
# *Federal Railroad Administration*
# *Office of Safety*
# *Headquarters Assigned*
# *Accident Investigation Report*
# *HQ-2005-38*

## *Union Pacific (UP)*
## *North Bend, Nebraska*
## *May 2, 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 # HQ-2005-38

| 1.Name of Railroad Operating Train #1 | 1a. Alphabetic Code | 1b. Railroad Accident/Incident No. |
|---|---|---|
| UNION PACIFIC RAILROAD COMPANY | UP | 0505CB002 |
| 2.Name of Railroad Operating Train #2 | 2a. Alphabetic Code | 2b. Railroad Accident/Incident |
| UNION PACIFIC RAILROAD COMPANY | UP | 0505CB002 |
| 3.Name of Railroad Responsible for Track Maintenance: | 3a. Alphabetic Code | 3b. Railroad Accident/Incident No. |
| Union Pacific RR Co. [UP ] | UP | 0505CB002 |
| 4. U.S. DOT_AAR Grade Crossing Identification Number | 5. Date of Accident/Incident: Month 05 / Day 02 / Year 2005 | 6. Time of Accident/Incident: 11:25: ☐ 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): 03

| 8. Cars Carrying HAZMAT | 9. HAZMAT Cars Damaged/Derailed | 10. Cars Releasing HAZMAT | 11. People Evacuated | 12. Division |
|---|---|---|---|---|
| 0 | 0 | 0 | 0 | Council Bluffs |

| 13. Nearest City/Town | 14. Milepost (to nearest tenth) | 15. State Abbr | 15. State Code | 16. County |
|---|---|---|---|---|
| North Bend | 53.4 | N/A | NE | DODGE |

| 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 |
|---|---|---|---|---|---|---|
| 38 F | | 4 | | 2 | | 1 |

| 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 |
|---|---|---|---|---|---|
| main Track No. 2 | | 5 | 130.7 | | 3 |

## 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 | 26. Was Equipment Attended? 1. Yes 2. No | Code | 27. Train Number/Symbol |
|---|---|---|---|---|---|
| | | 1 | 1 | 1 | CNAW K-01 |

| 28. Speed (recorded speed, if available) R - Recorded E - Estimated | | | Code |
|---|---|---|---|
| | 16 | MPH | R |

29. Trailing Tons (gross tonnage, excluding power units): 15429

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) | | | | |
|---|---|---|---|---|
| e | 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: 0

| 31. Principal Car/Unit | a. Initial and Number | b. Position in Train | c. Loaded (yes/no) |
|---|---|---|---|
| (1) First involved (derailed, struck, etc) | N/A | 1 | N/A |
| (2) Causing (if mechanical cause reported) | 0 | 0 | N/A |

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

| Alcohol | Drugs |
|---|---|
| 0 | 0 |

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 | 2 | 0 | 0 | 0 | 1 |
| (2) Total Derailed | 2 | 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 | 129 | 0 | 0 | 0 | 0 |
| (2) Total Derailed | 4 | 0 | 0 | 0 | 0 |

| 36. Equipment Damage This Consist | 37. Track, Signal, Way, & Structure Damage | 38. Primary Cause Code | 39. Contributing Cause Code |
|---|---|---|---|
| 1069974 | 19407 | H221 | N/A |

Number of Crew Members

| 40. Engineer/ Operators | 41. Firemen | 42. Conductors | 43. Brakemen |
|---|---|---|---|
| N/A | 0 | 1 | 0 |

Length of Time on Duty

| 44. Engineer/Operator | 45. Conductor |
|---|---|
| Hrs 8 Mi 40 | Hrs 8 Mi 40 |

| Casualties to: | 46. Railroad Employees | 47. Train Passengers | 48. Other |
|---|---|---|---|
| Fatal | 0 | 0 | 0 |
| Nonfatal | N/A | 0 | 0 |

