



***Federal Railroad Administration
Office of Safety
Headquarters Assigned
Accident Investigation Report
HQ-2005-84***

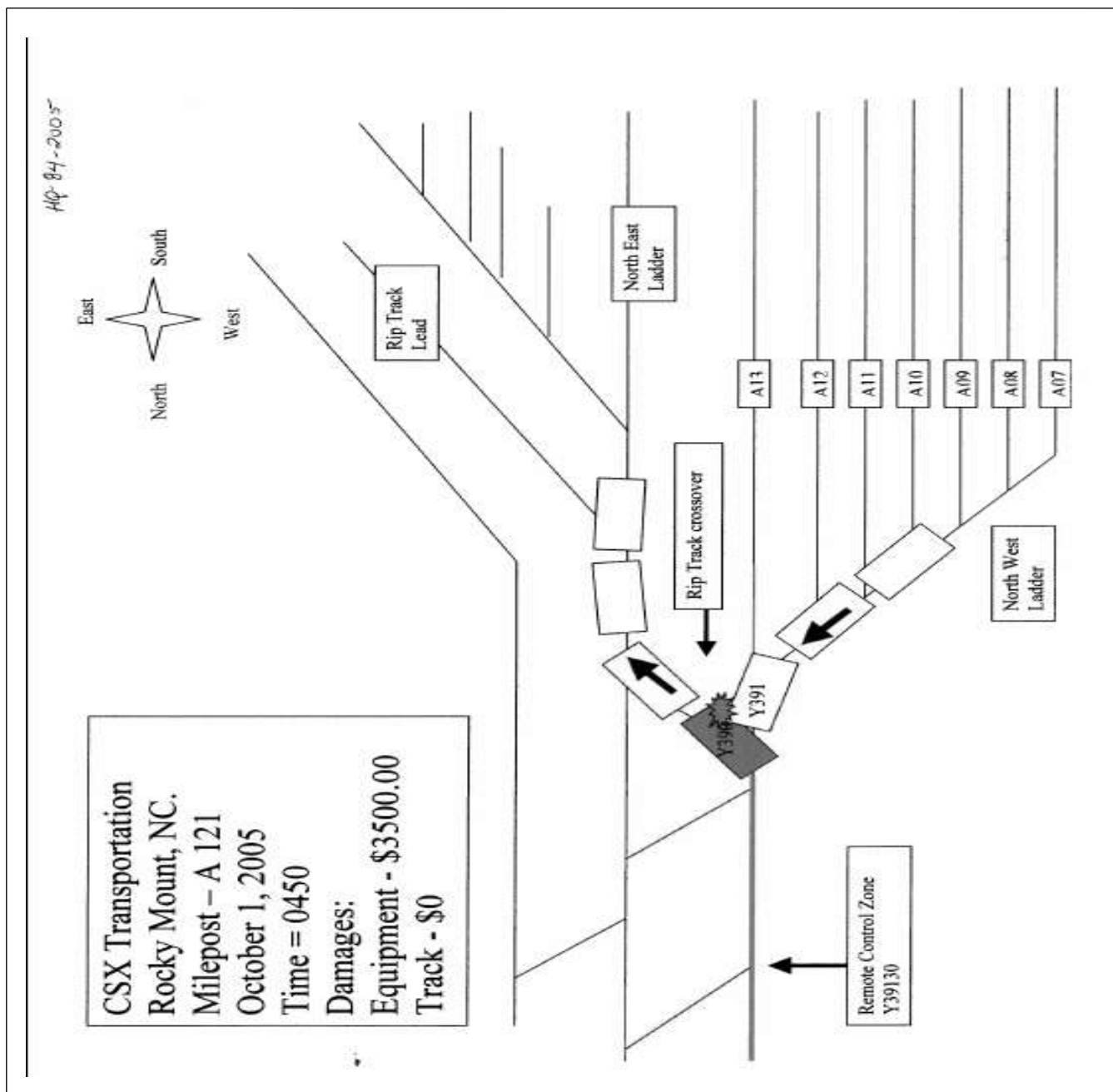
***CSX Transportation (CSX)
Rocky Mount, North Carolina
October 1, 2005***

