Federal Railroad Administration
Office of Safety
Headquarters Assigned
Accident Investigation Report
HQ-2005-06

CSX Transportation (CSX)
Banks, Alabama
January 11, 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-2005-6

1.Name of Railroad Operating Train #1	1a. Alphabetic Code	1b. Railroad Accident/Incident No.
CSX TRANSPORTATION	CSX	R000009398
2.Name of Railroad Operating Train #2	2a. Alphabetic Code	2b. Railroad Accident/Incident
CSX TRANSPORTATION	CSX	R000009398
3.Name of Railroad Responsible for Track Maintenance:	3a. Alphabetic Code	3b. Railroad Accident/Incident No.
CSX Transportation [CSX]	CSX	R000009398

4. U.S. DOT_AAR Grade Crossing Identification Number	5. Date of Accident/Incident			6. Time of Accident/Incident
	Month	Day	Year	06:05: ☑ AM ☐ PM
	01	11	2005	

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) — **02**

8. Cars Carrying HAZMAT	9. HAZMAT Cars Damaged/Derailed	10. Cars Releasing HAZMAT	11. People Evacuated	12. Division
18	0	0	0	Jacksonville

13. Nearest City/Town	14. Milepost (to nearest tenth)	15. State Abbr	15. State Code	16. County
Banks	AN0839.8	N/A	AL	PIKE

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
47 F		4		4		3

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
Banks Siding		1	31.5		2

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: 1

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

27. Train Number/Symbol: A73710 S

28. Speed (recorded speed, if available) R - Recorded E - Estimated: 0 MPH — Code: R

29. Trailing Tons (gross tonnage, excluding power units): 4942

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)				
k	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; 2. South 4. West: 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	3	0	0	0	0
(2) Total Derailed	1	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	60	0	9	0	0
(2) Total Derailed	0	0	0	0	0

36. Equipment Damage This Consist	37. Track, Signal, Way, & Structure Damage	38. Primary Cause Code	39. Contributing Cause Code
155000	0	H702	N/A

Number of Crew Members / Length of Time on Duty

40. Engineer/ Operators	41. Firemen	42. Conductors	43. Brakemen	44. Engineer/Operator	45. Conductor
N/A	0	0	0	Hrs 0 Mi 0	Hrs 0 Mi 0

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 — 2

OPERATING TRAIN #2

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

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

54. Train Number/Symbol: Q65009 N

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

57. Method(s) of Operation (enter code(s) that apply): a. ATCS; b. Auto train control; g. Automatic block; h. Current of traffic; m.Special instructions; n. Other than main track

57a. Remotely Controlled Locomotive? 0 = Not a remotely controlled; 1 = Remote control portable

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56. Trailing Tons (gross tonnage, excluding power units)	c. Auto train stop d. Cab e. Traffic f. Interlocking	i. Time table/train orders j.Track warrant control k. Direct traffic control l.Yard limits	o. Positive train control p. Other (Specify in narrative) Code(s)	2 = Remote control tower 3 = Remote control transmitter - more than one remote control transmitter
7351			k N/A N/A N/A N/A	0

58. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded (yes/no)	59. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.	Alcohol	Drugs
(1) First involved (derailed, struck, etc)	CSXT4 01	1	N/A		0	0
(2) Causing (if mechanical cause reported)	0	0	N/A	60. Was this consist transporting passengers? (Y/N)		N

61. Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End c. Remote
(1) Total in Train	8	0	0	0	0
(2) Total Derailed	0	0	0	0	0

62. Cars	Loade a. Freight	Loade b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Equipment Consist	53	0	36	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
1035	0	H702	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
1	0	1	0	Hrs 4 Mi 40	Hrs 4 Mi 40

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)
1	1	2

Highway User Involved

79. Type	Code
A. Auto B. Truck C. Truck-Trailer. D. Pick-Up Truck E. Van F. Bus G. School Bus H. Motorcycle J. Other Motor Vehicle K. Pedestrian M. Other (spec. in narrative)	N/A

