

Federal Railroad Administration Office of Safety Headquarters Assigned Accident Investigation Report HQ-2007-23

Burlington Northern Santa Fe (BNSF) Douglas, Wyoming April 26, 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 C FEDERAL RAILR	OAD A	DMINIS			FRA FA	ACTUA	L RAI	ILRO	OAD AG	CCIDE	ENT R	EPOR					<u>HQ-200</u>	07-23	
1.Name of Railroad Operating Train #1									1a. Alphabetic Code 1 BNSF					b. Railroad Accident/Incident No.					
BNSF Rwy Co. [BNSF] 2.Name of Railroad Operating Train #2													21-1	PR04200711					
N/A									2a. Alphabetic Code N/A					2b. Railroad Accident/Incident No. N/A					
3.Name of Railroad O N/A	3a. Alphabetic Code N/A					3b. 1	b. Railroad Accident/Incident No. N/A												
4.Name of Railroad Responsible for Track Maintenance: BNSF Rwy Co. [BNSF]									4a. Alphabetic Code BNSF					b. Railroad Accident/Incident No. PR04200711					
5. U.S. DOT_AAR Gr		ssing Iden	tificati	on Nu	nber				6. Date of Accident/Incident					Fime of A	ccident		lent		
		1. Derail	mont									ear 2007 Explosion		01:2	. Other	L	AM	PM	
 Type of Accident/In (single entry in code) 	ollision g collision			Hwy-rail c RR grade c	0		Explosion Fire/viole			(desc	ribe i	in	Code						
()		n Train co			Obstruction	-		Other im		narrative)				01					
9. Cars Carrying		3. Rear e			of Brone		Cars Rele	easing	[1	12. Peop		, acts	13. Di			1		
HAZMAT	IAZMAT 0 Intraction of the second sec						ZMAT		N/A Evacuat			ed		0 Po			owder Ri	ver	
14 Nearest City/Teyrn 15. Milepost 16 State 17 County																			
,		Douglas				(to n	earest te	enth) 23.5			WY	Code I'		CONVE					
18. Temperature (F)		19. Visil	oility	(sing	gle entry)	Code	20. W	. Weather (single		entry) C		Code	;	21. Type of Track				Code	
(specify if minus)	F		Dawn Day		Pusk Dark			. Clear 3. Rair			leet	I	1			. Siding		1 1	
65		2.	Day	4.1	Jark	2			oudy 4. Fog 6.Snow			1		2. Yard 4		,		1	
22. Track Name/Nun	nber					23. FRA Clas	s (1-9, X		Code		ual Trac	k Density in		25. Time Table Direction 1. North 3. East				Code	
	ack			Í	3	mill	ions)	43	39		2. Sout	th 4.		3					
	OPERATING TRAIN #1																		
26. Type of Equipmen	nt 1.	Freight tr	ain	4. W	ork train 7.	Yard/swi	tching	A. 5	Spec. MoV	V Equip.	Code	27. Wa		oment (Code	28.	Train Nu	mber/Symbol	
Consist (single ent		Passenge			0	Light loc				I	1		nded?	2. No 1 CJRMCRD05.				PD055	
20. Small (Commute				Maint./in	•		1 () (1	1	Yes	31a. Remotely Controlled Locomotive?					
29. Speed (recorded s R - Recorded	peed, if	available)	Code		. Method(s)	•			code(s) t	nat app m.Specia	2 /	ctions		0 = Not a				omotive?	
