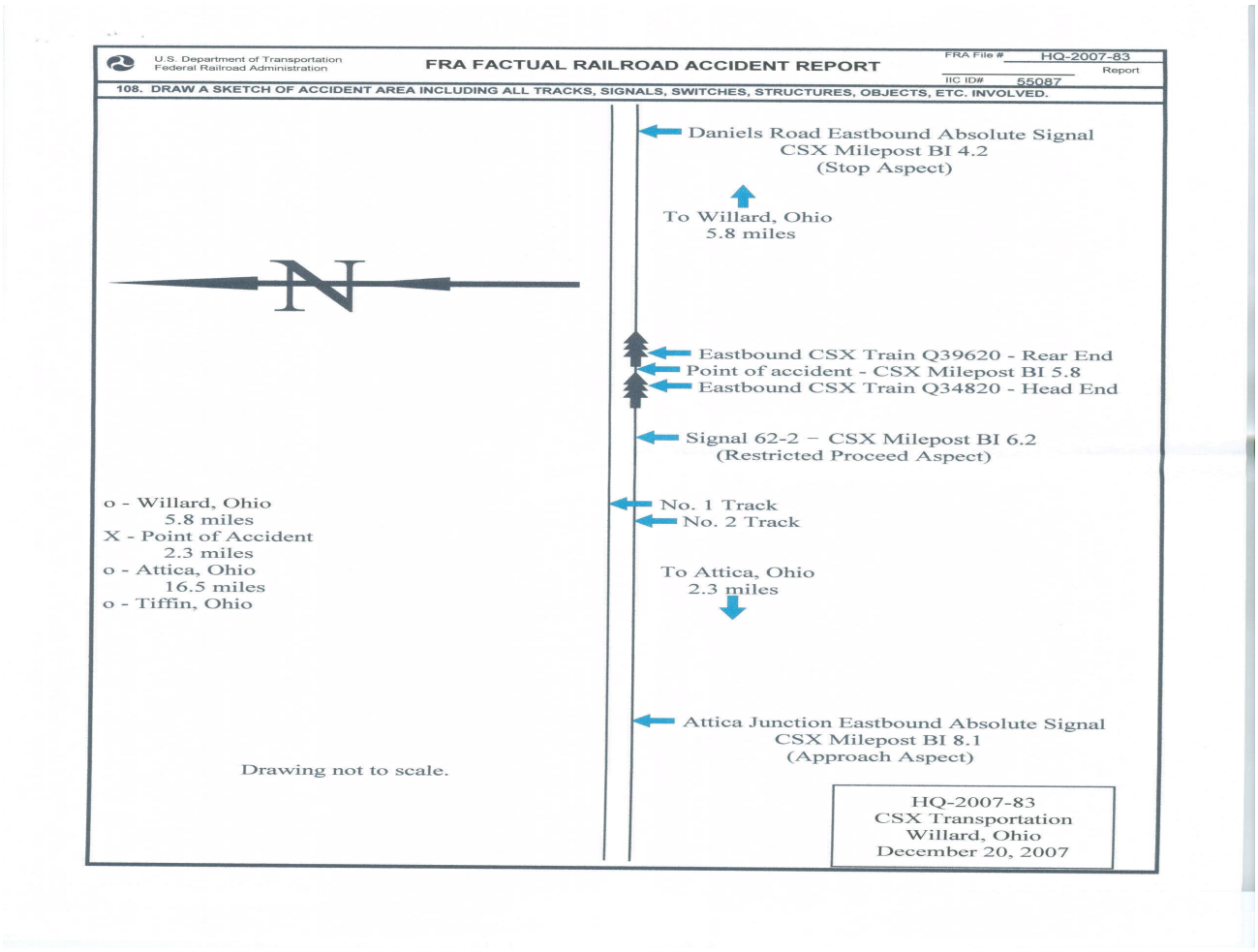
121. Age	122. Driver's Gender 1. Male 2. Female	Code	123. Driver Drove Behind or in Front of and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown	Code	124. Driver 1. Drove around or thru the Gate 2. Stopped and then Proceeded 3. Did not Stop 4. Stopped on Crossing 5. Other (specify in narrative)	Code
N/A		N/A		N/A		N/A

125. Driver Passed Highway Vehicle 1. Yes 2. No 3. Unknown	Code	126. View of Track Obscured by (primary obstruction) 1. Permanent Structure 2. Standing Railroad Equipment 3. Passing Train 4. Topography 5. Vegetation 6. Highway Vehicle 7. Other (specify in narrative) 8. Not obstructed	Code
	N/A		N/A

