

Federal Railroad Administration Office of Safety Headquarters Assigned Accident Investigation Report HQ-2005-91

CSX Transportation (CSX) Hamlet, North Carolina October 18, 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 ADMINISTRATIONFRA FACTUAL RAILROAD ACCIDENT REPORTFRA File # HQ-2005-91																					
1.Name of Railroad C	1a. Alphabetic Code 1b.					Railroad Accident/Incident No.															
CSX Transportatio	CSX 2a Alebakatia Cada					000016023															
CSX Transportatio	2a.	2a. Alphabetic Code 2b.					Railroad Accident/Incident														
3.Name of Railroad R	3a. Alphabetic Code     3b.						. Railroad Accident/Incident No.														
CSX Transportatio	CSX						000016023														
4. U.S. DOT_AAR G	5. Date of Accident/Incident 6. 7						Fime of Accident/Incident														
	Month Day Year																				
7 Type of Accident/I	ndicent				7	7 Hwy rail crossing 10 F			200	15	01:20:					PM					
(single entry in coo	ie box)	2. Head of	on col	lision	4. Side collision sion 5 Raking collision				8. RR grade crossing 11. Fire/vio					ent rupture (describe in							
(		3. Rear e	nd col	llision	sion 6. Broken Train collision				9. Obstruction 12. Oth				impacts		narra	irrative)			04		
8. Cars Carrying		9. HAZMA	urs	10. Cars Releasir				ig 11. People				_		12 Div	visior						
HAZMAT 0	AAT 0 Damaged/Derailed			led	d 0 HAZMAT				0 Evacu			vacuated			12. DI	15101	Florence				
					14. Milepost				I	<u></u>											
13. Nearest City/Tow	n T	Tomlat			(to nearest te					15.5	Abbr	Coc	le 10	6. County	PICHMOND						
17 5 ( )								\$253	.6		N/A		C	1	RICHMOND						
17. Temperature (F) (specify if minus)		18. Visit	oility Dawn	(sin	single entry) Code 19. V 3 Dusk			Veath	eather (single entry) Clear 3 Rain 5			С	ode	20. Type of Tra					Code		
55	55  F 2. Day			4.1	4.Dark   4   2				udy 4. F	6.Snow 1			2. Yard 4			. Siding . Industry		1			
21. Track Name/Num	ber				22. FRA Track				Code	Annual Track Density			24. Time Table Dir			ection	(	Code			
Main no						ss (1-9, X	K)	(gross tons in millions)				48.4		1. North 3. East				1			
							ODED				1		10.1						1		
25 E (E)				4 111		¥7 1/	OPER	AII	ING IRA	AIN #	1	126 1	Vec Fauir	mont c		107		1 (	(G 1 1		
25. Type of Equipme Consist (single en	A.	. Spec. Mo	ow Equ	up. Code	20.	Attended?	inded? Code 27.				7. Train Number/Symbol										
CONSIST (Single entry) 2. Passenger train 5. Single car 8. Light loco(s). 3. Commuter train 6 Cut of cars 9 Maint /inspect car										1 1. Yes						2. No 1 N42215					
28. Speed (recorded speed, if available)     Code     30. Method(s) of Operation     (enter code(s) that apply)     30a. Remotely Controlled Locomotive?														ve?							
R - Recorded a. ATCS g. Automat										block m.Special instructions						0 = Not a 2- should y to Wiested					
E - Estimated 7 MPH R b. Auto train control h. Curre									raffic	n. Ot	her than m	ain trac	K.	1 = Remote control portable							
