Federal Railroad Administration
Office of Safety
Headquarters Assigned
Accident Investigation Report
HQ-2007-39

Metro North Commuter Railroad Company (MNCW)
Milford, Connecticut
June 21, 2007

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

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

FRA FACTUAL RAILROAD ACCIDENT REPORT

FRA File # HQ-2007-39

1.Name of Railroad Operating Train #1: Metro North Commuter RR Co. [MNCW]	1a. Alphabetic Code: MNCW	1b. Railroad Accident/Incident No.: 2007062115
2.Name of Railroad Operating Train #2: N/A	2a. Alphabetic Code: N/A	2b. Railroad Accident/Incident No.: N/A
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: Metro North Commuter RR Co. [MNCW]	4a. Alphabetic Code: MNCW	4b. Railroad Accident/Incident No.: 2007062115
5. U.S. DOT_AAR Grade Crossing Identification Number:	6. Date of Accident/Incident: Month 06 | Day 21 | Year 2007	7. Time of Accident/Incident: 01:46:00 ☐ AM ☑ PM

8. Type of Accident/Indicent (single entry in code box): 1. Derailment; 2. Head on collision; 3. Rear end collision; 4. Side collision; 5. Raking collision; 6. Broken Train collision; 7. Hwy-rail crossing; 8. RR grade crossing; 9. Obstruction; 10. Explosion-detonation; 11. Fire/violent rupture; 12. Other impacts; 13. Other (describe in narrative) — Code: 01

9. Cars Carrying HAZMAT	10. HAZMAT Cars Damaged/Derailed	11. Cars Releasing HAZMAT	12. People Evacuated	13. Division
0	N/A	N/A	0	New Haven

14. Nearest City/Town	15. Milepost (to nearest tenth)	16. State Abbr	16. State Code	17. County
Milford	0.6	N/A	CT	FAIRFIELD

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

22. Track Name/Number	23. FRA Track Class (1-9, X) — Code	24. Annual Track Density (gross tons in millions)	25. Time Table Direction 1. North 2. South 3. East 4. West — Code
Ballast Track	3	N/A	1

OPERATING TRAIN #1

26. Type of Equipment Consist (single entry) 1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/switching 8. Light loco(s). 9. Maint./inspect.car A. Spec. MoW Equip. — Code	27. Was Equipment Attended? 1. Yes 2. No — Code	28. Train Number/Symbol
3	1	1926

29. Speed (recorded speed, if available) R - Recorded E - Estimated — Code	30. Trailing Tons (gross tonnage, excluding power units)
47 MPH — R	0

31. 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)				
j	N/A	N/A	N/A	N/A

31a. 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

32. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded (yes/no)
(1) First involved (derailed, struck, etc)	MNCW1697	1	no
(2) Causing (if mechanical cause reported)	0	0	N/A

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

Alcohol	Drugs
0	0

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

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

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

37. Equipment Damage This Consist	38. Track, Signal, Way, & Structure Damage	39. Primary Cause Code	40. Contributing Cause Code
$107,533.00	$2,000.00	H702	H220

Number of Crew Members: 41. Engineer/ Operators	42. Firemen	43. Conductors	44. Brakemen
1	0	1	0

Length of Time on Duty: 45. Engineer/Operator	46. Conductor
Hrs 1 Mi 36	Hrs 1 Mi 36

Casualties to:	47. Railroad Employees	48. Train Passengers	49. Other
Fatal	0	0	0
Nonfatal	2	2	0

50. EOT Device? 1. Yes 2. No — 2

51. Was EOT Device Properly Armed? 1. Yes 2. No — N/A

52. Caboose Occupied by Crew? 1. Yes 2. No — N/A

OPERATING TRAIN #2

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

56. Speed (recorded speed, if available) R - Recorded E - Estimated — Code
N/A MPH — N/A

58. 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

58a. Remotely Controlled Locomotive? 0 = Not a remotely controlled; 1 = Remote control portable

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

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

2 = Remote control tower
3 = Remote control transmitter - more than one remote control transmitter: N/A