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 # <u>HQ-2005-84</u>	
1. Name of Railroad Operating Train #1 CSX Transportation [CSX]			1a. Alphabetic Code CSX		1b. Railroad Accident/Incident No. 000015510		
2. Name of Railroad Operating Train #2 CSX Transportation [CSX]			2a. Alphabetic Code CSX		2b. Railroad Accident/Incident 000015510		
3. Name of Railroad Responsible for Track Maintenance: CSX Transportation [CSX]			3a. Alphabetic Code CSX		3b. Railroad Accident/Incident No. 000015510		
4. U.S. DOT_AAR Grade Crossing Identification Number			5. Date of Accident/Incident Month Day Year 10 01 2005		6. Time of Accident/Incident 04:50: <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM		
7. Type of Accident/Incident (single entry in code box) 1. Derailment 4. Side collision 7. Hwy-rail crossing 10. Explosion-detonation 13. Other (describe in narrative) 2. Head on collision 5. Raking collision 8. RR grade crossing 11. Fire/violent rupture 3. Rear end collision 6. Broken Train collision 9. Obstruction 12. Other impacts <div style="text-align: right;">04</div>							
8. Cars Carrying HAZMAT 0	9. HAZMAT Cars Damaged/Derailed 0	10. Cars Releasing HAZMAT 0	11. People Evacuated 0		12. Division Florence		
13. Nearest City/Town Rocky Mount		14. Milepost (to nearest tenth) A121.0	15. State Abbr Code N/A NC	16. County EDGEcombe			
17. Temperature (F) (specify if minus) 65 F	18. Visibility (single entry) 1. Dawn 3. Dusk 2. Day 4. Dark Code 4	19. Weather (single entry) 1. Clear 3. Rain 5. Sleet 2. Cloudy 4. Fog 6. Snow Code 2	20. Type of Track 1. Main 3. Siding 2. Yard 4. Industry Code 2				
21. Track Name/Number Rip Track Crossover		22. FRA Track Class (1-9, X) Code 1	23. Annual Track Density (gross tons in millions) 0		24. Time Table Direction 1. North 3. East Code 1		
OPERATING TRAIN #1							
25. Type of Equipment Consist (single entry) 1. Freight train 4. Work train 7. Yard/switching 2. Passenger train 5. Single car 8. Light loco(s). 3. Commuter train 6. Cut of cars 9. Maint./inspect.car		A. Spec. MoW Equip. Code 7		26. Was Equipment Attended? 1. Yes 2. No 1		27. Train Number/Symbol Y39130	
28. Speed (recorded speed, if available) Code R - Recorded E - Estimated 3 MPH E		30. Method(s) of Operation (enter code(s) that apply) a. ATCS g. Automatic block m. Special instructions b. Auto train control h. Current of traffic n. Other than main track c. Auto train stop i. Time table/train orders o. Positive train control d. Cab j. Track warrant control p. Other (Specify in narrative) e. Traffic k. Direct traffic control Code(s) f. Interlocking l. Yard limits n N/A N/A N/A N/A			30a. 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 3		
29. Trailing Tons (gross tonnage, excluding power units) 1800							
31. Principal Car/Unit (1) First involved (derailed, struck, etc) (2) Causing (if mechanical cause reported)		a. Initial and Number N/A	b. Position in Train 1	c. Loaded (yes/no) no	32. 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		
		n/a	0	N/A	33. Was this consist transporting passengers? (Y/N) N		
34. Locomotive Units	a. Head End	b. Mid Train	c. Remote	d. Manual	e. Remote	35. Cars a. Freight b. Pass. c. Freight d. Pass. e. Caboose	
(1) Total in Train	1	0	0	0	0	(1) Total in Equipment Consist 0 0 17 0 0	
(2) Total Derailed	0	0	0	0	0	(2) Total Derailed 0 0 0 0 0	
36. Equipment Damage This Consist 500		37. Track, Signal, Way, & Structure Damage 0		38. Primary Cause Code H306		39. Contributing Cause Code N/A	
Number of Crew Members				Length of Time on Duty			
40. Engineer/Operators N/A	41. Firemen 0	42. Conductors 1	43. Brakemen 1	44. Engineer/Operator Hrs 5 Mi 20		45. Conductor Hrs 5 Mi 20	
Casualties to:	46. Railroad Employees	47. Train Passengers	48. Other	49. EOT Device? 1. Yes 2. No 2		50. Was EOT Device Properly Armed? 1. Yes 2. No N/A	
Fatal	0	0	0	51. Caboose Occupied by Crew? 1. Yes 2. No N/A			
Nonfatal	N/A	0	0				
OPERATING TRAIN #2							
52. Type of Equipment Consist (single entry) 1. Freight train 4. Work train 7. Yard/switching 2. Passenger train 5. Single car 8. Light loco(s). 3. Commuter train 6. Cut of cars 9. Maint./inspect.car		A. Spec. MoW Equip. Code 7		53. Was Equipment Attended? 1. Yes 2. No 1		54. Train Number/Symbol Y39030	
55. Speed (recorded speed, if available) Code R - Recorded E - Estimated 5 MPH E		57. Method(s) of Operation (enter code(s) that apply) a. ATCS g. Automatic block m. Special instructions b. Auto train control h. Current of traffic n. Other than main track			57a. Remotely Controlled Locomotive? 0 = Not a remotely controlled 1 = Remote control portable		