E - Estimated	45	MPH	R		ATCS		. Automa		IOCK .	n. Other				1 = Rem					
c. Auto train stop i. Time t									ain orders					2 = Rem		-			
20 Trailing Tong (group tonno go							Track wa			p. Other		fy in narr	ative)	3 = Rem					
е. Ггапіс к.							. Direct t		control		Code(han one mitter	I	
18277 f. Interlocking 1. Yard limits e N/A N/A N/A N/A remote control transmitter 0												0							
32. Principal Car/Unit a. Initial and Number b. Position in Train c. Loaded(yes/no) 33. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in (1) First involved										Denio									
 First involved (derailed, struck, et 	c)	FUF	X9606	522	ç	93		y	es			priate box		positive i	11	-	Alcohol 0	Drugs 0	
(2) Causing (if mech	hanical	l	0			0		N/	/A	34. W	as this o	consist tra	nsport	ing passen	igers? (Y/N)	0		
cause reported)						-	ar End					Lo	Loaded Empty				N		
35. Locomotive Units	,	End	b. Ma			d. Manua		note	30. Cars			a. I	Freight	b. Pass.	c. Fre		d. Pass.	e. Caboose	
(1) Total in Train		2		0	0	0	2		(1) Total i	n Equipi	ment Co	onsist	128	0	(D	0	0	
(2) Total Derailed	ı	0		0	0	0	0		(2) Total I	Derailed			23	0	(D	0	0	
37. Equipment Damag	-			38. Tra	ick, Signal, V	Way,	10000		39. Prima	rv Cause				40. Cont	ributin	a Cau	160		
This Consist		1090197.			Structure Da	-	125000	0.	Code	i j cuuse		T109		Code	inouting	g Cau		Г206	
		Numbe	r of Cı						Lengt					of Time on Duty					
12. Themen					onductors	44. Bra	44. Brakemen		45. Engineer/Operator				46. Conductor Hr			F	Mi 46		
Operators 1		0			1		0		Hrs 5 Mi 46			6				-	-		
Casualties to:	47. Railr	oad Emple	oyees 2	48. Tra	in Passenger	s 49. C	Other		50. EOT Device?				51. Was EOT Device Properly Armed?						
Fatal		0			0 0				1. Yes 2. No 1					1. Yes 2. No 1					
Nonfatal		0			0 0				52. Caboose Occupied by Crew? 1. Yes 2. No				2. No	2					
OPERATING TRAIN #2																			
53. Type of Equipment 1. Freight train 4. Work train 7. Yard/switching A. Spec. MoW Equip. Code 54. Was Equipment Code 55. Train Number/Symbol																			
Consist (single ent	ry) 2.	Passenger			0	Light loce				1 T.			nded?						
3. Commuter train 6. Cut of cars 9. Maint./inspect.car N/A 1. Yes 2. No N/A N/A																			
56. Speed (recorded s	peed, if	available)	Code		. Method(s)	•	`		code(s) t	• •	2,			58a. Rem	-			omotive?	
R - Recorded a. ATCS g. Autor E - Estimated 0 MPH N/A b. Auto train control h. Curre									atic blockm.Special instructionst of trafficn. Other than main track					0 = Not a remotely controlled 1 = Remote control portable					
L Loundated	-																		

excludine nover units) d. Cab j. Track warrant control j. Track warrant control <th>DEPARTMENT FEDERAL RAILF</th> <th></th> <th></th> <th></th> <th></th> <th>FRA FA</th> <th>ACTUAL</th> <th>RAILR</th> <th>OAD AC</th> <th>CCIDENT REP</th> <th>ORT</th> <th>F</th> <th>RA File</th> <th># <u>HQ-200</u></th> <th>17-23</th>	DEPARTMENT FEDERAL RAILF					FRA FA	ACTUAL	RAILR	OAD AC	CCIDENT REP	ORT	F	RA File	# <u>HQ-200</u>	17-23		
Image Image <t< td=""><td colspan="5"></td><td>Cab</td><td>j.Ti</td><td>ack warran</td><td>t control I</td><td>p. Other (Specify in r</td><td>ol narrative)</td><td colspan="3">3 = Remote control transmitter - more than one</td><td></td></t<>						Cab	j.Ti	ack warran	t control I	p. Other (Specify in r	ol narrative)	3 = Remote control transmitter - more than one					
