



***Federal Railroad Administration  
Office of Safety  
Headquarters Assigned  
Accident Investigation Report  
HQ-2007-69***

***Canadian Pacific/Iowa Chicago and  
Eastern Railroad Corp. (CP/ICE)  
La Crescent, MN  
November 2, 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.***

1. Name of Railroad Operating Train #1 Canadian Pacific Rwy Co. [CP ]		1a. Alphabetic Code CP		1b. Railroad Accident/Incident No. 203967	
2. Name of Railroad Operating Train #2 Iowa Chicago and Eastern RR Corp. [ICE ]		2a. Alphabetic Code ICE		2b. Railroad Accident/Incident No. 2007309	
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: Canadian Pacific Rwy Co. [CP ]		4a. Alphabetic Code CP		4b. Railroad Accident/Incident No. 203967	
5. U.S. DOT_AAR Grade Crossing Identification Number		6. Date of Accident/Incident Month 11 Day 02 Year 2007		7. Time of Accident/Incident 11:58:00 <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM	
8. Type of Accident/Incident (single entry in code box)					
1. Derailment		4. Side collision		7. Hwy-rail crossing	
2. Head on collision		5. Raking collision		10. Explosion-detonation	
3. Rear end collision		6. Broken Train collision		11. Fire/violent rupture	
		9. Obstruction		12. Other impacts	
				13. Other (describe in narrative) Code 04	
9. Cars Carrying HAZMAT 5		10. HAZMAT Cars Damaged/Derailed 0		11. Cars Releasing HAZMAT 0	
				12. People Evacuated 0	
				13. Division CHICAGO SERVICE AREA	
14. Nearest City/Town LA CRESCENT		15. Milepost (to nearest tenth) 285.0		16. State Abbr Code N/A MN	
				17. County HOUSTON	
18. Temperature (F) (specify if minus) 40 F		19. Visibility (single entry) Code 1. Dawn 3. Dusk 2. Day 4. Dark 4		20. Weather (single entry) Code 1. Clear 3. Rain 5. Sleet 2. Cloudy 4. Fog 6. Snow 1	
				21. Type of Track Code 1. Main 3. Siding 2. Yard 4. Industry 3	
22. Track Name/Number NEW SIDING		23. FRA Track Code Class (1-9, X) 2		24. Annual Track Density (gross tons in millions) N/A	
				25. Time Table Direction Code 1. North 3. East 2. South 4. West 4	

**OPERATING TRAIN #1**

26. Type of Equipment Consist (single entry)		1. Freight train		4. Work train		7. Yard/switching		A. Spec. MoW Equip. Code		27. Was Equipment Attended? Code		28. Train Number/Symbol	
3. Passenger train		5. Single car		8. Light loco(s).				1		1. Yes 2. No 1		291-01	
29. Speed (recorded speed, if available) Code R - Recorded E - Estimated 17 MPH R		31. Method(s) of Operation (enter code(s) that apply)						31a. Remotely Controlled Locomotive?					
30. Trailing Tons (gross tonnage, excluding power units) 2929		a. ATCS		g. Automatic block		m. Special instructions		n. Other than main track		0 = Not a remotely controlled 1 = Remote control portable 2 = Remote control tower 3 = Remote control transmitter - more than one remote control transmitter		0	
		b. Auto train control		h. Current of traffic		o. Positive train control		p. Other (Specify in narrative) Code(s)					
		c. Auto train stop		i. Time table/train orders									
		d. Cab		j. Track warrant control									
		e. Traffic		k. Direct traffic control									
		f. Interlocking		l. Yard limits									
32. Principal Car/Unit		a. Initial and Number		b. Position in Train		c. Loaded (yes/no)		33. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.					
(1) First involved (derailed, struck, etc)		CP 9554		1		N/A				Alcohol		Drugs	
(2) Causing (if mechanical cause reported)		0		0		N/A				0		0	
												34. Was this consist transporting passengers? (Y/N) N	

35. Locomotive Units		a. Head End		Mid Train		Rear End		36. Cars		Loaded		Empty	
				b. Manual		c. Remote				a. Freight		b. Pass.	
										c. Freight		d. Pass.	
										e. Caboose			
(1) Total in Train		1		0		0		(1) Total in Equipment Consist		29		0	
(2) Total Derailed		1		0		0		(2) Total Derailed		0		2	

