Federal Railroad Administration
Office of Safety
Headquarters Assigned
Accident Investigation Report
HQ-2008-48

Canadian National-North America (CN)
Crystal Springs, MS
May 27, 2008

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-2008-48

1.Name of Railroad Operating Train #1: Amtrak [ATK]	1a. Alphabetic Code: ATK	1b. Railroad Accident/Incident No.: 108129
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: Canadian National - North America [CN]	4a. Alphabetic Code: CN	4b. Railroad Accident/Incident No.: 596181

5. U.S. DOT_AAR Grade Crossing Identification Number: 299824D	6. Date of Accident/Incident: Month 05 | Day 27 | Year 2008	7. Time of Accident/Incident: 01:00: ☐ 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: 07

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

14. Nearest City/Town	15. Milepost *(to nearest tenth)*	16. State Abbr / Code	17. County
Crystal Springs	751.2	N/A / MS	COPIAH

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
90 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
single main	4	23	2

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
2	1	P05991-26

29. Speed *(recorded speed, if available)* R - Recorded E - Estimated — Code	31. Method(s) of Operation *(enter code(s) that apply)*	31a. Remotely Controlled Locomotive?
79 MPH / R	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)*	0 = Not a remotely controlled; 1 = Remote control portable; 2 = Remote control tower; 3 = Remote control transmitter - more than one remote control transmitter
30. Trailing Tons *(gross tonnage, excluding power units)*: N/A	Code(s): e / N/A / N/A / N/A / N/A	0

32. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded *(yes/no)*
(1) First involved *(derailed, struck, etc)*	ATK 7	1	N/A
(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: N/A; Drugs: N/A

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	1	0	0	0	0
(2) Total Derailed	1	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	0	6	0	0	0
(2) Total Derailed	0	1	0	0	0

37. Equipment Damage This Consist	38. Track, Signal, Way, & Structure Damage	39. Primary Cause Code	40. Contributing Cause Code
$1,200,000.00	$65,928.00	M302	N/A

Number of Crew Members

41. Engineer/ Operators	42. Firemen	43. Conductors	44. Brakemen
2	0	2	0

Length of Time on Duty

45. Engineer/Operator	46. Conductor
Hrs 2 Mi 10	Hrs 4 Mi 30

Casualties to:	47. Railroad Employees	48. Train Passengers	49. Other
Fatal	0	0	0
Nonfatal	8	16	2

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: 2

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	58. Method(s) of Operation *(enter code(s) that apply)*	58a. Remotely Controlled Locomotive?
N/A MPH / N/A	a. ATCS; b. Auto train control; g. Automatic block; h. Current of traffic; m.Special instructions; n. Other than main track	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 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 B
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)* 5

109. *geographical)* Code 4
1.North 2.South 3.East 4.West

Rail Equipment Involved

111. Equipment Code 1
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 1

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110. Position	Code	113. Circumstance	Code
1.Stalled on Crossing 2.Stopped on Crossing 3.Moving Over Crossing 4. Trapped	3	1. Rail Equipment Struck Highway User 2. Rail Equipment Struck by Highway User	1
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	4	114b. Was there a hazardous materials release 1. Highway User 2. Rail Equipment 3. Both 4. Neither	4

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)	07	08	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		2