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

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

Alcohol	Drugs
N/A	N/A

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

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

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

64. Equipment Damage This Consist: N/A

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

66. Primary Cause Code: N/A

67. Contributing Cause Code: N/A

Number of Crew Members

68. Engineer/ Operators	69. Firemen	70. Conductors	71. Brakemen
N/A	N/A	N/A	N/A

Length of Time on Duty

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

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

Casualties to:	74. Railroad Employees	75. Train Passengers	76. Other
Fatal	N/A	N/A	N/A
Nonfatal	N/A	N/A	N/A

77. EOT Device? 1. Yes 2. No: N/A

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

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

OPERATING TRAIN #3

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

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

82. Train Number/Symbol: N/A

83. Speed (recorded speed, if available) Code
R - Recorded
E - Estimated
N/A MPH 0

84. Trailing Tons (gross tonnage, excluding power units): 0

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

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

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

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

Alcohol	Drugs
N/A	N/A

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

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

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

91. Equipment Damage This Consist: $0.00

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

93. Primary Cause Code: N/A

94. Contributing Cause Code: N/A

Number of Crew Members

95. Engineer/ Operators	96. Firemen	97. Conductors	98. Brakemen
0	0	0	0

Length of Time on Duty

99. Engineer/Operator: Hrs 0 Mi 0

100. Conductor: Hrs 0 Mi 0

Casualties to:	101. Railroad Employees	102. Train	103. Other
Fatal	0	0	0
Nonfatal	0	0	0

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

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

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

Highway User Involved

107. 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) 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

Rail Equipment Involved

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

112. Position of Car Unit in: N/A

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

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

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

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

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

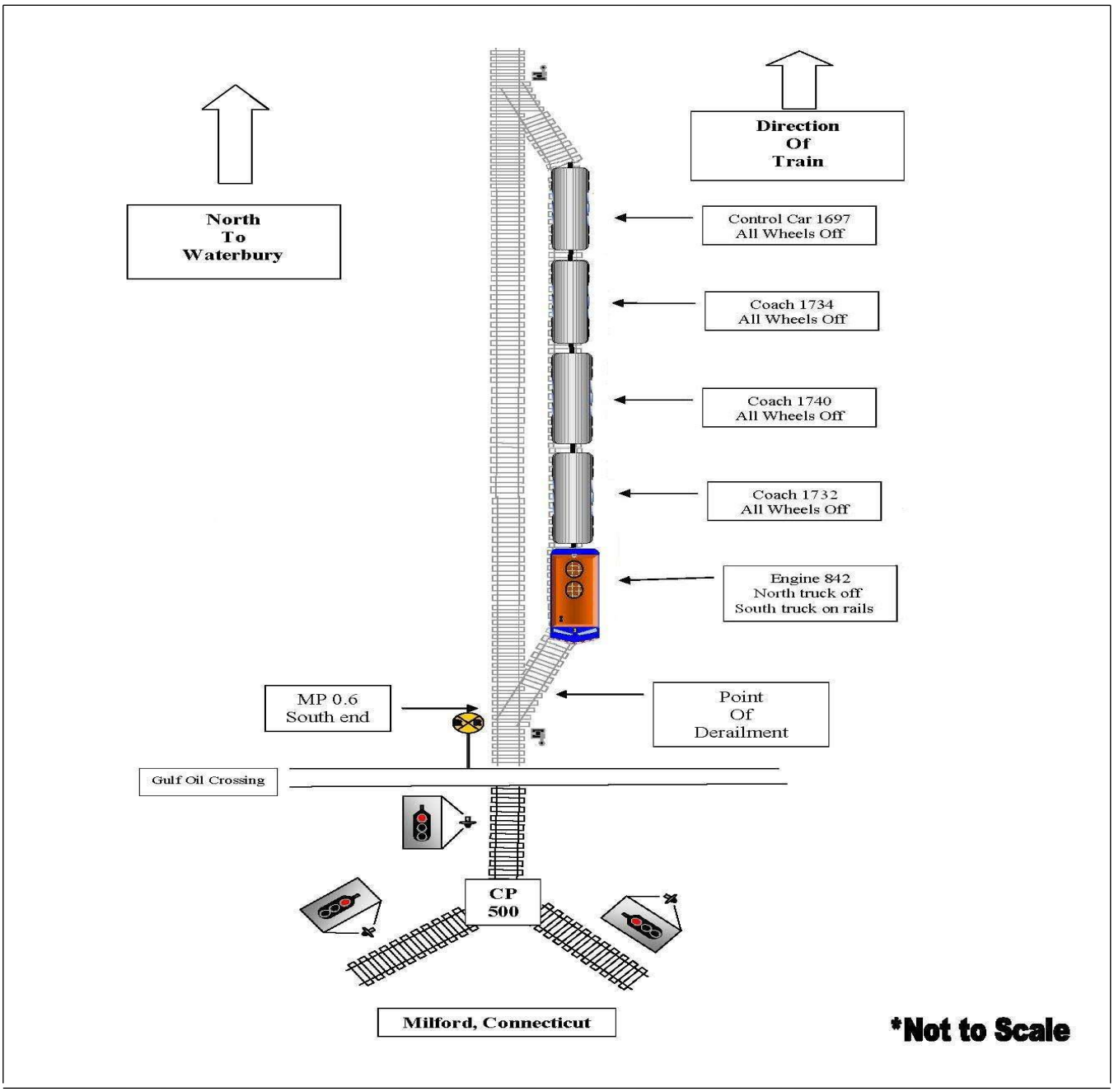
121. Age	122. Driver's Gender 1. Male 2. Female	Code	123. Driver Drove Behind or in Front of and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown	Code	124. Driver 1. Drove around or thru the Gate 2. Stopped and then Proceeded 3. Did not Stop 4. Stopped on Crossing 5. Other (specify in narrative)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

