Federal Railroad Administration
Office of Safety
Headquarters Assigned
Accident Investigation Report
HQ-2006-28

Union Pacific (UP)
Dalton, Illinois
May 11, 2006

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-2006-28

1.Name of Railroad Operating Train #1 Union Pacific RR Co. [UP]	1a. Alphabetic Code UP	1b. Railroad Accident/Incident No. 0506RP007
2.Name of Railroad Operating Train #2 Union Pacific RR Co. [UP]	2a. Alphabetic Code UP	2b. Railroad Accident/Incident 0506RP007
3.Name of Railroad Responsible for Track Maintenance: Union Pacific RR Co. [UP]	3a. Alphabetic Code UP	3b. Railroad Accident/Incident No. N/A
4. U.S. DOT_AAR Grade Crossing Identification Number	5. Date of Accident/Incident Month 05 / Day 11 / Year 2006	6. Time of Accident/Incident 03:43:00 ☑ AM ☐ PM

7. 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) — **04**

8. Cars Carrying HAZMAT	9. HAZMAT Cars Damaged/Derailed	10. Cars Releasing HAZMAT	11. People Evacuated	12. Division
3	0	0	0	CHICAGO

13. Nearest City/Town	14. Milepost (to nearest tenth)	15. State Abbr	15. State Code	16. County
DOLTON	18.0	N/A	IL	COOK

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

21. Track Name/Number	22. FRA Track Class (1-9, X)	Code	23. Annual Track Density (gross tons in millions)	24. Time Table Direction 1. North 3. East	Code
TRACK 25, 9-YARD		1	0		1

OPERATING TRAIN #1

25. 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: 7

26. Was Equipment Attended? 1. Yes 2. No — Code: 1

27. Train Number/Symbol: YCH04 R-10

28. Speed (recorded speed, if available) R - Recorded E - Estimated: 4 MPH — Code: R

29. Trailing Tons (gross tonnage, excluding power units): 1645

30. 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	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**

31. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded (yes/no)
(1) First involved (derailed, struck, etc)	N/A	33	no
(2) Causing (if mechanical cause reported)	N/A	N/A	N/A

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

Alcohol	Drugs
00	00

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

34. 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	0	0	1	0	0
(2) Total Derailed	0	0	0	0	0

35. Cars	Loade a. Freight	Loade b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Equipment Consist	5	00	30	00	00
(2) Total Derailed	00	00	1	00	00

36. Equipment Damage This Consist	37. Track, Signal, Way, & Structure Damage	38. Primary Cause Code	39. Contributing Cause Code
625	00	H306	H302

Number of Crew Members

40. Engineer/ Operators	41. Firemen	42. Conductors	43. Brakemen
N/A	00	00	00

Length of Time on Duty

44. Engineer/Operator	45. Conductor
Hrs 3 Mi 43	Hrs 00 Mi 00

Casualties to:	46. Railroad Employees	47. Train Passengers	48. Other
Fatal	00	00	00
Nonfatal	N/A	00	00

49. EOT Device? 1. Yes 2. No — 2

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

51. Caboose Occupied by Crew? 1. Yes 2. No — 2

OPERATING TRAIN #2

52. 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: 8

53. Was Equipment Attended? 1. Yes 2. No — Code: 1

54. Train Number/Symbol: YYCPR -09

55. Speed (recorded speed, if available) R - Recorded E - Estimated: 00 MPH — Code: R

57. Method(s) of Operation (enter code(s) that apply)

a. ATCS; b. Auto train control; g. Automatic block; h. Current of traffic; m.Special instructions; 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)	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)	2 = Remote control tower 3 = Remote control transmitter - more than one remote control transmitter
1542			n N/A N/A N/A N/A	0

58. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded (yes/no)	59. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.	Alcohol	Drugs
(1) First involved (derailed, struck, etc)	NS 8849	1	no		N/A	N/A
(2) Causing (if mechanical cause reported)	N/A	N/A	N/A	60. Was this consist transporting passengers? (Y/N)	N	

61. Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End c. Remote	62. Cars	Loade a. Freight	Loade b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Train	5	0	0	0	0	(1) Total in Equipment Consist	00	00	00	00	00
(2) Total Derailed	1	0	0	0	0	(2) Total Derailed	00	00	00	00	00

63. Equipment Damage This Consist	64. Track, Signal, Way, & Structure Damage	65. Primary Cause Code	66. Contributing Cause Code
12100	0	H306	H302