29. Trailing Tons (gross tonnage, c. Auto train stop i. Time d. Cab i. Track									nt control	p. Ot	arrative)	$\left  \begin{array}{c} z = \text{Remote control tower} \\ 3 = \text{Remote control} \end{array} \right $									
excluding power units) e. Traffic k. Di								traffic control Code(s)					arrative)	transmitter - more than one							
10811 f. Interlocking 1. Yard limits $e N/A N/A N/A N/A$ remote control transmitter 0													)								
31. Principal Car/Unit	t	a. Initial	and N	lumber	b. Positio	on in Train	n c. l	Load	ed(yes/no)	32.	If railroad	employ	vee(s) test	ed for drug	z/alcoho	ol use	÷,				
(1) First involved			NI/A			1			Voc		enter the number that wer			e positive i	n	Ľ	Alcohol	I	Drugs		
(derailed, struck, e	etc)		IN/A			1			yes	_	the appro	opriate b	oox.				0		0		
(2) Causing (if med	hanica	1	0		0				N/A 33. Was this co			consist	transport	ing passen	ng passengers? (Y/N			1	N		
34 Locomotive Units a Head					Train	Re	ar End		25 Cor				Lo	baded	1	Em	pty				
		End	b. M	anual	c. Remote	d. Manua	l c. Rei	mote	55. Cai	18			a. Freight	b. Pass.	c. Fre	ight	d. Pass.	e. C	Caboose		
(1) Total in Train	1	2		0	0	0	0		(1) Tota	l in Eq	uipment C	onsist	84	0	0	)	0		0		
(2) Total Derailed	d	1		0	0	0	0		(2) Tota	1 Derai	led		0	0	0	0	0		0		
36. Equipment Dama	ige		<u> </u>	о 27 Т.	alt Signal X	Var	, °		29 Dation	Come Co			0	20. Cont	ni hartin d	° Cou					
This Consist	37. II &	Structure Da	)	Code H221						Code N/A											
		Numbe	r of C	rew M	embers	-			Length of Time on Duty												
40. Engineer/	41. Firemen			42. C	onductors	43. Br	akemen		44. Engineer/Operator					45. Conductor							
Operators N/A	0				1	0			1		Hrs 9		45	Hrs 9 Mi				Mi	45		
Casualties to:	46. Railı	road Emplo	oyees	47. Tra	ain Passenger	s 48. 0	Other	49. EOT 1			e?			50. Was EOT Device Properly Armed?							
Fatal		0			0		0	1. Yes 2. No 1						1. Yes 2. No 1							
					0		0		51. Caboose (		se Occupied by Crew?		?	1							
Nonfatal		N/A 0			0 0				1. Yes 2					No 2					2		
OPERATING TRAIN #2																					
52. Type of Equipment 1. Freight train 4. Work train 7. Yard/switching A. Spec. MoW Equip. Code 53. Was Equipment Code 54 Train Number/Symbol																					
Consist (single entry) 2. Passenger train 5. Single car 8. Light loco(s).									Atte					d?							
	3.	Commute	r train	6. Cu	t of cars 9.	Maint./in	spect.ca	r			1		1. Yes	2. No 1			Q6691	17S			
55. Speed (recorded)	speed, if	available)	Cod	le   57	. Method(s)	of Operati	on (	ente	enter code(s) that apply)						57a. Remotely Controlled Locomotive?						
K - Recorded E - Estimated	. ATCS	g 2000 tur-1 1	g. Autom	hatic l	tic block m.Special instructions of troffic n. Other than main track					U = Not a remotely controlled 1 = Remote control portable											
E Loumatou				t	o. Auto train o	control r	. Curren	n of t	iante					. – Keill			stable				