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

Casualties to:	Killed	Injured	127. Driver 1. Killed 2.Injured 3. Uninjured	Code	128. Was Driver in the Vehicle? 1. Yes 2. No	Code
				N/A		N/A
129. Highway-Rail Crossing Users	0	0	130. Highway Vehicle Property Damage (est. dollar damage)	0	131. Total Number of Highway-Rail Crossing Users (include driver)	0

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

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



137. SYNOPSIS OF THE ACCIDENT

At approximately 1:46 PM EDST June 21, 2007, Metro North Railroad northward commuter train Number 1926 derailed Control Car 1697, three additional coaches and Engine 842 (pushing) on the Waterbury Branch in Milford, CT. The train derailed at the south end of the hand operated switch to the Ballast Track at Mile Post 0.6. Train 1926 was operating at 47 MPH. A total of 38 passengers and crew were onboard the train when it derailed. Two crew members and two passengers experienced minor injuries. The weather was clear, temperature 72 degrees and it was daylight. The Rail Traffic Controller in Grand Central Terminal, New York City had previously instructed the driver on an on- track Track Patrol vehicle to leave the hand switch to the Ballast Track in the reverse position for a following movement of a Ballast Regulator to clear in that track. The Ballast Regulator instead cleared the Single Track at a hand switch known as Track 5 at Mile Post 0.3. The Rail Traffic Controller mistakenly thought Track 5 and the south end of the Ballast Track were the same location and recorded the Single Track as clear. A southward train, Number 1963, then trailed through the misaligned switch and damaged it. The engineer of the southward train did not observe the switch in the reverse position as his attention was diverted away from the track by activity at the Gulf Oil Highway Crossing just beyond the hand switch in the reverse position. Train 1926 later approached the switch and observed it in the reverse position but was unable to stop in time. The train entered the side track and derailed.

Probable cause : The cause of the derailment was a misaligned switch.

138. NARRATIVE

CIRCUMSTANCES PRIOR TO THE ACCIDENT

The accident took place on the Waterbury Branch of the Metro-North Railroad (MNCW). The Waterbury Branch extends north from the Metro-North New Haven Line at Milford, CT to Waterbury, CT, a distance of 26.9 miles. This branch is a Single Track without an automatic block signal system governing train movements. The Method of Operation is by a Manual Block Signal System whereby a written authority called a Form “M” is issued for each movement. Once a Form “M” has been issued for a movement, no other following or opposing movements are permitted within the limits stated in the Form “M”. Form “M”’s are issued for all train and track car movements.