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56. Trailing Tons (gross tonnage, excluding power units) <div style="text-align: right;">0</div>		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) <div style="display: flex; justify-content: space-around; font-size: small;"> <div>n</div> <div>N/A</div> <div>N/A</div> <div>N/A</div> <div>N/A</div> </div>	
						2 = Remote control tower 3 = Remote control transmitter - more than one remote control transmitter <div style="text-align: right;">3</div>	
58. Principal Car/Unit (1) First involved (derailed, struck, etc) (2) Causing (if mechanical cause reported)		a. Initial and Number <div style="text-align: center;">CSX 6031</div>	b. Position in Train <div style="text-align: center;">1</div>	c. Loaded(yes/no) <div style="text-align: center;">N/A</div>	59. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.		
					<div style="display: flex; justify-content: space-between; font-size: small;"> <div>Alcohol</div> <div>Drugs</div> </div> <div style="display: flex; justify-content: space-between;"> <div>N/A</div> <div>N/A</div> </div>		
		<div style="text-align: center;">0</div>	<div style="text-align: center;">0</div>	<div style="text-align: center;">N/A</div>	60. Was this consist transporting passengers? (Y/N) <div style="text-align: right;">N</div>		
61. Locomotive Units	a. Head End	Mid Train b. Manual c. Remote		Rear End d. Manual c. Remote	62. Cars	Loaded a. Freight b. Pass.	Empty c. Freight d. Pass.
							e. Caboose
(1) Total in Train	<div style="text-align: center;">1</div>	<div style="text-align: center;">0</div>	<div style="text-align: center;">0</div>	<div style="text-align: center;">0</div>	(1) Total in Equipment Consist	<div style="text-align: center;">0</div>	<div style="text-align: center;">0</div>
(2) Total Derailed	<div style="text-align: center;">0</div>	<div style="text-align: center;">0</div>	<div style="text-align: center;">0</div>	<div style="text-align: center;">0</div>	(2) Total Derailed	<div style="text-align: center;">0</div>	<div style="text-align: center;">0</div>
63. Equipment Damage This Consist		64. Track, Signal, Way, & Structure Damage		65. Primary Cause Code		66. Contributing Cause Code	
<div style="text-align: center;">3000</div>		<div style="text-align: center;">0</div>		<div style="text-align: center;">H306</div>		<div style="text-align: center;">N/A</div>	
Number of Crew Members				Length of Time on Duty			
67. Engineer/Operators	68. Firemen	69. Conductors	70. Brakemen	71. Engineer/Operator Hrs Mi		72. Conductor Hrs Mi	
<div style="text-align: center;">1</div>	<div style="text-align: center;">0</div>	<div style="text-align: center;">1</div>	<div style="text-align: center;">1</div>	<div style="text-align: center;">5 20</div>		<div style="text-align: center;">5 20</div>	
Casualties to:	73. Railroad Employees	74. Train Passengers	75. Other	76. EOT Device?		77. Was EOT Device Properly Armed?	
Fatal	<div style="text-align: center;">0</div>	<div style="text-align: center;">0</div>	<div style="text-align: center;">0</div>	1. Yes 2. No <div style="text-align: right;">2</div>		1. Yes 2. No <div style="text-align: right;">N/A</div>	
Nonfatal	<div style="text-align: center;">0</div>	<div style="text-align: center;">0</div>	<div style="text-align: center;">0</div>	78. Caboose Occupied by Crew? 1. Yes 2. No <div style="text-align: right;">2</div>			
Highway User Involved				Rail Equipment Involved			
79. Type C. Truck-Trailer. F. Bus J. Other Motor Vehicle A. Auto D. Pick-Up Truck G. School Bus K. Pedestrian B. Truck E. Van H. Motorcycle M. Other (spec. in narrative)				83. Equipment 3. Train (standing) 6. Light Loco(s) (moving) 1. Train(units pulling) 4. Car(s)(moving) 7. Light(s) (standing) 2. Train(units pushing) 5. Car(s)(standing) 8. Other (specify in narrative)			
<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>				<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>			
80. Vehicle Speed (est. MPH at impact)		81. Direction geographical 1. North 2. South 3. East 4. West		84. Position of Car Unit in Train <div style="text-align: center;">0</div>			