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

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

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

## 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 | 53. Was Equipment Attended? 1. Yes 2. No | Code | 54. Train Number/Symbol |
|---|---|---|---|---|---|
| | | 1 | 1 | 1 | CCAFL 9-30 |

| 55. Speed (recorded speed, if available) R - Recorded E - Estimated | | | Code |
|---|---|---|---|
| | 0 | MPH | 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<br>d. Cab<br>e. Traffic<br>f. Interlocking | i. Time table/train orders<br>j.Track warrant control<br>k. Direct traffic control<br>l.Yard limits | o. Positive train control<br>p. Other (Specify in narrative)<br>Code(s) | 2 = Remote control tower<br>3 = Remote control transmitter - more than one remote control transmitter |
|---|---|---|---|---|
| 15000 | | | d e 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) | CEFX 42406 | 125 | yes | | N/A | N/A |
| (2) Causing (if mechanical cause reported) | 0 | 0 | N/A | 60. Was this consist transporting passengers? (Y/N) | | N/A |

| 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 | 0 | 0 | 0 | 0 | 0 | (1) Total in Equipment Consist | 0 | 0 | 0 | 0 | 0 |
| (2) Total Derailed | 0 | 0 | 0 | 0 | 0 | (2) Total Derailed | 0 | 0 | 0 | 0 | 0 |

| 63. Equipment Damage This Consist | 64. Track, Signal, Way, & Structure Damage | 65. Primary Cause Code | 66. Contributing Cause Code |
|---|---|---|---|
| 0 | 0 | N/A | N/A |

| Number of Crew Members | | | | Length of Time on Duty | |
|---|---|---|---|---|---|
| 67. Engineer/ Operators | 68. Firemen | 69. Conductors | 70. Brakemen | 71. Engineer/Operator | 72. Conductor |
| N/A | N/A | N/A | N/A | Hrs 0 Mi 0 | Hrs 0 Mi 0 |

| Casualties to: | 73. Railroad Employees | 74. Train Passengers | 75. Other |
|---|---|---|---|
| Fatal | 0 | 0 | 0 |
| Nonfatal | 0 | 0 | 0 |

| 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) |
|---|---|---|
| N/A | N/A | N/A |

## Highway User Involved

79. Type — 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)

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

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

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

86a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? — Code: N/A
1. Highway User 2. Rail Equipment 3. Both 4. Neither

## Rail Equipment Involved

83. 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)

84. Position of Car Unit in Train: N/A

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

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

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

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

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

| 93. Driver's Age | 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 |
|---|---|---|---|
| 0 | Code: N/A | Code: N/A | 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 |

| 97. Driver Passed Standing Highway Vehicle (1. Yes 2. No 3. Unknown) | 98. View of Track Obscured by (primary obstruction) |
|---|---|
| Code: N/A | 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 |

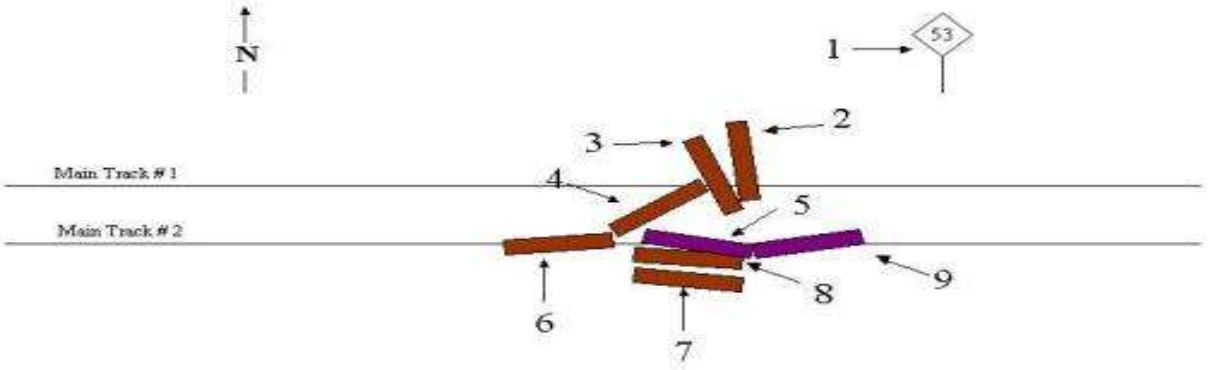
| 101. Casulties to Highway-Rail Crossing Users | Killed | Injured |
|---|---|---|
| | 0 | 0 |

