Federal Railroad Administration
Office of Safety
Headquarters Assigned
Accident Investigation Report
HQ-2007-13

CSX Transportation (CSX)
Oneida, New York
March 12, 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-2007-13

1.Name of Railroad Operating Train #1: CSX Transportation [CSX]	1a. Alphabetic Code: CSX	1b. Railroad Accident/Incident No.: 000029622
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: CSX Transportation [CSX]	4a. Alphabetic Code: CSX	4b. Railroad Accident/Incident No.: 000029622
5. U.S. DOT_AAR Grade Crossing Identification Number:	6. Date of Accident/Incident: Month 03 Day 12 Year 2007	7. Time of Accident/Incident: 07:00:00 ☑ 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
42	22	6	200	Albany

14. Nearest City/Town	15. Milepost (to nearest tenth)	16. State Abbr	16. State Code	17. County
Oneida	266	N/A	NY	MADISON

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
37 F		1		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.	Code
Main 2		4	103		3

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
	1	1. Yes	1	Q390-10

29. Speed (recorded speed, if available) R - Recorded E - Estimated	Code
47 MPH	R

30. Trailing Tons (gross tonnage, excluding power units): 9492

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)				
e	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)	CITX34968	25	yes
(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): N

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	3	0	0	0	0
(2) Total Derailed	0	0	0	0	0

36. Cars	Loaded a. Freight	Loaded b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Equipment Consist	77	0	1	0	0
(2) Total Derailed	29	0	0	0	0

37. Equipment Damage This Consist	38. Track, Signal, Way, & Structure Damage	39. Primary Cause Code	40. Contributing Cause Code
1421596	650000	T220	N/A

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 4 Mi 30	Hrs 4 Mi 30

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

50. EOT Device? 1. Yes 2. No	51. Was EOT Device Properly Armed? 1. Yes 2. No
1	1

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	1. Yes	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

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 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

86. 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

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	N/A	N/A	N/A	N/A	N/A
(2) Total Derailed	N/A	N/A	N/A	N/A	N/A

90. 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

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

95. Engineer/ Operators	96. Firemen	97. Conductors	98. Brakemen
N/A	N/A	N/A	N/A

Length of Time on Duty

99. Engineer/Operator Hrs N/A Mi N/A

100. Conductor Hrs N/A Mi N/A

Casualties to:	101. Railroad Employees	102. Train	103. Other
Fatal	N/A	N/A	N/A
Nonfatal	N/A	N/A	N/A

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. 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)

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

109. geographical) Code N/A
1.North 2.South 3.East 4.West

Rail Equipment Involved

111. 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)

112. Position of Car Unit in N/A

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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 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								116. Signaled Crossing (See instructions for codes)	Code N/A	117. Whistle 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				