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
	1		N/A		2

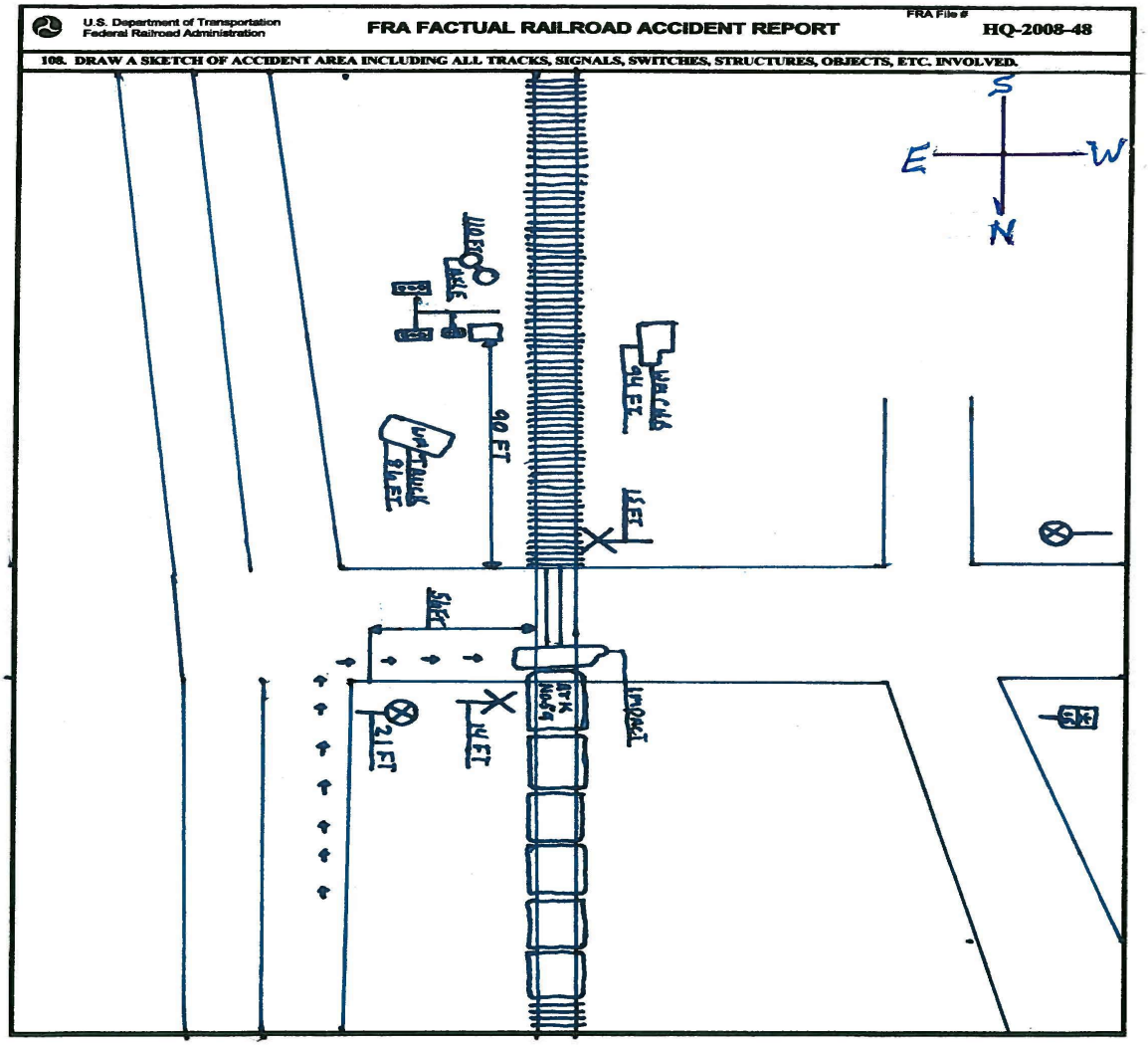
121. Age	122. Driver's Gender 1. Male 2. Female	Code	123. Driver Drove Behind or in Front of and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown	Code	124. Driver 1. Drove around or thru the Gate 2. Stopped and then Proceeded 3. Did not Stop 4. Stopped on Crossing 5. Other *(specify in narrative)*	Code
44		1		2		3

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
	2		8

Casualties to:	Killed	Injured	127. Driver 1. Killed 2.Injured 3. Uninjured	Code	128. Was Driver in the Vehicle? 1. Yes 2. No	Code
				2		1
129. Highway-Rail Crossing Users	0	2	130. Highway Vehicle Property Damage *(est. dollar damage)*	70000	131. Total Number of Highway-Rail Crossing Users *(include driver)*	2

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

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



137. SYNOPSIS OF THE ACCIDENT

On May 27, 2008, at 1:00 p.m., CDT, southbound Amtrak (ATK) Train P05991-26 struck a westbound Waste Management garbage truck at Hartley Lane/County Line Road, a non-signaled highway-rail grade crossing. The accident occurred in Crystal Springs, Copiah County, Mississippi (MS). The crossing is located at mile post (MP) 751.20 on the Canadian National (CN) Central Division of the McComb Subdivision. The crossing DOT/AAR No. is 299 824 D. The method of operation for the single Main Track is signal indication of a Traffic Control Signal System (TCS). The maximum authorized speed is 79 miles per hour (mph).