DEPARTMENT FEDERAL RAILF	OF TRAI ROAD AI	NSPOR MINIST	ΓΑΤΙ ΓRAT	ON TON	FRA F.	ACTUA	L RAILI	ROAD AC	CIE	DENT I	REPO	ORT	F	RA File #	<u>HQ-200</u>	<u>5-91</u>		
56. Trailing Tons (gross tonnage, excluding power units)					. Auto trai Cab Traffic	n stop i. j. k	train orders of nt control 1 ic control	ain orders o. Positive train control control p. Other (Specify in narrative) control Code(s)					2 = Remote control tower 3 = Remote control transmitter - more than one remote control transmitter					
58 Principal Car/Unit a Initial and Nu				I.	h Posit		ded()											
(1) First involved				vuinder	0. FOSI	24		C. Eouded(yes/110)			59. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in							
(derailed, struck, etc) AGR1308						54		no	the appropriate box.							0		
(2) Causing (if mechanical cause reported) 0						0		N/A	60. Was this consist transporting passengers? (Y/N)							N		
61. Locomotive Units	5	a. Head End b. Mar			Train c. Remote	Re d. Manua	ear End ll   c. Remot	62. Cars	62. Cars Loa a. Freight					b. Pass. c. Freight d. Pass.				
(1) Total in Train		2	2 (		0 0		0	(1) Total is	n Equi	pment C	onsist	9	0	9	0	0		
(2) Total Deraile	Total Derailed 0		0	) 0		0	(2) Total I	(2) Total Derailed			0	0	4	0	0			
63. Equipment Dama This Consist	ipment Damage 47000				ack, Signal, Structure D	Way, amage	0	65. Primar Code	65. Primary Cause Code H221 66. Contributing Cause Code Code						use	N/A		
		Numbe	er of C	Crew Me	embers							Length of	lime on D					
67. Engineer/	68. Fire	men		69. Co	nductors	70. Br	akemen	71. Engin	eer/Oj	perator			72. Cond	ductor	2	Mi ao		
Operators 1	Operators 1 0				1		0		Hrs 2 Mi 20					Hrs 2 M				
Casualties to:	73. Railro	oad Empl	oyees	74. Tra	in Passenge	rs 75. Ot	her	76. EOT E	evice'	?		77. Was l	Was EOT Device Properly An					
Fatal		0			0		0	1. 1	es	2. No		1	1.	Yes	2. No	1		
Nonfatal		0			0		0		78. Caboose Occupied by Crew?						I			
		0	Rail Equipment Involved															
79. Type	n ::		5				Code	83. Equip		Code								
A. Auto D. Pick-U	icle	3. Irain (standing) 6.Light Loco(s) (movin 1.Train(units pulling) 4.Car(s) (moving) 7.Light(s) (standing)								ioving)								
B. Truck E. Van	er (spec. in	narrative)	N/A 2.Train(units pushing) 5.Car(s) (standing) 8.Other (specify in narrative)															
80. Vehicle Speed		84. Positio	84. Position of Car Unit in Train N/A															
(est. MPH at in 82 Position	npact)	1	1.NO	rth 2.5	outh 5.East	4.west	Code	85. Circun	85. Circumstance									
1.Stalled on Cros	loving Ove	r Crossing	Code	1. Rail E	quipm	ent Struc	k High	way User				I						
4. Trapped		N/A	2. Rail Ed	luipm	ent Struc	k by H	ighway Use	er			N/A							
86a. Was the highw in the impact tr	nent inv terials?	olved		Code	86b. Was 1	here a	hazardo	ous mat	erials releas	e by			Code					
1. Highway User       2. Rail Equipment       3. Both       4. Neither    N/A        1. Highway User     2. Rail Equipment     3. Both     4. Neither													r	N/A				
86c. State here the name and quantity of the hazardous materials released, if any.																		
87 Type of 1 Gat																		
Crossing 2.Car	ntilever FL	4. w lg LS 5.Hw	g wag y. traf	s fic sign	als 8.Stop	signs 1	1.Other (spe	c. in narr.)	00. S	ee instru	ctions	for codes)	Code	1. Ye	s	Code		
Warning 3.Standard FLS 6.Audible					9.Watc	hman 12	2.None						1	2. No 3. Un	known	1		
Code(s) N/A		N/A	N/.	A	N/A	N/A	N/A	N/A	A N/A N/A							N/A		
90. Location of Warning Code 91. Cro 1. Both Sides W							ing warning Highway S	interconnect	ea	Code	92.0	rossing Illu Lights or S	ghts or Special Lights					
2. Side of Vehicl	1	l. Yes					1. Yes											
3. Opposite Side of Vehicle Approach					N/A	3		N/A 3. Unknown							N/A			
93. Driver's 94. I	95. Dr	iver Drove	Behind or	rain Cod	ain Code 96. Driver													
Age 1. Male					d Struck or Yes	was Strucł No	Train n	2. Stopped and then Proceeded 5. Other (specify in										
N/A 2. Penale N/A					105 1			N/A 3. Did not Stop narrative)										
97. Driver Passed Standing Highway Vehicle 1. Permanent Structure 3. Passing Train 5. Vacatation 7. Other (apolity in participal)														Code				
1. Yes 2. No 3. Ur	ıknown	N/A		2. Star	nding Railro	ad Equipn	nent 4. Top	ography 6.	Highv	vay Vehi	cle 8	. Not obstru	cted	arrauve)		N/A		
101. Casulties to Highway-Rail				d	Injured	99. Drive	r Was		-	Code 100. Was			Priver in th	Code				
Crossing Users Killed					-,	1. Killed	1 2.Injured 3	Uninjured	Ininjured N/A					Yes 2. No al Number of Highway Pail Crossing				
			N/A		N/A	(est.	dollar dama	ge)	mage	N/A		(incluc	le driver)	ingnway-	N/A	mg Users		
104. Locomotive Auxiliary Lights?   Code   105. Locomotive Auxiliary Lights Operational?													Code					
1. Yes	dlight Illu	2. No	2				N/A	1. 107 J -	Yes	A 11.1	<b>W</b> /	2. No	49			N/A		
1. Yes 2. No							N/A	1.	1. Yes 2. No							N/A		