| 99. Driver Was (1. Killed 2.Injured 3. Uninjured) | 100. Was Driver in the Vehicle? (1. Yes 2. No) |
|---|---|
| Code: N/A | Code: N/A |
| 102. Highway Vehicle Property Damage (est. dollar damage): 0 | 103. Total Number of Highway-Rail Crossing Users (include driver): 0 |

| 104. Locomotive Auxiliary Lights? (1. Yes 2. No) | 105. Locomotive Auxiliary Lights Operational? (1. Yes 2. No) |
|---|---|
| Code: N/A | Code: N/A |
| 106. Locomotive Headlight Illuminated? (1. Yes 2. No) | 107. Locomotive Audible Warning Sounded? (1. Yes 2. No) |
| Code: N/A | Code: N/A |

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

HQ-38
Sketch.jpg




1. Milepost 53
2. Third car of Train # 1 - CWEX 9422 – derailed upright
3. Fourth car of Train # 1 - CWEX 9608 – derailed upright
4. Fifth car of Train # 1 - CWEX 1308 – derailed upright
5. Rear car (125th) of Train # 2 - CEFX42406 - derailed upright
6. Sixth car of Train # 1 – CEFX 1210 – derailed upright
7. Lead locomotive Train # 1 – UP 7224 – derailed on right side
8. Second Locomotive Train # 1 UP 8297 – derailed upright
9. 124th car of Train # 2 CEFX 42251derailed upright

109. SYNOPSIS OF THE ACCIDENT

An eastbound UP freight train bearing Train Symbol CNAWK-01 (Train No. 1) collided with another eastbound UP freight train bearing Train Symbol CCAFL9-30 (Train No. 2) on May 2, 2005, at 11:25 p.m. The accident occurred on UP Main Track No. 2, near North Bend, Nebraska, milepost (MP) 53.49, on the Columbus Subdivision, Council Bluffs Service Unit.

Following the accident, the engineer and conductor of Train No. 1 were life flighted by helicopter to Creighton Medical Center in Omaha, Nebraska. The engineer sustained a broken right collar bone, two broken ribs, small facial fractures to the right eye socket and jaw bone, along with numerous minor cuts and bruises. The conductor sustained four fractures of the lower lumbar and a cervical fracture, along with numerous minor cuts and bruises.

The impact caused the rear two cars of Train No. 2 to derail, and the two locomotives and head four cars of Train No. 1 to derail. The lead locomotive of Train No. 1 came to rest on its right side, and the cab of the locomotive began to fill with diesel fuel from its ruptured fuel tanks. At one point, the fuel reached a level of approximately 18 inches in depth in the cab of the locomotive. Locomotive No. UP 7224 spilled 2,750 gallons of diesel fuel, and the UP 8297 spilled 1,000 gallons of diesel fuel. The derailed cars from both trains came to rest in various locations, some of which obstructed adjacent westbound Main Track No. 1.

At the time of the accident, it was dark and cloudy. The temperature was 38 °F.

The accident was caused by the failure of the crew of Train No. 1 to comply with signal indications displayed by both wayside and on-board cab signal aspects. A contributing factor was crew fatigue.