37. Equipment Damage This Consist \$606,902.00		38. Track, Signal, Way, & Structure Damage \$2,557.00		39. Primary Cause Code H221		40. Contributing Cause Code H104	
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Number of Crew Members				Length of Time on Duty							
41. Engineer/Operators 1		42. Firemen 0		43. Conductors 1		44. Brakemen 0		45. Engineer/Operator Hrs 4 Mi 33		46. Conductor Hrs 4 Mi 33	
Casualties to:		47. Railroad Employees		48. Train Passengers		49. Other		50. EOT Device? 1. Yes 2. No 1		51. Was EOT Device Properly Armed? 1. Yes 2. No 1	
Fatal		0		0		0					
Nonfatal		1		0		0		52. Caboose Occupied by Crew? 1. Yes 2. No		2	

**OPERATING TRAIN #2**

53. Type of Equipment Consist (single entry)		1. Freight train		4. Work train		7. Yard/switching		A. Spec. MoW Equip. Code		54. Was Equipment Attended? Code		55. Train Number/Symbol	
3. Passenger train		5. Single car		8. Light loco(s).				1		1. Yes 2. No 1		MHUCC-01	
56. Speed (recorded speed, if available) Code R - Recorded E - Estimated 5 MPH R		58. Method(s) of Operation (enter code(s) that apply)						58a. Remotely Controlled Locomotive?					
		a. ATCS		g. Automatic block		m. Special instructions		n. Other than main track		0 = Not a remotely controlled 1 = Remote control portable			
		b. Auto train control		h. Current of traffic		o. Positive train control		p. Other (Specify in narrative) Code(s)					

57. Trailing Tons (gross tonnage, excluding power units) 10920	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) n N/A N/A N/A N/A	2 = Remote control tower 3 = Remote control transmitter - more than one remote control transmitter 0
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59. Principal Car/Unit (1) First involved (derailed, struck, etc) DME 051634	a. Initial and Number 58	b. Position in Train 58	c. Loaded(yes/no) yes	60. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box. Alcohol N/A Drugs N/A
(2) Causing (if mechanical cause reported) 0	0	0	N/A	61. Was this consist transporting passengers? (Y/N) N

62. Locomotive Units	a. Head End	Mid Train b. Manual c. Remote	Rear End d. Manual c. Remote	63. Cars	Loaded a. Freight b. Pass.	Empty c. Freight d. Pass.	e. Caboose
(1) Total in Train 3	0	0	0	(1) Total in Equipment Consist 85	0	0	0
(2) Total Derailed 0	0	0	0	(2) Total Derailed 3	0	0	0

64. Equipment Damage This Consist \$21,546.00	65. Track, Signal, Way, & Structure Damage \$0.00	66. Primary Cause Code H221	67. Contributing Cause Code H104
Number of Crew Members		Length of Time on Duty	

68. Engineer/Operators 1	69. Firemen 0	70. Conductors 1	71. Brakemen 0	72. Engineer/Operator Hrs 6 Mi 28	73. Conductor Hrs 6 Mi 28
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Casualties to:	74. Railroad Employees 0	75. Train Passengers 0	76. Other 0	77. EOT Device? 1. Yes 2. No   1	78. Was EOT Device Properly Armed? 1. Yes 2. No   1
Fatal	0	0	0	79. Caboose Occupied by Crew? 1. Yes 2. No   2	
Nonfatal	0	0	0		

**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   N/A	82. Train Number/Symbol N/A
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83. Speed (recorded speed, if available) 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
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86. Principal Car/Unit (1) First involved (derailed, struck, etc) N/A	a. Initial and Number N/A	b. Position in Train N/A	c. Loaded(yes/no) N/A	87. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box. Alcohol N/A Drugs N/A
(2) Causing (if mechanical cause reported) N/A	N/A	N/A	N/A	88. Was this consist transporting passengers? (Y/N) N/A

89. Locomotive Units	a. Head End	Mid Train b. Manual c. Remote	Rear End d. Manual c. Remote	90. Cars	Loaded a. Freight b. Pass.	Empty c. Freight d. Pass.	e. Caboose
(1) Total in Train N/A	N/A	N/A	N/A	(1) Total in Equipment Consist N/A	N/A	N/A	N/A
(2) Total Derailed N/A	N/A	N/A	N/A	(2) Total Derailed 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		Length of Time on Duty	