108. DRAW A SKETCH OF ACCIDENT AREA INCLUDING ALL TRACKS, SIGNALS, SWITCHES, STRUCTURES, OBJECTS, ETC., INVOLVED. 91.bmp

## 109. SYNOPSIS OF THE ACCIDENT

On October 18, 2005, CSX Transportation (CSX) Train No. N42215 operating on main Track No. 2 was involved in a side collision with CSX Train Q66917. This side collision occurred on CSX Florence Division, Hamlet Terminal Subdivision milepost (MP) S253.6 (WARMAC) in Hamlet, North Carolina (NC). Both trains had two crew members consisting of an engineer and conductor.

About 1:20 a.m. Eastern Standard Time (EST), CSX Train No. N42215 was operating northbound on Track No. 2 toward the home signal at WARMAC MP S253.6, which was displaying a stop signal aspect. Train No. Q66917 was traversing southbound from the west departure lead track, through the crossover switches of main Track No. 3, then main Track No. 2 toward main Track No. 1, when it was struck by Train No. N42215 at the main Track No. 2 to main Track No. 1 crossover switches.

The collision resulted in the derailment of one locomotive on Train No. N42215 and four freight cars on Train No. Q66917. There was \$148,090 damage to the equipment and \$2,600 track damage. There were no personal injuries to the crew members and no hazardous materials involved.

At the time of the accident it was dark and clear. The temperature was 55F.

The railroad timetable direction of the train was north and south. Timetable directions are used throughout this report.

The probable cause of the accident was the failure of Train No. N42215 to stop for the stop signal aspect at WARMAC.

## 110. NARRATIVE

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

Circumstances Prior to the Accident

Train No. N42215

On October 17, 2005, at 3:35 p.m., a CSX engineer and conductor went on duty on to work a road switcher (Train No. F99717) at CSX Hamlet Yard in Hamlet, NC. Hamlet is the home terminal for this crew who received a statutory off duty period in excess of eight hours prior to reporting for duty. Road switcher assignments at CSX Hamlet Yard include pulling or operating trains that have outlawed within 25 miles of CSX Hamlet Yard. The assignment for the road switcher crew was to relieve CSX train crew N42215 at northeast Lilesville on the Monroe Subdivision and bring the train to CSX Hamlet Yard.