At 10:55 a.m. on June 21, 2007, the Metro North Railroad District “F” Rail Traffic Controller (RTC) in Grand Central Terminal, New York, NY, issued a Form “M” Track Occupancy Authority to the Track Foreman in Track Car 2330 to operate from CP 261 in Milford, CT to Waterbury, CT on the Waterbury Branch. Prior to the RTC authorizing the movement of Track Car 2330, the RTC had a conversation with Track Car Driver concerning the operation of an on track Ballast Regulator from Bridgeport (CT) Yard to a siding known as Track 5 at Mile Post 0.3. The RTC advised the Track Foreman on Track Car 2330 that he intends to operate the Ballast Regulator into the limits of Track Car 2330's Form “M” to operate from CP 261 to the Ballast Track at Mile Post 0.6. Additionally, the RTC requested that the Track Foreman on Track Car 2330 operate the hand switch at the south end of the Ballast Track from the Single Track to the Ballast Track and leave the switch lined for the Ballast Regulator. The Track Foreman subsequently reversed the switch for the south end of the Ballast Track and departed for Waterbury.
The RTC issued the Ballast Regulator permission to operate from CP 261 to CP 500 and thence from CP 500 to Track 5 on the Form “M” Authority of Track Car 2330.

At 11:04 a.m., the Track Car Driver with the Ballast Regulator reported clear of the Single Track at Track 5, Mile Post 0.3 and the switch is “locked and lined for the Waterbury Main”. The Track Car Driver had not requested permission to operate the switch for Track 5 nor had he questioned the fact that although he was told the hand switch for “Track 5 south” was lined and the derail off (as the RTC advised the Track Car Driver

on the Ballast Regulator), the switch for Track 5 was lined normal for the Single Track and was locked. [Metro North Operating Rules require employees to request permission to operate hand operated switches in non-signaled territory.]

The RTC acknowledged the Ballast Regulator clear in "the switch".

Train 1963 Engine 6221 was issued Track Occupancy Authority at 12:13 p.m. to operate from Waterbury to Milford with a Clear Block between those points. At approximately 1:01 p.m., as Train 1963 was approaching a location known as the Gulf Oil Highway Crossing at Mile Post 0.5, the engineer stated that he observed activity at the crossing and was concentrating on sounding a warning signal for the crossing. He did not notice that the hand operated switch for the south end of the Ballast Track was in the reverse position with the switch target indicating red, or reverse. Train 1963 proceeded to trail through the switch and damaged it.

The Rail Traffic Controller was on duty for 7 Hours and 16 minutes at the time of the derailment, after being off duty for 16 hours, the required statutory off duty time period.

THE ACCIDENT

At 1:29 p.m., the RTC issued Form "M" Number F-25 to Train 1926 control car 1697 to operate from Milford to Beacon Falls with a Clear Block. As Train 1926 was accelerating out of the curve at CP 500 and traveling at a speed of 47 MPH, the engineer and conductor observed the switch for the south end of the Ballast Track to be lined in the reverse position. The engineer placed the train in "emergency" braking. At 1:46 p.m., the train entered the south end of the Ballast Track and derailed the Control Car 1697, the second coach Number 1734, the third coach Number 1740, the fourth coach Number 1732 and the north truck of Engine 842.

The track layout in the accident area is tangent track. The Timetable Direction of Train 1926 is North. The geographic direction is North.

The recorded speed of the train approaching the point of derailment was 47 miles per hour. The speed of the train when derailing was estimated at 25 miles per hour. The maximum authorized speed in the accident location is 59 miles per hour.

ANALYSIS AND CONCLUSIONS

FRA's investigation concluded the probable cause of the accident was a misaligned switch. Contributing factors were the Rail Traffic Controller (RTC) confusing the locations of Track 5 with the south end of the Ballast Track and Southward train 1963's failure to notice the red switch target, meaning the switch was misaligned. When interviewed by FRA, the RTC stated that he thought Track 5 and the south end of the Ballast Track were the same place. Review of radio and telephone tape recordings of the activities and conversations between the RTC and the Track Foremen and the Track Car Driver further substantiated the confusion the RTC had with the two locations.
Additionally, the Track Car Driver operating the Ballast Regulator failed to obtain permission to operate the hand switch for Track 5 as required by Metro North Rules. The Track Car Driver also did not question the RTC when he had previously been told that the switch and derail for Track 5 south was lined for him and he did not find this true when he arrived there.