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	Code N/A

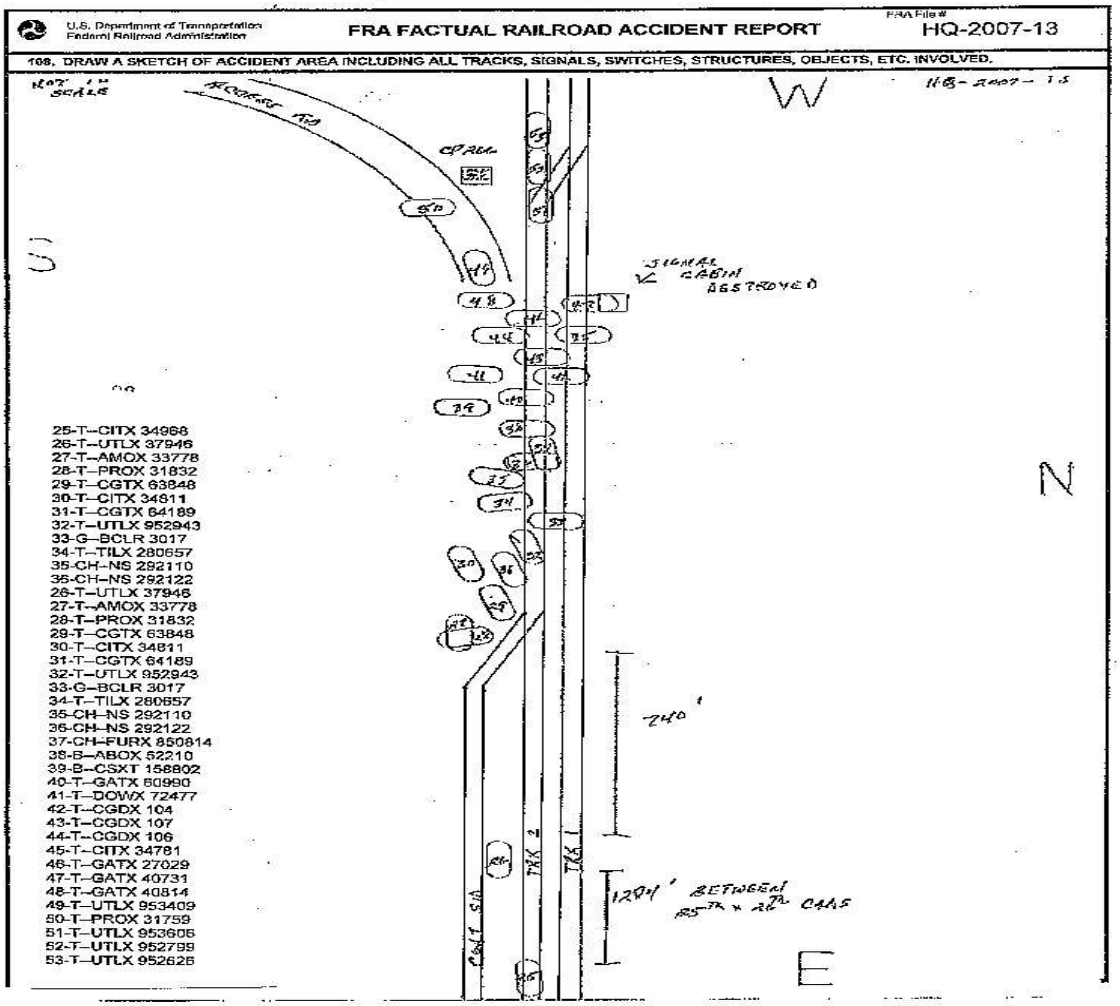
121. Age N/A	122. Driver's Gender 1. Male 2. Female	Code N/A	123. Driver Drove Behind or in Front of and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown	Code N/A	124. Driver 1. Drove around or thru the Gate 2. Stopped and then Proceeded 3. Did not Stop 4. Stopped on Crossing 5. Other (specify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

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	Code N/A
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)	N/A

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 Monday, March 12, 2007, at 7 a.m., CSX Transportation mixed freight train Q 310-10, consisting of 3 locomotives and 78 cars (77 loads and 1 empty), operating eastbound on main track 2 at milepost QC 266 on the Albany Division Mohawk Subdivision in Oneida, New York, Madison County, at a recorded speed of 47 mph, derailed 29 cars (the 25th thru 53rd head end).

The method of operation is by signal indications of a Traffic Control System (tracks signaled in both directions).

22 of the derailed cars contained hazardous material as follows; 19 Liquified Propane Gas, 1 Ferric Chloride, 1 Butane, and 1 Toluene. It was estimated that within 2 minutes from the initial derailment that 4 of the LPG cars were breached, vented, and eventually exploded.

The Oneida Fire Chief initially ordered a one mile evacuation around the area which involved 200 residents and was later reduced in the afternoon to a half mile and involved approximately 17 residents which remained evacuated until 1 p.m. on Thursday, March 15, 2007.

The New York State Thruway was closed between exits 33 and 34A and all local roads around the derailment scene.

Amtrak service was suspended and passengers were initially bussed between Syracuse and Rensselaer, NY.

The weather at the time of the accident was 37 º F, under clear skies with a northwest wind of 5 mph.

Damage was estimated at $2,071,596 and there were no injuries to the crew or nearby residents.

The probable cause was a broken rail (Transverse Defect) which was located in the south rail left-hand stock rail in the #20 crossover switch (1B) on track two, a trailing point move for the eastbound train.

138. NARRATIVE

CSX Train Q 390-10 originated in Chicago, Illinois on March 10, 2007 at 11:10 p.m. with 2 locomotives, 36 loads and 1 empty with 4511 tons and 2750 feet in length. It then changed crews at Garrett, Indiana on March 11 at 8:30 a.m. and proceeded east to Willard, Ohio where it again changed crews and made a pick up of 42 cars. The train then departed Willard on March 11 at 5:01 p.m. with a consist of 77 loads and 1 empty, 9492 tons and 5243 feet in length for the next crew change point in Buffalo, New York.