The crew members were transported by company van to northeast Lilesville to operate CSX Train No. N42215, which consisted of two locomotives and 84 loaded coal cars. Prior to departing northeast Lilesville they held a job briefing with the AF dispatcher, who informed them that they would be moving the train to Hamlet Terminal Subdivision Diesel Shop on Track No. 2 in Hamlet Yard. At the Diesel Shop they would run around the train for an outbound crew.

Train No. N42215 departed northeast Lilesville eastbound on main Track No. 2 to Raleigh Street, where they had a stop signal aspect and met Amtrak PO9117. After Amtrak departed the station, the crew received an Advance Approach signal aspect at Raleigh Street and proceeded toward CSX Hamlet Yard.

Train No. Q66917

On October 17, 2005, the crew members of Train No. Q66917 were a locomotive engineer and a conductor who reported for duty at 11 p.m. at CSX Hamlet Yard. Both crew members received the statutory off duty period in excess of eight hours prior to reporting for duty. Train No. Q66917 consisted of two locomotives and 57 cars.

At 1 a.m. Train No. Q66917 pulled down the West Departure Track at Hamlet Yard and waited for Amtrak PO9117 to clear main track at 2 WARMAC interlocking. When Amtrak cleared the WARMAC, Train No. Q66917 started to move from the West Departure Track through the crossover switches on main Track Nos. 2 and 3 to main Track No. 1 about 1:12 a.m and proceeded west.

## The Accident

Train No. N42215 departed Raleigh Street where they received an Advance Approach signal aspect on main Track No. 2. The crew was instructed by the AF dispatcher that they would be going to the Diesel Shop and run around their train. The next home signal was at Monroe Junction displaying an Approach signal aspect. The conductor called out the signal name and the engineer repeated it back. The engineer said, that in his mind, he was thinking Medium Approach signal and moved the locomotive throttle to position number six when he saw the headlight of Train No. Q66917 coming down main Track No. 1. Moments earlier, the conductor told the engineer that Train No. Q66917 was departing from the West Departure Track and crossing over to main Track No. 1 at WARMAC interlocking. Train No. N42215 was approaching WARMAC when the engineer saw the home signal on Track No. 2 displaying a stop signal aspect and placed the train into emergency. Train No. N42215 was traveling at a recorded speed of 23 miles per hour (mph) prior to striking Train No. Q66917. The train's event recorder indicated the traveled 731 feet before impacting Train No. Q66917 at the 33rd car. The impact derailed four cars of Train No. Q66917and the lead locomotive of Train No. N42215.

## FRA FACTUAL RAILROAD ACCIDENT REPORT

Under Federal Railroad Administration guidelines, CSX managers arranged for Post Accident Toxicology tests for the Train No. N42215 train crew. All toxicology test results were negative.

Analysis and Conclusion

All pertinent locking tests were conducted on the signal system and all signals were working properly at the time of the accident. The signal log from CSX Jacksonville showed that the dispatcher never requested the signal on track 2 at WARMAC.

Conclusion

The FRA determined that the probable cause of the accident was the failure of Train No. N42215 to stop for the stop signal aspect at WARMAC.

Applicable Rules

The engineer of Train No. N42215 failed to comply with CSX Signal Rule 1285.

1285: Approach, proceed, prepared to stop at the next signal. Trains exceeding Medium Speed must immediately begin reduction to medium speed as soon as the engine passes the Approach Signal.

2. The engineer of N42215 failed to comply with CSX Signal Rule 1292.

1292: STOP

3. The conductor of train N42215 failed to comply with CSX Operating Rule GR-55.4.

GR-55.4: When conditions require that the train be stopped or that train speed be reduced and :a. The engineer fails to take the proper action, orb. The engineer becomes incapacitated.

Crew members must take the necessary action. This includes operating the emergency brake valve, to ensure the safety of the train.