Char Display Hold Provided Control the analyse positive DataControl the analyse positive Data <th rows<="" td=""><td colspan="5"></td><td>Interlocking</td><td>g l.Y</td><td>ard limits</td><td></td><td>N/A N/A N/A</td><td>N/A N/A</td><td colspan="2">remote control trans</td><td>ansmitter</td><td>N/A</td></th>	<td colspan="5"></td> <td>Interlocking</td> <td>g l.Y</td> <td>ard limits</td> <td></td> <td>N/A N/A N/A</td> <td>N/A N/A</td> <td colspan="2">remote control trans</td> <td>ansmitter</td> <td>N/A</td>						Interlocking	g l.Y	ard limits		N/A N/A N/A	N/A N/A	remote control trans		ansmitter	N/A	
00NAneneNAneNAne12Causing cance reproduct and reproduct and reproduct and reproduct and reproduct and reproduct and reproduct and reproduct and reproduct 					lumber	b. Positi	on in Train	c. Load	led(yes/no)								
C2 Casaling (if mechanical case reprinted) 0 NA 61. Was this consist transporting passengers? (V/N) 1 AVA 62. Locanotiv Units case reprinted) a. Head in Manual c. Remore 63. Care in Arright (N Pass, Circling (N Pass,						0	N	N/A									
00. DOUBDINGY UND Initial Tranto Initial Manual C. Recorde O. Lable Initial Second Initial Lable C. Caboon (1) Total in Train 0 </td <td colspan="3">(2) Causing (if mechanical</td> <td></td> <td></td> <td>0</td> <td colspan="2">N</td> <td>61. Was this const</td> <td colspan="3">•</td> <td></td>	(2) Causing (if mechanical					0	N		61. Was this const	•							
C) O				b. Ma					63. Cars						e. Caboose		
64. Equipment Dumage This Consist 65. Track, Signal, Way, & Structure Damage 66. Frimary Cause Code NA 67. Contributing Cause NAA NA 68. Fagineer/ Operators 69. Freement Operators 69. Freement Operators 70. Conductors 71. Brakement 72. Engineer/Operator 73. Conductor	(1) Total in Train		0		0	0	0 0		(1) Total in	n Equipment Consist	0	0	0	0	0		
$ \begin{array}{ c c c c c c } \hline Tais Consist $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$$	(2) Total Deraile	d	0		0	0	0	0	(2) Total E	Derailed	0	0	0	0	0		
86. Engineer/ Operators 69. Firemen 70. Conductors 71. Brakemen 72. Engineer/Operator 73. Conductor Canualities in: 74. Bailroud Employees 75. Train Passengers 76. Other 1. Yes 2. No N/A 1. Yes 2. No N/A Fatal 0 0 0 0 1. Yes 2. No N/A 78. Conductor N/A Son Type of Equipment 1. Freight main 4. Work train 7. Struct/variable A. Spec. MoW Equip. Code 81. Was Equipment Code 82. Train Number/Symbol Son Type of Equipment 1. Freight main 4. Work train 7. Struct/variable A. Spec. MoW Equip. Code 81. Was Equipment Code 82. Train Number/Symbol Sone Greened specifier variable) Code 8. Method(s) of Operation (Enter train for train		age	0						Code				ributing (Cause	N/A		
Operation 0 Operation 0 Is and interpretation operation 0 Is and interpretation 0 <thi< td=""><td></td><td>_</td><td></td><td>r of Ci</td><td></td><td></td><td></td><td></td><td></td><td>•</td><td>Length of</td><td></td><td>-</td><td>I</td><td></td></thi<>		_		r of Ci						•	Length of		-	I			
Fanl0001. Yes2. NoN/A1. Yes2. NoN/AFanl00001. Yes2. NoN/A1. Yes2. NoN/ANonfaul00001. Yes2. NoN/AN/AN/AN/A80. Type of Equipment1. Preight train4. Work train7. Yard/switchingA. Spec. MoW Equip. Code81. Wits Equipment82. Train Number/SymbolN/AN/A83. Speed (recorded speed, if a valiable)Code85. Method(s) Of Operation(metre code(s) that apply)N/AN/AN/AN/AN/A84. Trailing TonsGross formage, exclusionCarbon of trafficn. Special instructionsn. Special instructionsN/AN/AN/AN/AN/A84. Trailing TonsGross formage, exclusional instructionsn. Structure of trafficN/AN/AN/AN/AN/AN/AN/A86. Principal Car/Unita Initial and Numberb. Position: in Trainc. Loadedyes/no)S7. If raitroad employees to serve positive in the appropriate loss.N/AN/AN/AN/AN/AN/AN/A89. Locomotive Unitsa. Head Endb. Mit Trainc. Loadedyes/no)S7. If raitroad employees to serve positive in the appropriate loss.N/AN/AN/AN/AN/AN/A80. Training Carse reported)000000000000000000 <td></td> <td>69. Fire</td> <td></td> <td></td> <td>70. Co</td> <td></td> <td>71. Brak</td> <td colspan="2"></td> <td colspan="3"></td> <td></td> <td>s 0</td> <td>Mi 0</td>		69. Fire			70. Co		71. Brak							s 0	Mi 0		