The male Waste Management truck driver was injured and admitted in the Intensive Care Unit under life support. The driver's male assistant was also injured and spent two weeks in the hospital, however he was sent home in stable but serious condition. Amtrak reported sixteen injuries to rail passengers. The injuries consisted of bruises and sprains. The passengers were treated at a medical facility and released. There were eight injuries sustained by six Amtrak employees on the train. The engineer, age 57, sustained a broken ankle. The conductor, age 53, and the assistant conductor sustained nose injuries. Two train attendants, ages 45 and 61, sustained shoulder injuries and one had a bruise to the head. An off duty train attendant, age 42, sustained a bruised knee and a lower back sprain.

The lead end of the lead locomotive derailed, along with the lead end of the last passenger coach car in the train. Emergency responders extinguished a fire on the lead locomotive. Total damages reported are $1,200,000 for rail equipment and $65,928 for signal and track structure. The Waste Management truck valued at $75,000 was completely destroyed.

The accident occurred during daylight hours, the weather was clear, and sight distance was unlimited. The temperature at the time was 90 °F.

The probable cause of the accident was driver inattentiveness and the failure of the Waste Management garbage truck to yield the right of way to the approaching Amtrak passenger train.

138. NARRATIVE

CIRCUMSTANCES PRIOR TO THE ACCIDENT

On May 27, 2008, Amtrak Train P05991-26 (ATK 59) originated in Chicago, Illinois (IL). The train consisted of one locomotive, Number ATK 7, with one baggage car, one view-liner, one diner car, one lounge car, and two passenger coach cars for a total of six cars. At Chicago, IL, a Class 1 train air brake test was performed at 3:00 p.m. on May 26, 2008. ATK 59 departed Chicago en route to Jackson, MS, a crew change point and station stop. The new Amtrak crew boarded ATK 59, at Jackson, MS and consisted of a locomotive engineer, a manager of engines, a conductor, and an assistant conductor, with their home terminal being New Orleans, Louisiana (LA). The locomotive engineer reported for duty at Jackson, MS at 10:50 a.m. after receiving 17 hours and 13 minutes rest. The conductor reported for duty at Jackson, MS at 8:30 a.m. after receiving 12 hours and 38 minutes rest. The assistant conductor reported for duty at Jackson, MS at 8:30 a.m. after receiving 12 hours and 22 minutes rest. All the hours of service employees involved had received the required statutory off duty rest period.

Amtrak P05991-26 was traveling at 79 mph as it reached Hartley Lane highway-rail grade crossing on the single Main Track. The engineer was at the controls of the lead locomotive and the manager of engines was seated in the conductor seat of the lead locomotive. The conductor was in the diner car and the assistant conductor was in the view-liner car performing their normal duties.

The single Main Track is tangent with a 0.21 percent ascending grade approaching Hartley Lane. Hartley Lane highway-rail grade crossing is equipped with passive warning devices consisting of cross-bucks and stop signs located on both sides of the tracks. Mississippi Department of Transportation (MDOT) does not have a survey of highway user traffic information for this highway-rail grade crossing.

The CN timetable and the geographic direction for the train are south. Timetable directions are used in this report.