An additional concern was the failure of the engineer of train 1963 to notice that the switch position target for the south end of the Ballast Track was indicating red, or reverse. A switch target is a fixed signal that is placed on a hand switch to indicate its position. Even though the speed of Train 1963 approaching the south end of the Ballast Track was probably too fast to stop before trailing through it, the engineer would have reported the misaligned switch, thereby avoiding the derailment of Train 1926.

It is also noted that Metro North does not stress to its operating employees the importance of previewing the indications given by switch position targets, particularly in non-signaled territory. This is illustrated by the fact that the crew of Train 1963 passed a switch position target indicating the switch was in the reverse position, trailed through a reversed position hand operated switch, and did not observe either.

ACTIONS TAKEN BY THE RAILROAD

As a result of the derailment of Train 1926 at Milford, CT on June 21, 2007, Metro North changed its procedures regarding operation of hand operated switches. Metro North Bulletin Order Number 4-65 (Hudson), 4-42 (Harlem), 4-93 (New Haven) and 4-16 (Beacon) issued July 3, 2007 requires that hand operated switches in Manual Block System (MBS) territory may not be operated without permission of the RTC. This procedure changed Operating Rule 12-K which allowed employees to operate a hand switch without RTC permission at a meeting point. Additionally, the same employee that operated the switch must restore and lock the switch in the normal position when the switch is no longer in use.

Metro North instituted the following steps to enhance operations in Manual Block System (MBS) territory:

- Review and enhance initial physical characteristics qualifications for Rail Traffic Controllers

- Revise Operating Rules to clarify the requirements for movement of multiple track cars under a Form "M" Line 1 or 2 movement authority. This requirement was instituted by Bulletin Order Number 4-76 (Hudson), 4-51 (Harlem), 4-107 (New Haven), and 4-18 (Beacon).

- Issued a revised RTC Switch Position Record for MBS Territory form which requires more comprehensive information to reflect the changes to Rule 12-K.

- Re-instructed all Maintenance of Way employees on the requirements of operating hand throw switches and the rule to obtain RTC permission to operate them.

- Increase efficiency testing on all radio rules.

- Develop an RTC communications and evaluation program.

ACTIONS TAKEN BY THE FRA

FRA Issued two violations to Metro North for violation of 49CFR Part 220 Railroad Communications. Both violations were connected to the derailment of Train 1926. Both violations concerned failure of the Rail Traffic Controller to repeat vital information given to him from the field which may have alerted him to the fact that the hand operated switches he was relating to for the movement of the Track Cars were not the same switches.

FRA also issued three violations of Emergency Order Number 24. These were for the following:

- Failure to make the required entry in the Switch Position Awareness Form (in this case, the RTC's record) with respect to the position of a specific hand operated switch in non-signaled territory. No record was made of the south end of the Ballast Switch at Mile Post 0.6.

- Failure to record the position of a hand operated switch before reporting clear of the limits of the main track authority.

- Failure of the RTC to confirm the position of a switch before clearing the limits of an authority.

PROBABLE CAUSE AND CONTRIBUTING FACTORS

Contributing factors, as noted by the Federal Railroad Administration, were the failure of the Rail Traffic Controller to be fully qualified on the physical characteristics of the district which he was dispatching. Also, failure of those involved in the event (the RTC, the Track Foreman and the Track Car Driver) to follow the prescribed radio procedures and repeating back critical information when provided with this information over the radio.

A causal factor is the failure of Metro North to enforce its operating rules regarding Emergency Order Number 24 and the Relief from this waiver granted FRA on March 16, 2006. Specifically, not maintaining an accurate Switch Position Awareness Form and not ensuring employees working on non-signaled territory are qualified on the physical characteristics.

PROBABLE CAUSE:

The cause of the accident, as determined by the FRA, was a misaligned switch.