110. NARRATIVE

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

CIRCUMSTANCES PRIOR TO THE ACCIDENT

The crew of Train No. 1, after receiving more than the required off-duty time (the engineer had received 9 hours and the conductor had received 118 hours 10 minutes), were called on May 2, 2005, at approximately 1:15 p.m. CDT, and reported for duty at North Platte, Nebraska, at 2:45 p.m. The crew consisted of an engineer and conductor assigned to operate Train No. 1, a coal train consisting of three locomotives (two on head-end of train, UP 7224 & UP 8297, and one DPU on the rear UP 6712) coupled to 129 cars (129 loads, 0 empties), from North Platte (MP 285), to Fremont, Nebraska (MP 39.0), a distance of approximately 246 miles. The train departed North Platte at approximately 4:21 p.m., after receiving a Class I Air Brake Test - Initial Terminal Inspection, with the engineer operating the train and the conductor seated in the left seat of lead Locomotive No. UP 7224, an American wide-body style locomotive.

The method of operation in the area where the accident occurred is by signal indication of a Traffic Control System (TCS), supplemented by an on-board Automatic Cab Signal/Automatic Train Stop (ACS/ATS) system. The maximum authorized speed is 60 mph for freight trains, with various speed restrictions in effect. Loaded coal trains are limited to a maximum authorized speed of 50 mph.

During an interview later conducted by UP managers, the conductor stated that approximately 1 mile east of North Platte the engineer asked him if he would operate the train because he was short rested and tired. The conductor stated that he operated the train from that point (1 mile east of North Platte) to Grand Island, Nebraska, a distance of approximately 140 miles. According to the dispatcher's movement of train sheet, this portion of the trip took a duration of approximately 4 to 5 hours. The conductor stated during this period, the engineer slept while he operated the train. The conductor stated the engineer operated the train from Grand Island to the point of accident, which took place approximately 3 hours later. During the final portion of the trip just prior to the accident, the conductor stated he sat upright in the conductor's seat with his eyes closed, but could hear the engineer acknowledging restricting cab signal aspects and the alerter. He also stated he thought he was calling signals, but later stated he must have been dreaming.

The crew of Train No. 2, after receiving more than the required off-duty time (the engineer had received 39 hours 40 minutes and the conductor had received 114 hours 40 minutes), reported for duty at North Platte at 3 p.m. The crew consisted of an engineer, and conductor, assigned to operate Train No. 2, a coal train consisting of two locomotives (UP 7228 and SP 0122) coupled to 125 cars (125 loads 0 empties), 15,000 trailing tons, from North Platte to Fremont. The train departed North Platte at approximately 4:22 p.m., after receiving a Class I Air Brake Test - Initial Terminal Inspection and arming the 2-way, end-of-train device (UPRQ 34234), with the engineer operating the train and the conductor seated in the left seat of lead Locomotive No. UP 7228, an American wide-body style locomotive.

As Train No. 1 and Train No. 2 traversed the distance between North Platte and Fremont, Train No. 2 gradually increased the distance separating the two trains until they reached Shell Creek (MP 64), where Train No. 2 began to encounter congestion approaching Fremont (MP 39). As Train No. 2 began to encounter signal aspects more restricting than clear, their movement began to slow, and Train No. 1 began to close the distance separating the two trains.

As Train No. 1 closed the distance between Train No. 2 ahead, they also began to encounter signal aspects more restricting than "clear." Train No. 1 received an "advance approach" signal at MP 66.7, and later an "approach" at MP 64.1. The signal aspects aboard Train No. 1 continued to change between "advance approach" and "approach" over the course of the next 12 miles. The event recorder tape also indicated that Train No. 1's speed varied between 10 and 20 mph during this same time period.

Train No. 2 was also following a train ahead, eastbound freight train bearing Train Symbol QNPCH-02, which was also being delayed account congestion, entering

Fremont. At one point, Train No. 2 received a “red” signal aspect at eastward intermediate Signal 5122 located at MP 51.1, where it stopped in approach of the signal.