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

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

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

Rail Equipment Involved

83. Equipment	Code
1.Train(units pulling) 2.Train(units pushing) 3.Train (standing) 4.Car(s) (moving) 5.Car(s) (standing) 6.Light Loco(s) (moving) 7.Light(s) (standing) 8.Other (specify in narrative)	N/A

84. Position of Car Unit in Train
N/A

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

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

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

87. Type of Crossing Warning (1.Gates 2.Cantilever FLS 3.Standard FLS 4.Wig Wags 5.Hwy. traffic signals 6.Audible 7.Crossbucks 8.Stop signs 9.Watchman 10.Flagged by crew 11.Other (spec. in narr.) 12.None)	88. Signaled Crossing Warning (See instructions for codes) Code	89. Whistle Ban (1. Yes 2. No 3. Unknown) Code
Code(s) N/A N/A N/A N/A N/A N/A N/A		N/A

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

93. Driver's Age	94. Driver's Gender (1. Male 2. Female)	Code	95. Driver Drove Behind or in Front of Train and Struck or was Struck by Second Train (1. Yes 2. No 3. Unknown)	Code	96. Driver (1. Drove around or thru the Gate 2. Stopped and then Proceeded 3. Did not Stop 4. Stopped on Crossing 5. Other (specify in narrative))	Code
0		N/A		N/A		N/A

97. Driver Passed Standing Highway Vehicle (1. Yes 2. No 3. Unknown)	Code	98. View of Track Obscured by (primary obstruction) (1. Permanent Structure 2. Standing Railroad Equipment 3. Passing Train 4. Topography 5. Vegetation 6. Highway Vehicle 7. Other (specify in narrative) 8. Not obstructed)	Code
	N/A		N/A