Casualties to:	Killed	Injured	127. Driver 1. Killed 2.Injured 3. Uninjured	Code	128. Was Driver in the Vehicle? 1. Yes 2. No	Code
				N/A		N/A
129. Highway-Rail Crossing Users	N/A	N/A	130. Highway Vehicle Property Damage (est. dollar damage)	N/A	131. Total Number of Highway-Rail Crossing Users (include driver)	N/A

132. Locomotive Auxiliary Lights? 1. Yes 2. No	Code	133. Locomotive Auxiliary Lights Operational? 1. Yes 2. No	Code
	N/A		N/A
134. Locomotive Headlight Illuminated? 1. Yes 2. No	Code	135. Locomotive Audible Warning Sounded? 1. Yes 2. No	Code
	N/A		N/A

136. DRAW A SKETCH OF ACCIDENT AREA INCLUDING ALL TRACKS, SIGNALS, SWITCHES, STRUCTURES, OBJECTS, ETC., INVOLVED.



137. SYNOPSIS OF THE ACCIDENT

On December 20, 2007, at 7:16 p.m., an eastbound CSX freight train collided with the rear end of another eastbound CSX freight train. The accident occurred about six miles west of Willard, Ohio, at CSX Milepost BI 5.8, on the CSX Willard Subdivision of the CSX Great Lakes Division. Both trains were operating in an eastward direction according to timetable, which was also the geographical direction.

There were no injuries and no hazardous material cars were damaged or leaking. The total equipment damage was $47,982 and one car was derailed. There was no track or signal damage.

At the time of the accident it was dark and the weather was clear. The temperature was 34° F.

FRA concluded that the accident was caused by the failure of the crew members of CSX Train Q34820 to comply with a Restricted Proceed signal aspect. FRA also concluded that an improperly functioning rear end marking device on the rear car of CSX Train Q39620 was a contributing factor.

138. NARRATIVE

CIRCUMSTANCES PRIOR TO THE ACCIDENT

TRAIN Q34820 EAST

The crew of CSX Train Q34820 consisted of a locomotive engineer and conductor. They went on duty at 1:45 p.m. EST on December 20, 2007, at CSX Parsons Yard, Columbus, OH. After going on duty, they were transported by highway vehicle to Marion, OH where they took charge of CSX Train Q34820. Columbus, OH is the home terminal for both crew members. They had both been off-duty for 14 hours and 12 minutes, which exceeded the statutory minimum requirement.

CSX Train Q34820 originated at CSX Avon Yard, Indianapolis, IN and was given a proper Class I brake test at that location. At Marion, OH, 16 cars were removed from CSX Train Q34820 by the previous crew and a proper Class III brake test was performed prior to departure.

CSX Train Q34820 departed Marion, OH at 5:00 p.m. EST with two locomotives, 49 loaded cars and 22 empty cars in its consist. It was a mixed freight train 4,333 feet in length, with a weight of 6,753 tons. The final destination for CSX Train Q34820 was Willard, OH.

As CSX Train Q34820 approached the accident area on No. 2 Track, the following eastbound signal aspects were displayed:

Republic Eastbound Absolute Signal CSX Milepost BI15.5 Clear Signal 130-2
CSX Milepost BI13 Clear Signal 106-2 CSX Milepost BI10.6 Approach
Attica Junction Eastbound Absolute Signal CSX Milepost BI 8.1 Approach Signal 62-2
CSX Milepost BI 6.2 Restricted Proceed

The conductor and engineer were both in the control compartment of the leading locomotive. The engineer was seated on the right (south) side of the locomotive at the control stand and the conductor was seated

across from the engineer on the left (north) side of the locomotive. They were operating in an eastward direction according to timetable, which was also the geographical direction.

TRAIN Q39620 EAST

The crew of CSX Train Q39620 consisted of a locomotive engineer and conductor. They went on duty at 2:45 p.m. EST on December 20, 2007, at CSX Stanley Yard, Walbridge, OH. This is the home terminal for both crew members. They had both been off-duty for 15 hours and 25 minutes, which exceeded the statutory minimum requirement.

CSX Train Q39620 originated at CSX Stanley Yard, Walbridge, OH and was given a proper Class I brake test at that location. It departed Walbridge, OH at 3:15 p.m. EST with two locomotives, 61 loaded cars and 29 empty cars in its consist. It was a mixed freight train 5,440 feet in length, with a weight of 7,952 tons. The final destination for CSX Train Q39620 was Willard, OH.