Number of Crew Members				Length of Time on Duty	
67. Engineer/ Operators	68. Firemen	69. Conductors	70. Brakemen	71. Engineer/Operator	72. Conductor
1	00	1	00	Hrs 4 Mi 43	Hrs 4 Mi 43

Casualties to:	73. Railroad Employees	74. Train Passengers	75. Other
Fatal	00	00	00
Nonfatal	2	00	00

76. EOT Device? (1. Yes 2. No)	77. Was EOT Device Properly Armed? (1. Yes 2. No)	78. Caboose Occupied by Crew? (1. Yes 2. No)
2	N/A	N/A

Highway User Involved

79. Type	Code
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)	N/A

80. Vehicle Speed (est. MPH at impact)	81. Direction geographical) 1.North 2.South 3.East 4.West	Code
N/A		N/A

82. Position	Code
1.Stalled on Crossing 2.Stopped on Crossing 3.Moving Over Crossing 4. Trapped	N/A

86a. 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

Rail Equipment Involved

83. Equipment	Code
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)	N/A

84. Position of Car Unit in Train
N/A

85. Circumstance	Code
1. Rail Equipment Struck Highway User 2. Rail Equipment Struck by Highway User	N/A

86b. Was there a hazardous materials release by (1. Highway User 2. Rail Equipment 3. Both 4. Neither)	Code
	N/A

86c. State here the name and quantity of the hazardous materials released, if any.
N/A

87. Type of 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)	88. Signaled Crossing Warning (See instructions for codes) Code	89. Whistle Ban (1. Yes 2. No 3. Unknown) Code
Code(s): N/A N/A N/A N/A N/A N/A N/A	N/A	N/A

90. Location of Warning (1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach)	Code	91. Crossing Warning Interconnected with Highway Signals (1. Yes 2. No 3. Unknown)	Code	92. Crossing Illuminated by Street Lights or Special Lights (1. Yes 2. No 3. Unknown)	Code
	N/A		N/A		N/A

93. Driver's Age	94. Driver's Gender (1. Male 2. Female)	Code	95. Driver Drove Behind or in Front of Train and Struck or was Struck by Second Train (1. Yes 2. No 3. Unknown)	Code	96. 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
0		N/A		N/A		N/A

97. Driver Passed Standing Highway Vehicle (1. Yes 2. No 3. Unknown)	Code	98. 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