THE ACCIDENT

AMTRAK PASSENGER TYRAIN P05991-26:
The engineer stated that he was at the controls of Locomotive ATK 7 on passenger Train P05991-26, traveling southbound on the CN Main Track approaching Hartley Lane at 1:00 pm. The train was traveling 79 mph, as recorded by the onboard event recorder of the lead locomotive (ATK 7). The maximum authorized speed for this line segment is 79 mph, as designated in the current CN Central Division Time Table. The engineer stated that he laid on the horn as he saw the Waste Management garbage truck pull in-front of the train. The engineer put the train in emergency, and he and the manager ducked their heads and braced for the collision. Amtrak Train P05991-26 was traveling southward toward the crossing; the garbage truck was traveling in an east to west direction across the crossing prior to impact.

WASTE MANAGEMENT GARBAGE TRUCK:
The Waste Management garbage truck was traveling westward across the crossing when ATK 7 struck the truck square in the large waste container. The force of the impact caused the truck to rotate clockwise 360 degrees and break into three pieces. The truck destroyed the stop signs, the cross-buck signs, and damaged an intermediate signal location device. The full waste container was separated from the truck and came to a rest on the east side of the tracks approximately 86 feet from point of impact. The lead locomotive stopped 2,200 feet south of the point of impact.

After the train stopped, the engineer made an emergency radio transmission and notified the CN Dispatcher of the accident. The CN Dispatcher contacted the local Police and Emergency Service personnel. The engineer, manager of engines, and the conductor were injured, so the assistant conductor remained aboard the train and attended to passenger needs. According to Copiah County Sheriff's Department, the two occupants of the truck were ejected. Copiah County Fire and Rescue responded and rendered emergency aid to the train employees and the passengers. A Copiah County Sheriff's Department Officer was notified at 1:02 p.m. and arrived at the scene at 1:12 p.m. Copiah County Fire and Rescue was notified at 1:00 p.m. and arrived at the scene at 1:13 p.m.

The six Amtrak employees were transported by emergency vehicles to a hospital in Jackson, MS. Sixteen passengers were transported to a nearby medical facility in Crystal Springs by ambulance, and the two Waste Management employees were transported by Life Flight to University Medical Center in Jackson, MS.

ANALYSIS AND CONCLUSION:

The garbage truck involved was a 2003 Mack MR-6 Rear-end-loader configured in order to transport residential waste. The container was almost full at the time of the accident. The operator is a male, age 44. The male passenger/helper riding in the truck passenger's seat was age 57. They were the only vehicle occupants.

No toxicological tests were performed on the highway users or the train crew members.

After the accident, Amtrak Mechanical personnel responded from the New Orleans Shop Facility at New Orleans, LA. The mechanical personnel made emergency repairs to allow Amtrak Passenger Train ATK 59 to be moved to Brookhaven, MS.

Hartley Lane is a two lane asphalt road 20 ft wide and runs in an east/west direction. The street has a posted speed limit of 15 mph and enters into a residential housing area with no other access. The highway-rail grade crossing is equipped with two stop signs and two cross-buck signs. The whistle posts are located on the railroad right-of-way 1,500 feet north and south of the crossing. There are no pavement stop bars. There are two crossing warning signs with one placed twenty-one feet east of the crossing and one placed 150 ft west of the crossing. A vehicle operator's sight distance at Hartley Lane grade crossing for east to west movement is 5,000 feet in either direction.

A Federal Railroad Administration (FRA) inspection of the highway-rail grade crossing did not reveal any conditions that would have contributed to the accident.

The lead locomotive was equipped with a headlight, auxiliary lights, and audible warning device as required by Federal Regulations. These devices were tested and found to be functioning properly at Chicago, IL, prior

to departure. The lead locomotive was equipped with a speed indicator and an event recorder as required. The event recorder data was downloaded in New Orleans, LA, by Amtrak Mechanical personnel. The analysis disclosed that the engineer was in compliance with all railroad operating and train handling requirements.

ANALYSIS: - FATIGUE:

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

CONCLUSION:

Upon analysis of that information FRA concluded that fatigue was not probable for any of the employees.

PROBABLE CAUSE

FRA determined the probable cause of the accident was driver inattentiveness and the failure of the Waste Management garbage truck operator to yield the right of way to the oncoming Amtrak passenger train.