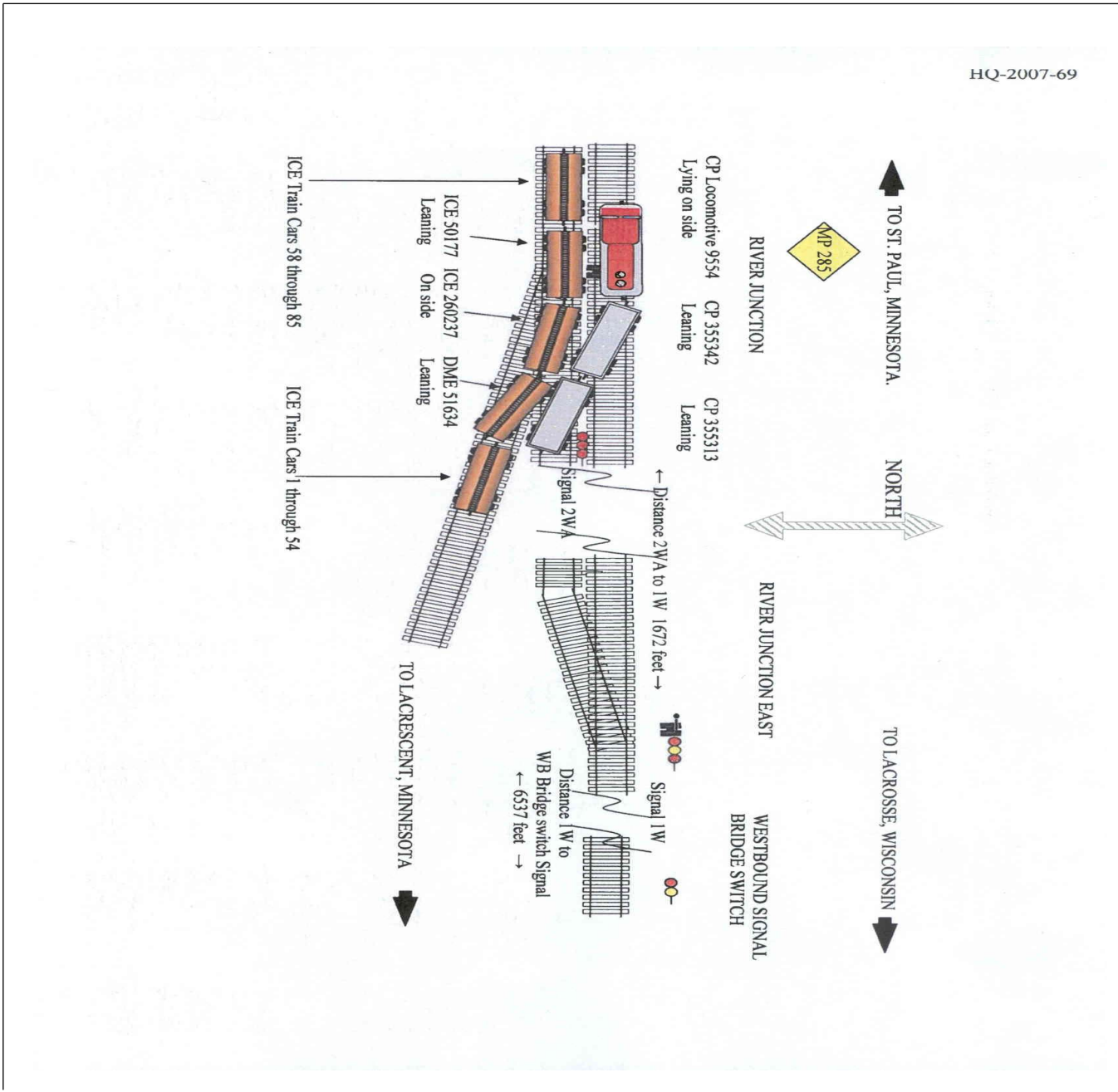
95. Engineer/Operators N/A	96. Firemen N/A	97. Conductors N/A	98. Brakemen N/A	99. Engineer/Operator Hrs N/A Mi N/A	100. Conductor Hrs N/A Mi N/A
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Casualties to:	101. Railroad Employees N/A	102. Train N/A	103. Other N/A	104. EOT 1. Yes 2. No   N/A	105. Was EOT Device Properly 1. Yes 2. No   N/A
Fatal	N/A	N/A	N/A	106. Caboose Occupied by Crew? 1. Yes 2. No   N/A	
Nonfatal	N/A	N/A	N/A		