101. Casulties to Highway-Rail Crossing Users	Killed	Injured
	0	0

99. Driver Was (1. Killed 2.Injured 3. Uninjured)	Code	100. Was Driver in the Vehicle? (1. Yes 2. No)	Code
	N/A		N/A

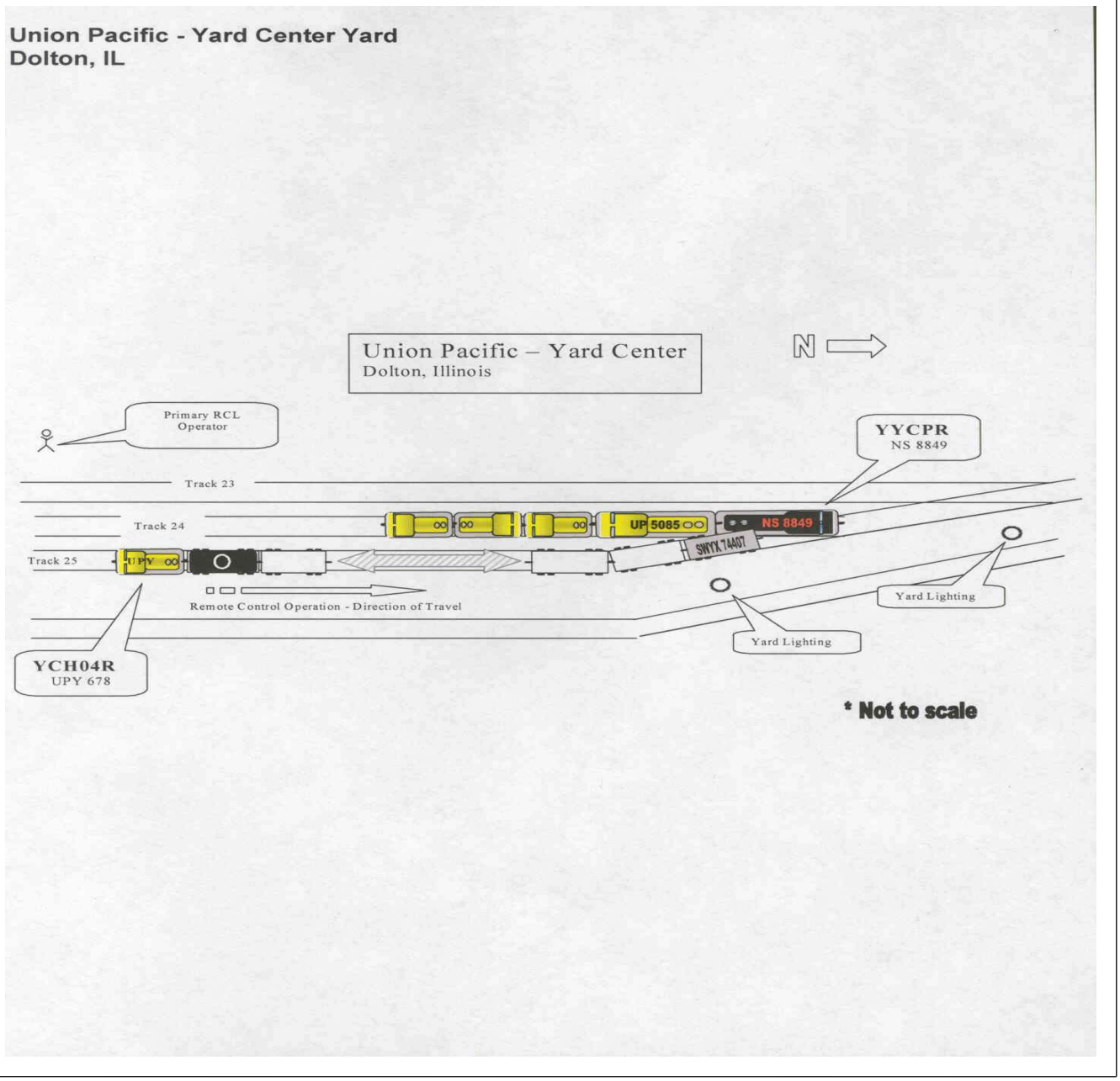
102. Highway Vehicle Property Damage (est. dollar damage)	103. Total Number of Highway-Rail Crossing Users (include driver)
0	0

104. Locomotive Auxiliary Lights? (1. Yes 2. No)	Code	105. Locomotive Auxiliary Lights Operational? (1. Yes 2. No)	Code
	N/A		N/A

106. Locomotive Headlight Illuminated? (1. Yes 2. No)	Code	107. Locomotive Audible Warning Sounded? (1. Yes 2. No)	Code
	N/A		N/A

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

HQ-28-
2006
Accident
Sketch.jpg



109. SYNOPSIS OF THE ACCIDENT

On May 11, 2006, at 3:43 a.m. c.d.t. remote-controlled assignment YCH04R-10, while shoving 32 cars north on track 25 in 9-yard, collided with YYCPR-09. The accident occurred at the Union Pacific Yard Center Yard near Dolton, Illinois, UP Milepost 18.0 on the Villa Grove Subdivision. YYCPR-09, an extra yard transfer assignment, was fouling the lead at the north end of 9-yard.

The primary remote control operator (RCO) on YCH04R-10 shoved track 25 northward and the north car struck the lead locomotive, NS 8849, and the second locomotive, UP 5085, of YYCPR-09. The collision resulted in an estimated $12,100 in damages to the two locomotives and about $625 damage to the north car on track 25, SWYX 74407. As a result of the collision the NS 8849 and the SYNX 74407 derailed and two train crew members on board the NS 8849 were injured.

At the time of the accident it was dark and raining. The temperature was 45 F.

The probable cause of the accident was the failure of the primary RCO on YCH04R-10 to protect the movement by being at or on the leading end of the equipment during the shove movement. YYCPR-09 fouling the north lead was a contributing cause.

The UP requires the yardmaster to conduct a safety briefing with each crew member prior to the crew performing switching operations; the yardmaster did not conduct the briefing. This may have contributed to the accident. The UP does not have written instructions for this requirement.

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110. NARRATIVE

Circumstances Prior to the Accident
Train YCH04R-10

The remote control assignment YCH04R-10 crew consisted of two RCO operators, a regularly assigned primary operator and an extra board secondary operator. The crew members of YCH04R were called to report for duty at 11:59 p.m., May 10, 2006, at the UP Yard Center Yard in Dolton. This was the home terminal for both crew members, and they received the statutory off duty period, prior to reporting for duty. Their assigned yard train consisted of one locomotive, and they were to perform switching on the south end of 9-yard. The crew was scheduled to switch cars from various tracks to make up blocks of cars for other train assignments.