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

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

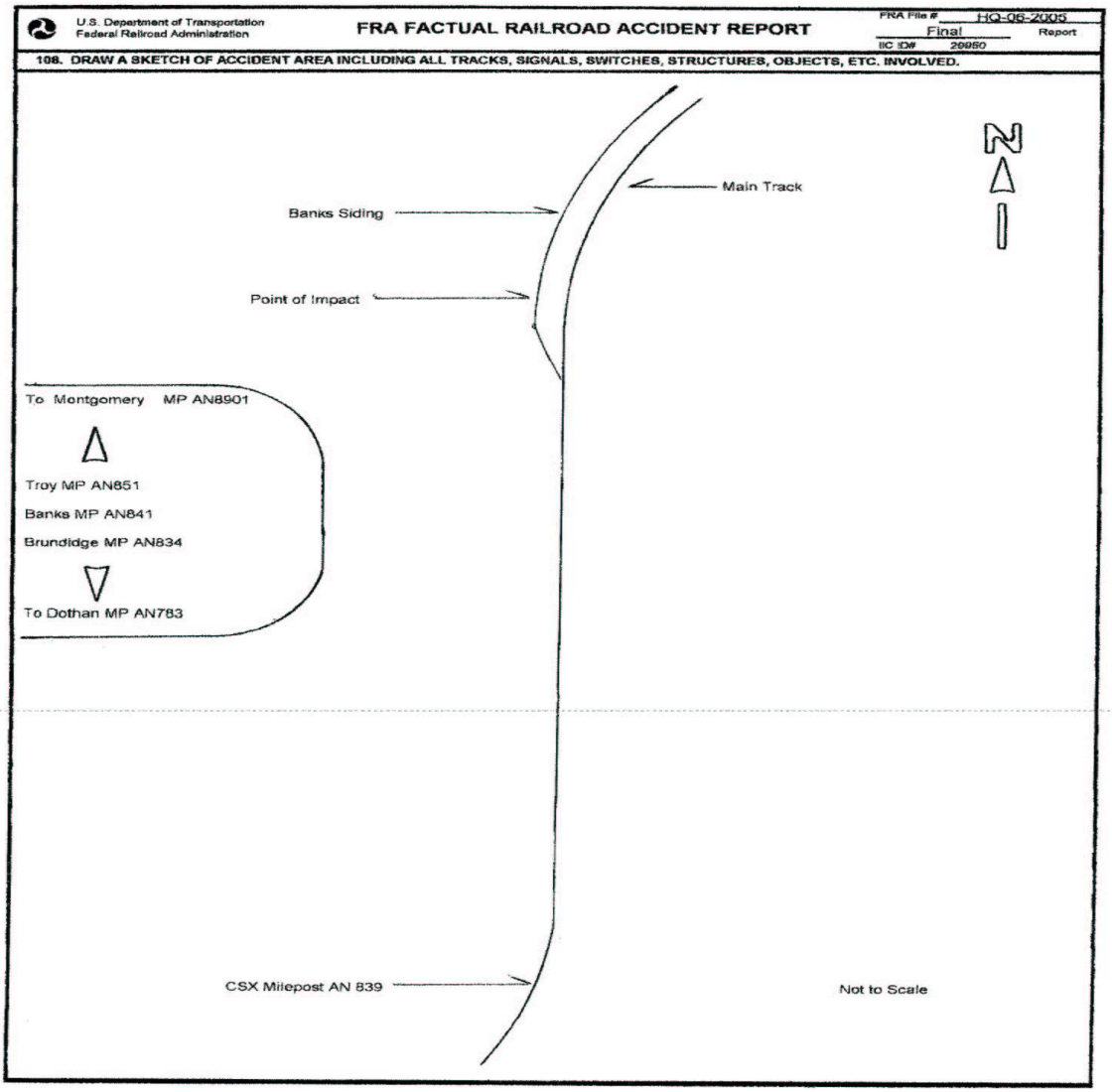
102. Highway Vehicle Property Damage (est. dollar damage)	103. Total Number of Highway-Rail Crossing Users (include driver)
0	0

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

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

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

HQ-06-
2005
sketch.jpg



109. SYNOPSIS OF THE ACCIDENT

On January 11, 2005, at 6:05 a.m. Eastern Standard Time (EST) a head on collision occurred on the CSX Transportation (CSX) Jacksonville Division, Dothan Subdivision at CSX milepost (MP) AN 0839.8 at Banks, Alabama (AL). The method of operation for the Dothan Subdivision is Direct Traffic Control (DTC).

A northbound CSX freight train Q65009 consisting of eight locomotives, 56 loaded and 36 empty freight cars, was operating on the main track at a recorded speed of 29 miles per hour (mph) approaching the accident site. The train crew consisted of a locomotive engineer and a conductor. Train Q65009 approached MP AN 0839.7 and observed the main track switch aligned for movement onto the side track at the south end of Banks Siding. The locomotive engineer initiated an emergency air brake application about 700 ft from the switch. Train Q65009 entered the side track and struck the lead locomotive of standing train CSX A73710 at an estimated speed of four mph. Train A73710 was unattended at the time of the collision. The collision resulted in the derailment of the lead truck of the lead locomotive on train A73710. There were no injuries caused by the collision, no hazardous materials were released, and no spillage of diesel fuel.

Damage was estimated at $155,000 for the lead locomotive on train A73710 (CSXT5810) and $1,035 to the lead locomotive on train Q65009 (CSXT 410). There was no structure or track damage.

At the time of the accident it was dark with heavy ground fog, the ambient temperature was about 47 °F.

The probable cause of the accident was the switch not being restored to the normal position after use. The normal position for the switch is lined and locked for movement on the main track.