Prior to the accident, CSX Train Q39620 had stopped on No. 2 Main Track at the Daniels Road Eastbound Absolute Signal (CSX Milepost BI 4.2) for a stop aspect, and had remained at that signal for approximately 45 minutes. The conductor and engineer were both in the control compartment of the leading locomotive. The engineer was seated on the right (south) side of the locomotive at the control stand and the conductor was seated across from the engineer on the left (north) side of the locomotive. They were operating in an eastward direction according to timetable, which was also the geographical direction. Timetable directions are used throughout this report.

The accident occurred on the Great Lakes Division, Willard Subdivision. In the accident area the track is tangent and practically level. Train movements are governed by Traffic Control System (TCS).

It was dark, the weather was clear and the temperature was 34° F. The ground was covered with snow.

THE ACCIDENT

While traveling at a recorded speed of 15 miles per hour, the crew of eastbound CSX Train Q34820 observed the rear end of eastbound CSX Train Q39620 that was stopped on No. 2 Main Track directly in front of them. The engineer of eastbound CSX Train Q34820 then initiated an emergency train air brake application. At about 7:16 p.m. EST, after slowing to a recorded speed of 12 miles per hour, eastbound CSX Train Q34820 struck the rear end of standing eastbound CSX Train Q39620 at CSX Milepost BI 5.8. The maximum authorized speed for mixed freight trains in the accident area is 60 miles per hour, as designated in the current CSX Great Lakes Division Timetable No. 4. However, at the time of the accident, the speed of eastbound CSX Train Q34820 was governed by a Restricted Proceed signal aspect with the indication to proceed at Restricted Speed. Restricted Speed is defined in the current CSX Operating Rules book as: "A speed that will permit stopping within one-half the range of vision. It will also permit stopping short of a train, a car, an obstruction, a stop signal, a derail or an improperly lined switch. It must permit looking out for broken rail. It will not exceed 15 miles per hour."

There were no injuries reported as a result of the accident and no hazardous materials cars were derailed or damaged. The collision impact caused CSX Train Q39620 to move forward a short distance, but none of the locomotives derailed. The only unit that derailed in CSX Train Q34820 was the 13th head car (UTLX 13775) which overrode the 12th head car and came to rest in a vertical position between the 12th and 14th head cars. The 12th, 13th and 14th head cars in CSX Train Q34820 were empty, non-hazardous tank cars. The leading locomotive (BNSF 8217) of CSX Train Q34820 coupled to the rear car (CSXT 498299) of CSX Train Q39620 upon impact. The collision impact did not damage the leading locomotive of CSX Train Q34820, but did bend the car body center sill slightly downward at each end of the rear car in CSX Train Q39620. The collision impact did not force any of the cars or locomotives in either train out of alignment with the track. However, the heavy buff forces did damage the center sills and couplers of several cars in each train.

ANALYSIS AND CONCLUSIONS

ANALYSIS - Track, Wayside Signals and Radio Communication Equipment:

Examinations of the track, wayside signals and radio communication equipment were conducted after the

accident and all were found to be in proper condition.

CONCLUSION:

Condition of track, wayside signals and radio communication equipment was not a factor.

ANALYSIS - Locomotive and Train Air Brake Equipment of CSX Train Q34820:

After the accident, the two locomotives and head 12 cars of CSX Train Q34820 were separated from the remainder of that train and operated eastward into the CSX Willard Terminal, with leading locomotive BNSF 8217 controlling the air brakes on all of those locomotives and cars. Three running tests of air brakes were conducted during that movement and it was observed that all air brake systems functioned properly and retarded the speed of the train as intended by design.

CONCLUSION:

Condition of locomotive and train air brake equipment was not a factor.

ANALYSIS - Locomotive Headlights and Auxiliary Lights of CSX Train Q34820:

The headlights and auxiliary lights on the leading locomotive of CSX Train Q34820 were also examined and found to be functioning as intended.

CONCLUSION:

Condition of locomotive headlights and auxiliary lights was not a factor.

ANALYSIS - Toxicological Testing:

The engineer and conductor of CSX Train Q34820 were tested for reasonable cause under the authority of 49 CFR Part 219 Subpart C, account a rule violation for the failure to control their train in accordance with signal indication, causing a collision with another train. The test results for both employees were negative.

CONCLUSION:

Intoxication was not a factor.

ANALYSIS - Crew Member Fatigue:

FRA obtained fatigue related intormation, inlcuding a 10-day work history, for all of the employees involved in this incident.