The trackage in the area of the accident is tangent, and the grade is practically level. There is a 40-minute curve to the right, approximately 1/8 mile in length, located approximately 1 mile in approach to the point of collision. The weather at the time of the accident was dark, cloudy, and 38 °F. Sight distance approaching the point of collision was unobstructed and visibility would have been good.

THE ACCIDENT

As Train No. 1 approached stopped Train No. 2, they encountered an “approach” signal aspect at MP 57.8, and later a second “approach” aspect at MP 55.6. Train No. 1 continued to operate at a speed between 18 and 20 mph the entire distance, seemingly making no attempt to be prepared to stop prior to reaching the next signal.

UP System Special Instructions, effective 0001 Sunday, April 3, 2005, Item 20, Block and Interlocking Signals, Rule 9.2.6, entitled “Approach” reads as follows:

Proceed prepared to stop before any part of train or engine passes the next signal.

- Freight trains exceeding 30 MPH must immediately reduce to 30 MPH.
- Passenger trains exceeding 45 MPH must immediately reduce to 45 MPH.

At MP 53.7, Train No. 1 encountered a “red” signal aspect with the rear of Train No. 2 stopped 1,113 feet in advance. The signal at MP 53.7 is an absolute with no number plate and requires the crew to stop and contact the dispatcher before passing. The crew must comply with General Code of Operating Rule (GCOR) 9.12.1, Stop Indications, CTC Territory.

UP System Special Instructions, effective 0001 Sunday, April 3, 2005, Item 20, Block and Interlocking Signals, Rule 9.2.15, entitled “Stop” reads as follows:

Stop before any part of train or engine passes the signal.

General Code of Operating Rules, Fifth Edition, Effective April 3, 2005, Rule 9.12.1, Stop Indication - CTC Territory, reads as follows:

9.12 Indications

9.12.1 CTC Territory

At a signal displaying a Stop indication, if no conflicting movement is evident, the train will be governed as follows:

- A crew member must immediately contact the control operator, unless the train is within track and time limits or entering track and time limits from any point other than either end of track and time limits.
- Before authorizing the train to proceed, the control operator must know that the route is properly lined and no conflicting movement is occupying or authorized to enter the track between that signal and the next absolute signal governing movement or the end of CTC where applicable.
- When the train receives these instructions, “After stopping, (train) at (location) has authority to pass signal displaying Stop indication,” specifying the route where applicable, the train must move at restricted speed.

The event recorder taken from the lead locomotive of Train No. 1 fails to indicate any action taken by the engineer or conductor in an effort to stop the train prior to Train No. 1 passing the eastbound absolute signal at MP 53.7. After passing the “red” aspect at MP 53.7, approximately 44 seconds elapsed, and the crew of Train No. 1 still took no action to stop their train before traveling approximately 1,112 feet and impacting the rear car of standing Train No. 2, at a speed of 16 mph.

The on-board ACS system is equipped with an automatic train stop (ATS) feature. A failure to acknowledge a more restricting aspect of the ACS will result in the ATS portion making a full service brake pipe reduction of the train's automatic brake system. The ACS/ATS system would have required the engineer to acknowledge the stop aspect within a maximum of 8 seconds (CFR part 236.563). An interview with the engineer and conductor failed to conclude any fault with the on-board ACS/ATS system, so it can be assumed an acknowledgment was performed, thereby forestalling a penalty brake application from the ATS portion of the system.

The impact caused the rear two cars of Train No. 2 to derail, and the two locomotives and head four cars of Train No. 1 to derail. The lead locomotive of Train No. 1 came to rest on its right side, and the cab of the locomotive began to fill with diesel fuel from its ruptured fuel tanks. At one point, the fuel reached a level of approximately 18 inches in depth in the cab of the locomotive. The UP 7224 spilled 2,750 gallons of diesel fuel, and the UP 8297 spilled 1,000 gallons of diesel fuel. The derailed cars from both trains came to rest in various locations, some of which obstructed adjacent westbound Main Track No. 1.