Highway User Involved				Rail Equipment Involved			
107. C. Truck-Trailer A. Auto B. Truck E. Van	F. Bus G. School Bus H. Motorcycle	J. Other Motor Vehicle K. Pedestrian M. Other (spec. in narrative)	Code N/A	111. Equipment 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)	Code N/A
108. Vehicle Speed (est. MPH at impact) N/A	109. geographical 1. North 2. South 3. East 4. West	Code N/A		112. Position of Car Unit in N/A			

110. Position 1. Stalled on Crossing 2. Stopped on Crossing 3. Moving Over Crossing 4. Trapped				Code N/A	113. Circumstance 1. Rail Equipment Struck Highway User 2. Rail Equipment Struck by Highway User				Code 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				Code N/A	114b. Was there a hazardous materials release 1. Highway User 2. Rail Equipment 3. Both 4. Neither				Code N/A		
114c. State here the name and quantity of the hazardous materials released, if any. N/A											
115. Type Crossing 1. Gates 2. Cantilever FLS 3. Standard FLS 4. Wig Wags 5. Hwy. traffic signals 6. Audible Warning 7. Crossbucks 8. Stop signs 9. Watchman 10. Flagged by crew 11. Other (spec. in narr.) 12. None				Code N/A	116. Signaled Crossing (See instructions for codes)				Code N/A	117. Whistle 1. Yes 2. No 3. Unknown	
Code(s)				N/A	N/A	N/A	N/A	N/A	N/A	N/A	
118. Location of Warning 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach				Code N/A	119. Crossing Warning with Highway Signals 1. Yes 2. No 3. Unknown				Code N/A	120. Crossing Illuminated by Street Lights or Special Lights 1. Yes 2. No 3. Unknown	
121. Age N/A		122. Driver's Gender 1. Male 2. Female		Code N/A	123. Driver Drove Behind or in Front of and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown				Code N/A	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)	
125. Driver Passed Highway Vehicle 1. Yes 2. No 3. Unknown				Code N/A	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		
Casualties to:			Killed	Injured	127. Driver 1. Killed 2. Injured 3. Uninjured				Code N/A	128. Was Driver in the Vehicle? 1. Yes 2. No	
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)	
132. Locomotive Auxiliary Lights? 1. Yes 2. No				Code N/A	133. Locomotive Auxiliary Lights Operational? 1. Yes 2. No				Code N/A		
134. Locomotive Headlight Illuminated? 1. Yes 2. No				Code N/A	135. Locomotive Audible Warning Sounded? 1. Yes 2. No				Code N/A		

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



## 137. SYNOPSIS OF THE ACCIDENT

On November 2, 2007, at 11:58 p.m. CDT, westbound Canadian Pacific Railway Company (CP) Freight Train 291-01 passed a signal displaying Stop, and collided with Iowa, Chicago & Eastern Railroad Corporation (ICE) Freight Train ICE MHUCC-01. The collision occurred near La Crescent, Minnesota, at River Junction, CP Milepost 285 on the CP Tomah Subdivision. The CP locomotive engineer admitted that he dozed off. The CP conductor stated that he was awake, reviewing paperwork, and assumed that the locomotive engineer was in control and would stop.

The locomotive and the two head cars of CP 291-01 derailed, and three cars of the ICE MHUCC-01 were derailed. The total estimated monetary damage was \$631,005.

At the time of the accident, it was dark and clear. The temperature was 40° F.

The collision was caused by the failure of CP Train 291-01 to stop at a signal displaying a stop indication, striking the side of passing ICE Train MHUCC-01. Failure of the crew of CP Train 291-01 to remain alert was a contributing factor.

## 138. NARRATIVE

## CIRCUMSTANCES PRIOR TO THE ACCIDENT

## CP TRAIN 291-01:

The crew of CP Train 291-01 included a conductor and locomotive engineer. They went on duty at 7:25 p.m., November 2, 2007, at CP's Portage Yard in Portage, Wisconsin. This was the away from home terminal for both crew members, and both received the required statutory off duty rest period prior to reporting for duty.