CONCLUSION -

FRA concluded that fatigue was not probable for any of these employees.

ANALYSIS - Locomotive Engineer and Conductor Operating Performance - CSX Train Q34820:

The engineer of CSX Train Q34820 stated that he had no issues or problems with his train and that everything was running correctly. He also stated that after receiving a Restricted Proceed aspect at Signal 62-2 (CSX Milepost BI 6.2), his train was traveling at Restricted Speed. The engineer of CSX Train Q34820 further stated that he first observed the rear end of CSX Train Q39620 at a distance of about 10 car lengths.

The engineer and conductor of CSX Train Q34820 both stated that they initiated an emergency train air brake application when they first observed the rear end of CSX Train Q39620. They also stated that they could not recall if the headlight on their train was displayed in the bright, medium or dim position. They further stated that they did not see the rear end of CSX Train Q39620 in time to stop because the rear end marking device on that train was not functioning. They both acknowledged that prior to the accident, the last signal aspect for their train was Restricted Proceed.

According to the current CSX Signal Aspects and Indications Rules book, the indication for a Restricted Proceed signal aspect is: Proceed at Restricted Speed.

The current CSX Operating Rules book defines Restricted Speed as: A speed that will permit stopping within one-half the range of vision. It will also permit stopping short of a train, a car, an obstruction, a stop signal, a derail or an improperly lined switch. It must permit looking out for broken rail. It will not exceed 15 miles per hour.

CONCLUSION:

This accident was caused by the failure to operate CSX Train Q34820 in compliance with a Restricted Proceed signal aspect. It could not be determined if the headlight display position was a factor.

ANALYSIS - Locomotive Engineer and Conductor Operating Performance - CSX Train Q39620:

The engineer and conductor of CSX Train Q39620 stated that the crew members of at least three passing westbound trains had reported good “roll-by’s” to them and that the status of their rear end marking device was not mentioned during those reports. They also stated that while they were stopped at the Daniels Road Eastbound Absolute Signal (CSX Milepost BI 4.2), they felt a slight nudge, and then noticed that the air brakes on their train had applied.

CONCLUSION:

The operation of CSX Train Q39620 was not a factor.

ANALYSIS - Rear End Marking Device on CSX Train Q39620:

After the accident, it was observed that the rear end marking device on the rear car of CSX Train Q39620 was not functioning properly. When activated by the test button, the light on that device would flash several times and then go dark until the button was pressed again. There was no evidence that the collision had damaged the exterior of the device and it was still in the normal position on the rear coupler of CSX Train Q39620. A further examination and test of that rear end marking device was conducted at the CSX Willard Terminal Car Shop. That test revealed that the battery in the device was properly charged and that the light would activate. However, after the light flashed several times, it would then go dark and quit functioning.

The rear end marking device was later examined at the CSX Willard Terminal Communications Department. It was then determined that the light in the device would flash for about 25 seconds, and then quit functioning. The batteries in the unit were found to have a partial charge and tested good, but the No. 1 and No. 3 pins on transistor Q1 were broken, which required the replacement of the display board. The display board was part of the circuitry that controlled the flashing of the light. All other functions of the two-way end-of-train device performed properly, with all parameters being within specification.

The rear end marking device from CSX Train Q39620 was manufactured by Pulse and was assigned the identification number CSXT 26932.

CONCLUSION:

The improper functioning rear end marking device on CSX Train Q39620 was a contributing factor.

ANALYSIS - Inbound Inspection of CSX Train Q34820 at Willard Terminal:

Upon arrival at the CSX Willard Terminal, CSX Train Q34820 was inspected by CSX Mechanical Operations Employees. That inspection revealed that the air brakes were cut out on the 50th head car (CSXT 250300), that the air brakes failed to apply on the 52nd head car (UTLX 80315), and that the air brake system on the 59th head car (CSXT 705776) would not charge because the release valve was stuck in the open position and could not be seated.

If the air brakes on CSXT 250300, UTLX 80315 and CSXT 705776 had been operative at the time of the

accident, the collision speed would have been reduced slightly. However, that speed reduction would likely have been less than one mile per hour, and the collision would still have occurred.

CONCLUSION:

The three cars in CSX Train Q34820 with inoperative air brakes were not contributing factors.

OVERALL CONCLUSIONS:

FRA concluded that the probable cause of this accident was the failure to operate CSX Train Q34820 in compliance with Restricted Proceed signal indication.

FRA also concluded that the improper functioning rear end marking device on CSX Train Q39620 was a contributing factor.