At Buffalo, the train was called for 2:30 a.m. on March 12 with 3 locomotives, 77 loads and 1 empty destined for its final terminal in Selkirk, New York. The train departed Buffalo on March 12 at 2:58 a.m. after receiving a brake test. The crew consisted of a conductor and engineer and both went on duty at 2:30 a.m. EST in Buffalo, NY at CSX's Frontier Yard after receiving an off duty period of 10 hours and 25 minutes. The engineer was operating the train seated in the engineer's seat on the south side of the locomotive and the conductor was seated on the north side of the locomotive and both crew members had been on duty for 4 hours and 30 minutes. The crew stated they had no problems with the train between Buffalo and Oneida, NY. At 6:22 a.m. the train passed over the Syracuse Hot Box/Dragging Equipment Detector at milepost QC 293.1 on track 2. No defects were detected and no exceptions taken with the train or speed. Approximately 20 minutes later at 6:42 a.m. and 13 miles further east, the train passed over the Kirkville, NY Hot Box/Dragging Equipment Detector at milepost QC 280.0 on track 2. Again no exceptions were taken either with the train or speed.

At 7 a.m., train Q 390-10 while traveling east on track 2 at CP 266, milepost QC 266, experienced rough track in the number 1B switch (trailing point move) and soon after had a train line initiated undesired emergency brake application. While the train was coming to a stop, the crew observed sparks, flames and multiple explosions in their train. They notified the dispatcher that their train was in emergency and evacuated to a safe area.

Earlier in the morning, at 4:05 a.m., train Q 117-11 while traveling westbound on track 2 through this area experienced an undesired emergency brake application. The crew walked their train and found nothing wrong. Unable to reset the trains air brake system, they found that the engineer's seat in the second locomotive had rotated around and struck the brake handle causing the brakes to apply. Upon resetting the brake properly, there were no further problems and the train continued westbound.

The next train to pass over this section of track was train Q 161-11, at 5:36 a.m., also traveling westbound on track 2. The dispatcher instructed train Q 161-11 to operate at restricted speed (not exceeding 15 MPH) between CP 266 and milepost QC 267 as is required by CSXT operating rule 90 part 6 a. The train crew reported to the dispatcher that they saw nothing out of normal conditions in this area and continued west.

Traveling in an eastbound direction, starting at milepost QC 268.6, there is approximately 2.6 miles of tangent track before entering the Number 20 turnout (1B switch) in a trailing point move on Number 2 track at CP 266. From milepost QC 268.6 to milepost QC 267 there is a 0.25 percent ascending grade and from milepost QC 267 to milepost QC 265.6 there is a 0.25 percent descending grade.

On March 8, 2007, a CSXT track inspector designated under 49 CFR Part 213.7(a) last visually inspected the track in the derailment area and noted no defects at milepost QC 266.

The CSXT Geometry car TGC2 last tested the main track in a westward direction on October 2, 2006 with no critical geometry deficiencies found between milepost 265 and 267. CSXT's GRMS vehicle also tested this track on July 5, 2006 with no exceptions found.

The last test to inspect for internal rail defects at the proper frequency required by 49 CFR 213.231(a) was conducted by Sperry Rail Service on November 9, 2006 with no rail defects being found between milepost QC 257.9 and milepost QC 266.7. The test records indicate that the Sperry Rail Test operator did stop at milepost QC 266 and performed a hand test on the south stock rail on track 2 (1B) switch because of some shelly spots but no defects were found.

The Accident

According to CSX Transportation Timetable No. 4 effective November 1, 2004, the timetable speeds for trains in the vicinity of CP 266 are 50 mph for mixed freight, 60 mph for intermodal and 79 mph for passenger trains. These speeds place the track under FRA Class 4 conditions and the track is required to be inspected on a twice weekly basis.

Train movements on the Mohawk Subdivision are governed by operating rules, timetable instructions and the signal indications of a traffic control system (TCS).

Train Q 390-10 approached the accident area at a recorded speed of 47 mph on number 2 track in an eastward direction on a clear signal indication in throttle 2 position. Because of the number of hazardous material cars in the train, Q 390-10 was classified as a Key Train with a maximum authorized timetable speed of 50 mph.

While traveling through CP 266, in the vicinity of the 1B switch, both crew members heard a loud "pop" from the track structure and looked in the rear view mirrors and saw sparks in the vicinity of the "pop." Before the crew could respond, the train experienced an undesired emergency brake application. Because radio communications were disrupted, the conductor notified the dispatcher by cell phone that their train had derailed and was on fire. Radio communications were later restored using another base station.

The City of Oneida Fire Chief was on his way to work when he saw the flames and called for assistance and ordered an initial evacuation of a one mile radius around the area. An incident command post was established about 1 mile south of the derailment scene.

Two elementary schools and numerous businesses were closed. Local roads in the area and the New York State Thruway (I-90) were closed between exits 33 and 34A. The initial evacuation area consisted of approximately 117 properties and 200 people. The evacuation zone was reduced that afternoon to one half mile with 8 properties and approximately 17 residents involved until the evacuation was lifted at 1 p.m. on Thursday, March 15, 2007. The Thruway was reopened Monday afternoon at 2:43 p.m..