The regularly assigned RCO notified the railroad he would arrive late to work because of personal reasons. He reported for work at about 1:30 a.m. on the morning of May 11, 2006.
The extra board RCO operator arrived at the scheduled time and waited for the other operator to arrive. While waiting, he spoke with the yardmaster who told him to keep alert while working with the other operator. The yardmaster told him that the regularly assigned RCO operator had a problem the last time he worked as the primary operator.

When the regular assigned RCO arrived, the crew performed a job briefing. The RCOs reviewed the paperwork for the switching moves and discussed who would be the primary operator. They decided the regular assigned operator would act as primary RCO. Although regularly assigned to the YCH04R-10 crew, the regularly assigned RCO did not normally work the primary position. His normal position was as the secondary RCO. The extra board RCO had not operated remote control equipment for an extended period and did not want the primary position. The regularly assigned RCO agreed to work the primary position and the extra board RCO agreed to work the secondary position.

The regular assigned RCO received switching instructions along with a “bowl turnover” from the yardmaster. The “bowl turnover” indicated the number of cars on each track in 9-yard. The RCOs did not receive a safety briefing from the yardmaster before commencing their switching duties.

The Manager of Yard Operations (MYO) met the crew before they left the yard office to link to their assigned remote-controlled locomotive. He inquired about their work and safety equipment, but asked nothing about their safety briefing. He was unaware the crew did not receive a safety briefing from the yardmaster.

The RCO crew began switching operations at about 2 a.m. on May 11, 2006, when they electronically linked the remote control transmitting units to locomotive UPY 678 in 9-yard. Each RCO operator linked to the locomotive and performed the tests required to determine their equipment was working properly. They also performed the required mechanical inspection of the locomotive. The crew tuned their radios to channel 69, the yard channel.

9-yard is an arrangement of tracks numbered 308 thru 41 with a north and south switching lead. The crew worked switching out cars at the south end from track 41, 18, 28, and 30, in 9-yard, placing these cars on various tracks including track 25. The final switching move prior to the accident included pulling two cars from track 30, coupling to track 25, and shoving the track clear of the south lead. The final two cars to be placed on track 25 were “Do Not Hump” cars containing hazardous materials.

The primary RCO announced a “Shove Red Zone.” “Shove Red Zone” is required to be announced prior to any shove movement being made. This alerts other crews about a movement of cars by giving the track name, direction of shove, and the job name making the shove. The secondary RCO acknowledged the “Shove Red Zone.”

When the shove movement began the primary RCO was about 30 yards west of track 25 and about 15 cars in from the south end of the track. The secondary RCO

was on the east side of the lead track walking north inspecting the switches for alignment. He was unable to view the north end of track 25 because cars on adjacent tracks blocked his view. The primary RCO noted the lights on the north lead at the north end of 9-yard were on but felt the area was not well lit.

Train YYCPR-09

The crew of YYCPR-09, an extra yard transfer assignment, included a locomotive engineer and a conductor. They first went on duty at 11 p.m., May 10, 2006, at the UP Yard Center Yard. This was the home terminal for both crew members, and they received the statutory off duty period prior to reporting for duty.

Their assigned transfer freight train was being built by a yard crew. It would have five locomotives. The transfer train was scheduled to operate from UP Yard Center to the UP Proviso Yard in Northlake, Illinois. The crew arrived at the scheduled time and preformed a job briefing and a safety briefing with the yardmaster at the south tower.

Following the briefings they were transported to the north end of track 306 where they boarded the lead locomotive, NS 8849, of a three unit consist. The yardmaster instructed them to cut the three locomotives away from track 306 and proceed to track 24. They were told to couple to two additional locomotives on track 24. The crew waited for a train to clear and, when the train cleared, received permission from the yardmaster to operate southward through track 308 into track 24. Their locomotive radio was tuned to channel 69, the yard channel.

The engineer was operating locomotive, NS 8849, from the engineer's seat on the east side of the locomotive. The conductor, who had ridden the rear locomotive to the coupling on track 24, had returned to the lead locomotive, and was seated on the west side of the locomotive in the conductor's seat. They coupled to the two additional locomotives on track 24 at about 3 a.m. and were waiting for the mechanical department to arrive with a cable to connect the locomotives in multiple. They remained in the foul of the north lead while they waited. They did not hear YCH04R-10 announce a "Shove Red Zone" on the radio.