<div style="text-align: center;">0</div>		<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>					
82. Position 1. Stalled on Crossing 2. Stopped on Crossing 3. Moving Over Crossing 4. Trapped				85. Circumstance 1. Rail Equipment Struck Highway User 2. Rail Equipment Struck by Highway User			
<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>				<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>			
86a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials?				86b. Was there a hazardous materials release by			
1. Highway User 2. Rail Equipment 3. Both 4. Neither				1. Highway User 2. Rail Equipment 3. Both 4. Neither			
<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>				<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>			
86c. State here the name and quantity of the hazardous materials released, if any. <div style="text-align: center;">N/A</div>							
87. Type of Crossing Warning		1. Gates 4. Wig Wags 7. Crossbucks 10. Flagged by crew 2. Cantilever FLS 5. Hwy. traffic signals 8. Stop signs 11. Other (spec. in narr.) 3. Standard FLS 6. Audible 9. Watchman 12. None		88. Signaled Crossing Warning (See instructions for codes)		89. Whistle Ban	
<div style="text-align: right;">Code(s)</div>		<div style="text-align: right;">N/A</div>		<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>		<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>	
90. Location of Warning 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach		<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>		91. Crossing Warning Interconnected with Highway Signals 1. Yes 2. No 3. Unknown		92. Crossing Illuminated by Street Lights or Special Lights 1. Yes 2. No 3. Unknown	
<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>				<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>		<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>	
93. Driver's Age <div style="text-align: center;">0</div>	94. Driver's Gender 1. Male 2. Female	95. Driver Drove Behind or in Front of Train and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown		96. Driver 1. Drove around or thru the Gate 2. Stopped and then Proceeded 3. Did not Stop		97. Driver Passed Standing Highway Vehicle 1. Yes 2. No 3. Unknown	
	<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>	<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>		<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>		<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>	
97. Driver Passed Standing Highway Vehicle 1. Yes 2. No 3. Unknown		98. View of Track Obscured by (primary obstruction) 1. Permanent Structure 3. Passing Train 5. Vegetation 7. Other (specify in narrative) 2. Standing Railroad Equipment 4. Topography 6. Highway Vehicle 8. Not obstructed					
<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>		<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>					
101. Casualties to Highway-Rail Crossing Users		Killed	Injured	99. Driver Was 1. Killed 2. Injured 3. Uninjured		100. Was Driver in the Vehicle? 1. Yes 2. No	
		<div style="text-align: center;">0</div>	<div style="text-align: center;">0</div>	<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>		<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>	
				102. Highway Vehicle Property Damage (est. dollar damage)		103. Total Number of Highway-Rail Crossing Users (include driver)	
				<div style="text-align: center;">0</div>		<div style="text-align: center;">0</div>	
104. Locomotive Auxiliary Lights? 1. Yes 2. No				105. Locomotive Auxiliary Lights Operational? 1. Yes 2. No			
<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>				<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>			
106. Locomotive Headlight Illuminated? 1. Yes 2. No				107. Locomotive Audible Warning Sounded? 1. Yes 2. No			
<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>				<div style="text-align: right;">Code</div> <div style="text-align: right;">N/A</div>			