110. NARRATIVE

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

Circumstances Prior to the Accident

CSX Train A73710

On January 10, 2005, at 3 p.m. EST, after completing a statutory off-duty period, a train crew consisting of a locomotive engineer and conductor went on duty at CSX Montgomery Yard, Montgomery, AL. The train crew was assigned to operate train A73710 from Montgomery to Dothan, AL, a distance of about 116 miles. Train A73710 is a scheduled seven day local freight train and switches industries south to Dothan.

Train A73710 departed Montgomery Yard with three locomotives, 56 loaded and four empty freight cars, 7,321 trailing tons, and was 3,717 ft in length. The train received a Class 1 initial air brake test by the CSX mechanical department. The train departed Montgomery Yard at 7:30 p.m. The train crew had authority from the train dispatcher to occupy the Day, Sprague and Grady DTC Blocks. The train's first work was at Ramer Storage Track at MP AN 0875.5 where the crew set out seven cars and pick up two cars. After completing their work and performing a brake test at Ramer the crew continued south, after receiving track authority from the train dispatcher to occupy the Youngblood, Troy and Corcoran DTC Blocks at 9:51 p.m. Train A73710 activated a defect detector at Youngblood MP AN 0862.9, indicating the train had five defective journals. The engineer stopped the train and the conductor inspected both sides of the train, finding no defects. The crew informed the train dispatcher of their findings.

Train A73710 continued southward stopping at Jeff Smurf Wood Yard, Troy, AL, where they pick up six loaded cars and set off three empty cars. The train crew then received track authority from the train dispatcher to occupy the Banks Siding DTC Block, with instructions from the dispatcher to back the train into the Banks Siding and secure the train.

At the south Banks switch, the conductor dismounted the lead locomotive and aligned the switch for movement onto the siding. A taxi, which had been called earlier to transport the train crew, was waiting near the switch. The conductor rode in the taxi as he directed the shoving movement via radio northward on a county road that parallels the track. After shoving 31 cars over a private road crossing, about one-half mile north of the south switch, the conductor stopped the movement. The conductor applied hand brakes on the first four cars north of the road crossing and instructed the engineer to pull ahead. After clearing the road crossing the conductor rode in the taxi back to the lead locomotive. The conductor informed the driver that his girlfriend was arriving at the train and would take the engineer and himself home. He asked the taxi driver to wait until her arrival. The conductor returned to the locomotive and completed his paperwork when he realized that he had not realigned the switch for main track movement or released all the DTC blocks back to the train dispatcher. He then proceeded to the switch which he aligned for the main track. When he returned to the locomotive he called the dispatcher and released his block authority.

The engineer said while the conductor was doing his paperwork on the locomotive, he realized that he had not aligned the switch for main track movement. The engineer said that the locomotive headlight was on dim. He observed the conductor walk to the switch, watched the conductor align the switch, and saw the switch target turn from red to green. The engineer then went back to the other two locomotives in the train and shut them down and applied hand brakes on both of the locomotives.
About 2:30 a.m. the relief crew for train A73710 arrived via a contract van and the conductor of the relief crew communicated with the train dispatcher using the radio on the lead locomotive of train A73710. After receiving instructions they continued on south to Dillard.

The train crew on A73710 was relieved of duty January 11, at 2:58 a.m. The conductor and engineer departed Banks siding about 3:15 a.m. in the conductor's

girlfriend's vehicle. The taxi also departed the area at the same time.

CSX Train Q65009

On January 11 at 1:30 a.m., after completing a statutory off-duty period, a train crew consisting of a locomotive engineer and a conductor went on duty at CSX Montgomery Yard in Montgomery, AL to operate train A73710. The train crew was transported from Montgomery Yard to Banks, AL via a contract van. Upon arriving at the south end of the side track at about 2:30 a.m., the engineer of train A73710 informed the relief engineer that the train dispatcher wanted to talk with him via the radio. The engineer mounted the lead locomotive and the train dispatcher instructed the train crew to continue southward on to Dillard via the van. The dispatcher instructed the train crew to relieve the train crew on northbound train Q65009 at Dillard, MP AN 0816.9 then double to train A736 at Dillard siding.