The Accident
Train YCH04R-10

The crew of YCH04R-10 after switching cars off track 25 prepared to shove track 25 to clear the lead at the south end. They had coupled to two hazardous material cars that were going to track 25 along with cars already on the track. The primary RCO had coupled the two cars to track 25 and pulled the track of cars south until he observed the north car. He had determined all cars on the track were coupled together. Track 25 holds about 35 cars and the crew believed they were shoving 29 cars into the track. The operator had not counted the cars on the track before shoving.

The primary RCO, located on the west side of track 25 at the south end of 9-yard, began shoving track 25. The locomotive consist on track 24 at the north end blocked his view of the clearance point of track 25. It was dark and raining at the time the shove move began. The primary operator did not ride the shove movement or position himself at the end of the movement. The secondary RCO was inspecting switches on the east side of the track along the switching lead at the south end of 9-yard and was unable to view the north end of track 25. The primary RCO was in control of the remote-controlled locomotive.

After he announced a "Shove Red Zone" the operator shoved track 25 to the north. The secondary RCO acknowledged the "Shove Red Zone" announcement. However, he failed to inquire if the primary operator was protecting the shove move.

During the shove movement the north car on track 25, SWYX 74407, collided with locomotive NS 8849 of the YYPRC-09 consist fouling track 25. Locomotive NS 8849 derailed as a result of the collision and, the trailing locomotive, UP 5085, suffered damage when the YYPRC-09 consist moved north. According to the event recorder download, the collision shoved the locomotive consist about 4 feet.

The crew of YCH04R-10 uncoupled from track 25 and proceeded to track 23 and were operating down the track when the MYO contacted them on the radio. The MYO requested the crew meet with him. Shortly before the MYO contacted the crew the secondary RCO received a call on the cellular telephone from the conductor on YYCPR-09 informing him YCH04R-10 had run into the side of YYCPR-09. The crew met the MYO and was transported to the north end of 9-yard where they observed the result of the collision at the derailment area.

They boarded locomotive, NS 8849, and spoke with the crew of YYCPR-09. They observed the damage caused by the collision and then returned to the MYO's vehicle and waited until they were transported to the south tower for an interview and toxicological testing. The MYO retrieved the remote transmitting units from the operators before returning to the south tower.

Train YYCPR-09

The crew of YYCPR-09 was awaiting the arrival of mechanical department personnel at the north end of track 24 when they felt their locomotive begin to move forward. The engineer looked back and saw a car that had struck the side of their locomotive. The locomotive consist had moved about 4 feet as a result of the collision. The event recorder on locomotive NS 8849, showed YYCPR-09 was not moving at the time of the collision.

The engineer immediately transmitted on the radio to stop the shove movement on track 25. He then contacted the south tower yardmaster and reported the collision.

The conductor on YYCPR-09 suffered an asthma attack following the collision and a mechanical supervisor at the scene began giving assistance. The conductor became ill; an ambulance was called, and transported the conductor to the hospital emergency room for treatment. The engineer reported back pain and was transported from the scene to a medical clinic where he was treated and released.

The crew of YYCPR-09 did not receive toxicological testing.

Analysis and Conclusions
Analysis

The primary RCO, who arrived late because of personal issues, notified the railroad of his circumstances and arrived at work about 1:30 a.m.

The yardmaster failed to conduct a safety briefing with the crew when the primary RCO reported for work. The UP has no written instructions that require a safety briefing be held by the yardmaster. According to UP management it is understood that a briefing will be done prior to a crew beginning their work and the yardmaster will conduct the briefing. The manager on duty did not conduct a briefing or inquire if a safety briefing had been done when he talked with the YCH04R-10 crew. The yardmaster and the manager were aware of the primary RCO's accident history and involvement in a previous RCO collision at Yard Center.

The RCOs had conducted a proper job briefing between themselves and properly inspected and linked to the remote-controlled locomotive, UPY 678. They determined all equipment associated with the remote control operations worked correctly. The remote control transmitting and receiving devices were tested on May 12, 2006, the day following the accident, in the presence of a Federal Railroad Administration (FRA) Motive Power and Equipment inspector. The equipment functioned as intended.

The primary RCO had complied with Superintendent Bulletin 63 and announced a "Shove Red Zone" for the movement on track 25. He had pulled track 25 and determined all cars were coupled before shoving. He had not inspected the track to determine the number of cars on the track. It was later determined by the railroad that track 25 had three more cars in it than the bowl turnover had indicated when YCH04R-10 shoved the track. The operator had not positioned himself where he could observe the end car of the move. The primary operator did not position himself at or on the end of the equipment when the shove move occurred, and the locomotive consist of YYCPR-09 on the north end of track 24 blocked his view of the clearance point on track 25. It was dark and raining at the time of the collision.