The assigned CP freight train consisted of one locomotive, 29 loaded rail cars, and 15 empty freight cars. The train was 3,735 feet long, and weighed 3,134 tons. CP Train 291-01 had received a Class I air brake test at Bensenville, Illinois, on November 2, 2007, at 11:50 a.m. CP Train 291-01 was equipped with an End-of-Train Device (EOTD) and departed Portage at 8:40 p.m.

As westbound CP Train 291-01 approached the accident area, the CP conductor was seated at the conductor's desk, on the left hand side of the locomotive in the direction of movement. The CP locomotive engineer was seated in the locomotive engineer's seat at the controls, on the right side of the locomotive in the direction of movement.

Proceeding westward from River Junction East at milepost 284.7, there is a curve averaging 0 degree 13 minutes to the right which extends to River Junction at milepost 285. There is a 0.26 percent ascending grade through the same area.

## ICE TRAIN MHUCC-01:

The crew of ICE Train MHUCC-01 included a conductor and locomotive engineer. They went on duty at 5:30 p.m., CDT, November 2, 2007, at Dubuque, Iowa. This was the home terminal for both crew members and both received the required statutory off duty rest period prior to reporting for duty. The crew was then transported to Minnesota City, Minnesota, to the train.

The assigned ICE freight train consisted of three locomotives and 85 loaded freight cars of several varieties. It was 5,103 feet long and weighed 10,920 tons. The train had received a Class I air brake test at Huron, South Dakota. The train was equipped with an End-of-Train Device (EOTD). The train departed Minnesota City at 10:45 p.m.

Just prior to the collision, the ICE conductor was preparing to get off the locomotive to line a switch. The ICE locomotive engineer was seated in the locomotive engineer's seat at the controls, on the right hand side of the locomotive in the direction of movement. This was south side of the locomotive based upon the easterly movement of the train per timetable direction.

#### THE ACCIDENT:

##### CP TRAIN 291-01:

CP Train 291-01 was being operated at a recorded speed of 16.2 mph as it passed River Junction East at milepost 284.7. The signal at River Junction East displayed Diverging Approach Indication. The maximum authorized speed for the train was 25 mph. The train was being operated at 17.2 mph as it approached River Junction at milepost 285.0. The signal at River Junction displayed a Stop Indication. The train passed the Stop signal without stopping. Four seconds later, at 11:58 p.m., moving at 17 mph, the train struck the side of the ICE train, colliding with the 55th car from the head end of the ICE Train MHUCC-01. The locomotive engineer was not aware of the impending collision. He admitted dozing off after passing the signal at River Junction East. The conductor states that he was reviewing his paperwork as the train approached the Stop signal at River Junction, and assumed that the locomotive engineer was in control of the train, and going to stop. The locomotive tipped over to the north side, or right hand side in the direction of movement. The head two cars also derailed. The above speeds were recorded by the event recorder of the locomotive.

##### ICE-TRAIN MHUCC-01:

ICE Train MHUCC-01 was being operated at five mph as it passed through River Junction. The maximum authorized speed for the train was 10 mph, as the train was passing through a turnout. When the head end of the train was about 3,000 feet past River Junction, the air brakes applied in emergency. CP Train 291-01 had struck the 55th car from the head end. The 55th through the 57th cars were derailed, two grain hopper cars tipped over and spilled wheat. The above speed was recorded by the event recorder of the lead locomotive.

#### ANALYSIS AND CONCLUSIONS:

##### ANALYSIS - TOXICOLOGICAL TESTING:

Toxicological testing was conducted on the conductor and engineer of CP Train 291-01, and the results were negative. No toxicological testing was performed on the conductor and engineer of ICE Train MHUCC-01. FRA regulation does not require testing of the ICE train crew. The CP forwarded the toxicological tests to the wrong laboratory address resulting in FRA filing a violation for failure to comply with certain provisions of 49 CFR Part 219.

##### CONCLUSION:

Intoxication or impairment was not a factor.