The engineer and conductor from Train No. 1 were life flighted by helicopter to Creighton University Medical Center in Omaha, Nebraska, where they were treated for injuries and received post accident FRA mandatory drug and alcohol testing, along with the crew members from Train No. 2.

The engineer of Train No. 1 sustained a broken right collar bone, two broken ribs, small facial fractures to the right eye socket and jaw bone, along with numerous minor cuts and bruises. The conductor of Train No. 1 sustained four fractures of the lower lumbar and a cervical fracture, along with numerous minor cuts and bruises. Both were heavily sedated and unable to provide interviews until the afternoon of May 4, when they both gave brief statements to an FRA Operating Practices Inspector. In those statements, neither the engineer or conductor could remember what took place after receiving the second “approach” aspect at MP 55.6 until the time they were being life flighted by helicopter to Creighton University Medical Center in Omaha.

ANALYSIS AND CONCLUSIONS

An inspection of the lead locomotive (UP 7224) of Train No. 1 immediately following the accident, revealed a set of 4-inch speakers and MP-3 player, which appeared to have been set up on the console of the locomotive. During the interviews with the crew following the accident, they were questioned as to why the equipment was in the cab of the locomotive. The engineer stated he was showing the equipment to the conductor and the batteries had gone dead as they listened to approximately half a song some time prior to the accident.

A review of the adult trauma flow sheet obtained at Creighton University Medical Center following the accident revealed the following entry on the conductors' report. The following is a portion of the entry included under the heading “nursing progress notes:” “Patient riding on a train in engine - patient states engineer fell asleep hit another train - patient able to climb up to door of engine which was on the side but unable to pull self out”. Post accident interviews resulted in statements from both the conductor and engineer admitting to dozing off just prior to collision.

FRA Post-Accident Forensic Toxicology Result Reports indicates that both crew members of Train No.1 had negative test results.

Engineer of Train No. 1 was issued Notification of Certificate Suspension effective on May 2, 2005, for failure to stop before any part of train or engine passed a signal displaying a stop indication at MP 53.7, while on Train Symbol CNAWK-01. This suspension was taken as a result of a violation of 49 CFR 240.117(a)(1), failure to control a locomotive or train in accordance with a signal indication, excluding a hand or a radio signal indication, or a switch, that requires a complete stop before passing it. The suspension was for 30 days.

Both crew members of Train No. 1 signed a Behavior Modification Waiver to waive a formal investigation and stated they had failed to stop before any part of their train or engine passed a signal displaying a stop indication, at MP 53.7 and that they failed to take appropriate action; which resulted in their train colliding with Train Symbol CCAFL9-30 and damage to track and equipment and personal injury. This resulted in a Level 4.5 disciplinary action and each crew member was given a 60-day suspension.

UP Managers conducted interviews with the engineer and conductor at a later date. The engineer was interviewed on May 24, and the conductor on June 15. Copies of those interviews are attached.

A followup interview was conducted with the engineer by an FRA Operating Practices Inspector on August 4, in North Platte. The first attempt made by FRA to obtain an interview with the conductor was cancelled by his attorney. A subpoena was later issued to obtain his testimony. Both the engineer and conductor gave final statements in an interview on September 30th.

PROBABLE CAUSE AND CONTRIBUTING FACTORS

H221 - Automatic block or interlocking signal displaying a stop indication - failure to comply.

The crew of Train No. 1 failed to operate their train in accordance with signal indication and Union Pacific operating rules. A contributing factor was crew fatigue.

Fatigue is entered as a contributing factor based on statements from the conductor to UP managers during an interview conducted by UP after the accident. The conductor stated to UP managers that shortly after beginning the trip at North Platte, the engineer asked him to operate the train because he was short rested and tired. Subsequently, the conductor operated the train for the next 4 to 5 hours between North Platte and Grand Island, Nebraska. In a statement in the conductors interview on September 30th, he advised FRA that the engineer was too fatigued to operate the train safely. The FRA concurs with these findings.