FRA inspection determined a track grade at the north end of 9-yard descending slightly to the south. The locomotives were the only equipment on track 24, and the

lead locomotive, NS 8849, fouled the north lead. Lighting in the area of the accident consists of a pole light located about 100 feet to the north, and a pole light about 100 feet to the south and east of the NS 8849. The lighting appeared to be adequate.

YYCPR-09's crew had operated their three locomotives from track 306 to track 24 where they coupled to two additional locomotives. The lead locomotive, NS 8849, of the consist remained foul the north lead following the coupling. Although the track into which the YYCPR-09 crew had coupled was empty of cars, the crew did not move the locomotive consist into the clear of the north lead. The Director of Terminal Operations during an interview stated, because the yardmaster had given permission for YYPRC-09 to operate on the lead to make the coupling on track 24, they were not required to shove clear of the lead.

Each locomotive involved in the collision, UPY 678, UP 5085, and NS 8849 was equipped with a working event recorder. The event recorders were downloaded by the Manager of Operating Practices and reviewed. The analysis disclosed the locomotive consist of YYCPR-09 was stationary and the YCH04R-10 locomotive, UP 678, was moving at about 4 mph at the time of collision. FRA reviewed the results of the analysis and concurred with the conclusions.

The recorded train speed of YCH04R-10 was 4.1 mph at the time of the collision. The maximum authorized speed for the track is 10 mph as designated by UP System Special Instructions, effective April 3, 2005. The speed was recorded by the event recorder of the controlling locomotive on YCH04R-10. The RCO operator was not aware that a collision had occurred.

FRA reviewed the efficiency testing records of the crew members of YCH04R-10 and YYCPR-09. Records indicate testing on the crew members was performed by eight managers from January to May 2006, a five-month period. There were 390 test events with one test failure during that period. The conductor on YYPRC-09 had the only recorded failed test, resulting from a failure to comply with UP System Special Instructions, Item 17, Job Briefing. Tests requiring compliance with a stop or restricted speed, UP GCOR rule 6.28, totaled 48 tests. A total of 20 tests requiring protection for a shoving movement, UP GCOR rule 6.5, were conducted. No test failures occurred in these 68 tests.

The primary RCO's test record showed 220 test events from January to May 2006 with 29 rule 6.28 tests and 13 rule 6.5 tests. There were no failures recorded in the 220 test events. The secondary RCO's record during the same period showed 25 test events with three rule 6.28 tests and three rule 6.5 tests. There were no failures recorded for these 25 test events.

FRA reviewed the work history records for the crew members of YCH04R-10 and
YYCPR-09. The review indicated the primary RCO of YCH04R-10 averaged 9 hours and 14 minutes for each working day over 11 working days in an 18-day period. The secondary RCO averaged 8 hours and 39 minutes for each working day over eight working days in a 21-day period. The engineer on YYCPR-09 averaged 10 hours and 42 minutes for each working day over 11 working days in a 27-day period. The conductor averaged 8 hours and 19 minutes for each working day over the same period. Commuting time to and from work was not significant for three of the crew members averaging between 5 and 20 minutes each way. The engineer on YYCPR-09 had a significant commute averaging 1 hour and 30 minutes each way. There were no excess hours of service events recorded during this review period.

Toxicological testing conducted on the crew of YCH04R-10 following the accident was negative.

Conclusions

The crew of YCH04R-10 failed to comply with the railroads operating rule for protection of shoving movements. The primary RCO controlling the shove movement failed to position himself at or on the leading end of the shove movement. This operator had been involved in a previous accident at Yard Center which also resulted in a collision. The shove movement during that event was not protected.

The yardmaster and manager on duty knew the accident history of the primary RCO as it related to yard switching, but failed to conduct or verify that a safety job briefing had been conducted.

Probable Cause & Contributing Factors

The FRA determined that the accident occurred because the primary operator on YCH04R-10 failed to properly protect the shoving movement. A member of the crew was not in position at or on the leading end of the equipment to observe the shoving movement as required by UP GCOR operating rule 6.5 - Handling Cars Ahead of Engine, as modified by UP System Special Instructions, Item 10-A.Leaving equipment foul of the north lead was a contributing factor in the accident.

Failure on the part of the yardmaster to conduct a safety job briefing may have been a causal factor in the accident.

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