The derailment involved a total of 29 cars of which 22 cars were required to be placarded under the Hazardous Materials Regulations (49 CFR Part 172). The derailed cars contained the following; 19 Liquified Propane Gas UN 1075, 1 Ferric Chloride UN 2582, 1 Butane UN 1075, and 1Toluene UN 1294. Eighteen of these cars continued to burn into Friday.

Analysis

The CSX Albany Division, Mohawk Subdivision, runs in a timetable east/west direction between the Selkirk Subdivision (MP QC 175.5 and the Rochester Subdivision (MP QC 296.8). It consists of a double main line track with track number 1 to the north and track number 2 to the south.

The point of derailment (POD) occurred on the straight stock rail (south rail) in the number 20 turnout (1B) switch at CP 266 on track number 2. The break (Transverse Fissure) was found adjacent to the switch point approximately 55.5 inches west of the east end of the switch point.

Construction at each end of the crossover consisted of 136 lb. NYC 1965 continuously welded rail (CWR) installed in 1965 and was seated in 14 by 7 3/4 inches double shoulder tie plates on timber crossties on Granite rock ballast with box anchoring every other tie. The rail was fastened with conventional six inch cut track spikes. The spiking patter consisted of two rail holding spikes on the gage side of the rail and one spike on the field side. The number 20 turnout (1B switch) consisted of 136 lb. Bethlehem Steelton CWR rolled in March of 1993. Rail fasteners are Pandrol Clips on Pandrol plates fastened to the crossties with lag screws. The track was last timbered and surfaced in 2004.

The rail break displayed batter on both ends of the rail indicating train movements in both directions over the broken rail. Track 2 was destroyed from the broken rail east for approximately 700 feet with another approximate 1000 feet of track sustaining moderate damage. Number 1 track was also damaged for approximately 280 feet. Rail marks on the tread of the wheels on the locomotives and the first 24 cars that did not derail indicated that these marks were caused by the wheels traversing the broken rail.

Post accident inspection of the track from the west end of the derailment walking west from the west end of the undisturbed track toward the east found there were no visual exceptions.

Track measurements were taken at 15 locations (stations) on 15 foot 6 inch intervals beginning at the last portion of undisturbed track and extended west for 232.5 feet and it was determined that there were no exceptions to the geometry standards for FRA Class 4 track.

It was determined that the rail had been broken prior to the passing of train Q 390-10 due to the rail end batter displayed on both ends of the break.

It was also determined that because of the location of the break in the switch area, that a signal was not indicated to the dispatcher because the broken rail was located on the switch plates and did not allow for an interruption of the signal circuit.

It was determined that the first car to derail was the 25th head car, CITX 34968, a loaded tank of Liquified Propane Gas, UN 1075. This car and the head end of the train continued east and eventually stopped with the derailed 25th car approximately 740 feet east of the general pile up area.

The following 28 cars continued to derail in an accordion fashion toward the south side of the track. Initially 4 of the propane cars were breached, vented and exploded with the ensuing fires damaging 18 of the derailed cars which continued to burn through the week.

Once the derailment site was determined safe for entry, CSX Transportation and Oneida County Hazardous Material Teams made a decision to pressurize the cars that were burning to expedite the burn off process and transfer the loads that were not involved in fire. All fires were extinguished by approximately 04:00 a.m. on Friday, March 16, 2007.

The Q 390-10 crew was transported to the Oneida Healthcare facility for mandatory FRA Post Accident Toxicological Testing as required under 49 CFR Part 219, Subpart C, at approximately 11:30 a.m.

Conclusion

The crew of CSX Transportation Train Q 390-10 was operating their train in full compliance with their own and all applicable Federal standards.

The track was inspected in compliance with all Federal requirements under 49 CFR 213.233(c) for twice weekly inspections and for internal rail testing under 49 CFR 213.231(a).

The City of Oneida Fire Chief immediately called for assistance and within 30 minutes of the derailment had established an Incident Command Post near the scene and continued to coordinate the operation with emergency responders, federal, state and county officials, CSX Transportation officials and Hazardous Material teams from Madison County and CSX throughout the week.

There were no injuries to the crew or local residents.

FRA's investigation determined the probable cause to be a broken rail (Transverse Defect) which was located in the south rail left-hand stock rail in the #20 crossover switch (1B) on track two, a trailing point move for the eastbound train. It was determined that this rail was apparently broken previous to the arrival of the eastward train evidenced by the rail end batter found on both ends of the broken rail.