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



109. SYNOPSIS OF THE ACCIDENT

On October 1, 2005, CSX Transportation (CSX) Remote Control Locomotive (RCL) Yard Switchers Y391-30 and Y390-30 were switching on the north end of CSX Rocky Mount Yard in Rocky Mount, North Carolina (NC). Both RCL yard crews consisted of a foreman, switchman, and a trainee.

RCL Y391-30 established a Remote Control Zone (RCZ) in the Rocky Mount Yard without protecting the leading end of the movement. CSX Special Instructions identify this RCZ to be located on the North End East Yard Lead, 25 feet north of the road crossing, north of "CO", 10 feet north of A14 switch.

About 4:50 a.m., Eastern Standard Time (EST), RCL Y390-30 with Locomotive No. CSXT 6031 and 70 cars, received permission to enter the remote control zone of RCL Y391-30. They were making a cross yard move from Track No. A21 to Track No. A12, using the rip track crossover. After shoving cars into A12, RCL Y390-30 was instructed to hold onto 12 cars and return back to Track No. A21. As they were shoving through the Rip track crossover, RCL Y391-30 with Locomotive No. CSXT 9498 was pulling out of Track No. A02 with 17 cars, striking RCL Y390-30 locomotive as it moved through the crossovers.

The side collision ruptured the fuel tank of Locomotive No. CSXT 6031, leaking about 1,000 gallons of diesel fuel. There was \$3,500 damage to both locomotives. No car derailed and there was no personal injuries or track damage as a result of the impact.

At the time of the accident, it was dark and cloudy. The temperature was 65 F

The probable cause of the accident was the failure of the remote control operator of RCL Y391-30 to check the RCZ after use by another crew, and failure to protect the leading end of the movement.

110. NARRATIVE

The following information was obtained from an investigation that was conducted by the Federal Railroad Administration.

Circumstances Prior to the Accident

RCL Y391-30

The crew of CSX Yard Switcher RCL Y391-30 included a foreman, switchman, and a trainee. On September 30, 2005, at 11:30 p.m., they went on duty at the Rocky Mount Yard in Rocky Mount, NC. Rocky Mount is the home terminal for all the crew members and all received the statutory off duty period in excess of eight hours prior to reporting for duty. The crew received a job briefing from the trainmaster on duty and switching instructions from the yardmaster. They were using the Northwest Ladder with the North End East Yard Lead RCZ, activated for their switching moves.

RCL Y390-30

The crew of CSX Yard Switcher RCL Y390-30 included a foreman, switchman, and a trainee. On September 30, 2005, at 11:30 p.m., they went on duty at the Rocky Mount Yard in Rocky Mount, NC. Rocky Mount is the home terminal for all the crew members and all received the statutory off duty period in excess of eight hours prior to reporting for duty. The crew received a job briefing from the trainmaster on duty and instructions from the yardmaster on the work to be performed during their shift. They were performing switching moves off of the Northeast Ladder.

The Accident

RCL Y390-30 received permission to enter the RCZ of the RCL Y391-30 to make a crossover yard move with 70 cars from Track No. A21 through the rip track crossover switches to Track No. A12. After completing the move, RCL Y390-30 was instructed by the yardmaster to take 12 cars back to Track No. A21. When the cars cleared Track No. A12, the foreman and trainee of RCL Y391-30 lined the switch back for the ladder. The foreman pitched the Remote Control Unit (RCU) to his switchman, who started the RCL moving north on the northwest ladder with 17 cars. The RCL Y391-30 foreman called his switchman over the radio instructing him to stop the movement when he noticed their train moving north on the northwest ladder track. The RCL Y391-30 switchman immediately placed the RCU speed selector switch in the stop position, but the train continued to move northward colliding with the RCL Y390-30 locomotive. The RCL Y390-30 switchman and trainee were riding on the locomotive that was shoving back through the rip track crossover when their Locomotive No. CSXT 6031 was struck by the RCL Y391-30 locomotive.

Analysis

The foreman on RCL Y390-30 requested and received permission via radio from the foreman on RCL Y391-30 to occupy their RCZ using the rip track crossovers. The RCL Y390-30 was in the process of clearing the RCZ. The foreman on RCL Y391-30 pitched the control of the RCL to his switchman who started moving the RCL northward in the direction where RCL Y390-30 was still occupying the RCZ. The RCL Y391-30 conductor noticed his RCL moving northward and immediately told the switchman to stop the movement. The crew on RCL Y390-30 was also telling the conductor of RCL Y391-30 via the radio to stop his train. RCL Y391-30 did not stop and collided with RCL Y390-30, which was operating through the rip track crossover switches.

The foreman on RCL Y390-30 had not released the use of RCZ back to the RCL Y391-30 crew. The switchman on RCL Y391-30 failed to comply with CSX RCL

Instructions, Rules R22 and R24, which state in part: "Before resuming utilization of the zone without point protection, it must be inspected. Tracks within the RCZ must be inspected and known to be clear of cars, engines or employees fouling the tracks, switches improperly lined. The switchman was required to ride the leading end of the movement to ensure compliance with CSX RCL Instruction Rule 22.

Conclusion

The switchman on RCL Y391-30 failed to check his RCZ after use by another crew. He failed to comply with CSX instructions governing Remote Control Locomotive Operating Rules R24 and R22.

Probable Cause

The FRA determined the primary cause of the accident was the failure of the RCL Y391-30 switchman to provide head end protection and ensure the RCZ was clear prior to movement, which resulted in the side swipe collision.