##### ANALYSIS: - LOCOMOTIVE EQUIPMENT:

FRA inspected CP Locomotive 9554 and found the locomotive sustained heavy damage to the right side car body, front and rear end plates including steps and hand rails, and both front trucks. Inspection of the truck and wheel assemblies that remained intact were in compliance with applicable regulations. FRA observed that the truck brake cylinders were cut in, and assumed operating at the time of the collision. FRA also inspected the cab of the locomotive and noted that the cab remained intact with no intrusions, cab seats and stanchions also remained intact and fastened to the cab floor.

##### CONCLUSION:

The condition of locomotive compliance was not a factor.

**ANALYSIS - SIGNALING EQUIPMENT:**

FRA inspection of the Traffic Control System (TCS) following the accident revealed no defects. The records of the required periodic inspections of the CTC signal system for inspections prior to the incident were reviewed by FRA, and found to be in order with no exceptions.

**CONCLUSION:**

The signal system worked as intended and FRA noted no exceptions to signal system inspections.

**ANALYSIS - LOCOMOTIVE ENGINEER/CONDUCTOR:**

The locomotive engineer of CP Train 291-01 admitted that he dozed off after passing the signal displaying Approach Diverging, and failed to stop for the signal displaying Stop. The locomotive engineer has no record of disciplinary actions during his 10 years of service. During 2006 and 2007, he was subject to 69 operational tests for rules compliance. Three of those, or four percent, were failures.

The CP conductor denied falling asleep, claiming he was looking at his paperwork during that time. He did go so far as to state that he apparently wasn't alert. During his eight years of service, the conductor had five disciplinary actions taken against him. One of the discipline actions, January 2006, was a suspension for sleeping on duty. During 2006 and 2007, he was subject to 30 operational tests for rules compliance. Six of those, or 20 percent, were failures. This is a high failure rate.

**CONCLUSION:**

The engineer was not awake and alert while operating the controls of CP Train 291-01 after passing the Approach Diverging signal, and did not stop the train at the Stop signal. The conductor of CP Train 291-01 was not attentive to the operation of the train and took no action to stop the train prior to the collision.

**ANALYSIS:**

FRA obtained fatigue related information, for the 10-day period preceding this incident including the 10-day work history (on duty/off duty cycles) for all of the employees involved.

**CONCLUSION:**

Upon analysis of that information FRA concluded that one or more of the employees may have been working at a diminished level of safety (effectiveness) due to mental and/or physical attributes associated with fatigue, which may have contributed to the cause of the accident.

**OVERALL CONCLUSIONS:**

Other than human factors, the CP Railway was in compliance with their own, and applicable Federal standards with respect to the cause of the collision. There were nine defects resulting from the collection and handling of blood and urine specimens following the alcohol and drug testing of the crew of CP Train 291-01. Civil penalty is recommended for one of these defects, and that violation is the subject of Form FRA F6180.67, Violation of Operating Practices Regulations, Report Number RGK-194.

The crew of CP Train 291-01 failed to comply with various CP rules as follows:

1. Conductor and locomotive engineer failed to be alert and attentive, General Code of Operating Rules (GCOR) Rule 1.1.
2. Locomotive engineer admitted dozing off, GCOR Rule 1.11.
3. Both failed to be alert for, and communicate the names of signals affecting their train, GCOR Rule 1.47.



4. Conductor failed to take action when the locomotive engineer failed to comply with signal indications, GCOR Rule 1.47, and CP Timetable Special Instructions Rule 6.22.

4. Both crew members failed to comply with Diverging Approach Signal at River Junction East, CP timetable Rule 9.1.7.

5. Both crew members failed to comply with Stop Signal at River Junction, CP timetable Rule 9.1.1, and GCOR Rule 9.5.

6. Both crew members failed to comply with speed restrictions through turnouts, CP timetable Tomah Subdivision speed restrictions.

ICE Railroad, and the ICE crew were in compliance with their own, and applicable Federal standards.

The CP conductor had a history of failure to comply with rules, two of which resulted in suspensions. He also had a high failure rate for operational tests of rules compliance during 2006 and 2007.

**PROBABLE CAUSE & CONTRIBUTING FACTORS:**

The collision was caused by the failure of CP Train 291-01 to stop at a stop signal, which resulted in a collision with the side of passing ICE Train MHUCC-01. Failure of the crew of CP Train 291-01 to remain alert was a contributing factor.

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