The train crew arrived at Dillard and relieved the crew on train Q65009. They received DTC block authority from the train dispatcher to operate train Q65009 in the Dillard siding, Dillard and Tennille blocks. After assembling their train consisting of eight locomotives and 90 mixed freight cars, the train crew performed a air brake test and proceeded northward about 4:40 a.m. The train stopped at Sloss Industries located at MP AN 0823 and sat out two tank cars, coupled back to the train, and after performing a brake test continued northward. The train dispatcher gave train Q65009 the authority to operate in the Banks, Corcoran, Troy, and Youngblood DTC blocks. As the train crew traveled northward, they operated over a 29 mph slow order at MP AN 0837.7.

As the train approached the accident area, the engineer was seated in the cab at the controls on the east side of the lead locomotive. The conductor was seated in the cab on the west side of the lead locomotive with the short hood forward. The train crew encountered heavy ground fog approaching the accident area.

Approaching the accident area from the south at MP AN 0839 there are successively a 1-degree
30-minute curve to the left for about 1,120 ft, a tangent for about 2,000 ft, and a 3-degree 6-minute right-hand curve for about 575 ft to the collision point. In the accident area the track is practically level.

CSX timetable direction is south/north. The geographic direction is south/north. Timetable directions are used throughout this report.

The Accident

CSX train A73710 was standing in the side track at Banks, AL. The lead locomotive was positioned 640 ft north of the south switch of the side track leading from the main track at MP AN 0839.7. Attached to the lead locomotive were two other locomotives and 38 mixed freight cars. The three locomotives had hand brakes applied with no hand brakes applied on the freight cars. The remaining 31 freight cars of the train were on the north side of a private road crossing with four hand brakes applied on the south end of the cars. The locomotives were shut down and unattended.

The train Q65009 was operating at a recorded speed of 29 mph approaching the accident area. Both the engineer and the conductor said they saw a red switch target at the south end of Banks siding. The engineer initiated an emergency brake application. He and the conductor sat down on the floor of the locomotive. Train Q65009 entered the siding striking the lead locomotive of train A73710 at an estimated speed of four mph. The impact derailed the lead trucks of the lead locomotive on train A73710. After the impact, the conductor communicated with the train dispatcher notifying him of the head-on collision. There appeared to be no apparent injuries.

Analysis and Conclusion

Analysis

The lead locomotives on both trains, Q65009 and A73710, were equipped with a speed indicator and event recorded as required. The relevant event recorder data was downloaded by the road foreman of engines at the accident site and analyzed. The analysis disclosed that the locomotive engineer on train Q65009 was in compliance with all applicable railroad operating and train handling requirements. Federal Railroad Administration (FRA) reviewed the results of the analysis and concurred with the conclusions.

The switch at the south end of Banks siding and the switch lock were examined by both a CSX Special Agent and Pike County Sheriff Department for tampering. The results of the test were negative for tampering. The switch handle and switch lock were examined for fingerprints by the Pike County Sheriff Department. There were no fingerprints found on the switch handle or on the switch lock. The switch handle was found in the locked position, aligning the main track switch for the siding. A switch lock found in the hasp above the switch handle was left unlocked.

The train crew members of train A73710 had gone off duty prior to the accident and were not FRA Drug and Alcohol Post Accident tested.

Conclusion

The crew members of train A73710 were the only known witnesses to the position of the switch at the south end of Banks siding prior to the accident. The conductor said he had thrown the switch at Banks siding for the main track. The engineer said he saw the conductor throw the switch and the Banks siding target turn from red to green.

Police authorities could find no signs of tampering to the switch or the switch lock, which was left open.

Probable Cause

The FRA determined that the probable cause of the accident was the switch not being restored to the normal position after use. The normal position for the switch is lined and locked for movement on the main track.