Fail00079. Caboose Occupied by Crew?N/ANonfatal001. Yes2. NoN/ANonfatal001. Yes2. NoN/ANonfatal1. Freight train6. Yaraf Sampel and Sampel a	Casualties to:	74. Railr	oad Emplo	oyees ′	75. Tra	in Passenger	s 76. Othe	76. Other					1 5				
Nonfand 0 0 1. Yes 2. No NA 50. Type of Equipment Consist (single entry) 1. Fright Tain 4. Work Tain 7. Yand Single Carl NA	Fatal		0			0		0					1. Yes 2. No				
80. Type of Equipment Consist (single entry) 1. Freight train S. Single arr 4. Work train S. Single arr 7. Yard/switching S. Light loco(s). A. Spec. MoW Equip. N/A Code N/A 81. Was Equipment I. Vest coded S. Train Number/Symbol 62. Train Number/Symbol 82. Train Number/Symbol 82. Train Number/Symbol 82. Train Number/Symbol 82. Train Number/Symbol 83. Special instructions 83. Special instructions 83. Remotely Controlled Locomotive? 83. Remotely Controlled Locomotive? 83. Remotely Controlled Locomotive? 9. N/A N/A N/A N/A N/A N/A N/A 84. Training Tons (gross tomage, excluding nower units) 0 0 0 0. Other than main track c. Auto train onto; i. Time table/train orders 0. Dother (Specify in narrative) 9. Remote control tower 2 = Remote control tower 9. Distin in Units a. Initial and Number b. Position in Train c. Loadedyes/noi) 87. If rainade employee(s) tested for drug/alcohol use, terrative consolity in trainade employee(s) tested for drug/alcohol use, terrative consolity in trainade employee(s) tested for drug/alcohol use, terrative the number that were positive in trainade employee(s) tested for drug/alcohol use, terrative comrol in trainade employee(s) tested for drug/alcohol use, terrative comrol in trainade employee(s) tested for drug/alcohol use, terrative the number that were positive in trainade employee(s) tested for drug/alcohol use, terrative trainade employee(s) ested for drug/alcohol use, terrative traina	Nonfatal		0			0		0						I			
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$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		Consist (single entry) 2. Passenger train 5. Single car 8. Light loco(s).								Attended?							
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $															motive?		
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$ \begin{array}{ c c c c c c c c c c c c c c c c $				-	- c.	Auto trair	i stop i. T	ime table/tı	rain orders			2 = Remo	te contro	l tower			
NANANANANANANANANANANANANANANANANANA86. Principal Car/Unit (drailed, struck, etc)a. Initial and Numberb. Position in Train (drailed, struck, etc)b. Position in Trainc. Loaded(yes/no)87. If railroad employee(s) tested for drug/alcohol us.metry positive in the appropriate box.NANANA(2) Causing (if mechanical cause reported)a. Head EndMit Train b. Manual c. RemoteRear End d. Manual c. Remote90. Cars88. Was this consist transporting passengers? (ViN)N/AN/A89. Loconotive Unitsa. Head Endb. Manual b. Manual c. Remotec. Remote d. Manual c. Remote90. CarsLoaded a Freightb. Pass. b. Remotec. Freight d. Pass.d. Pass. c. Freight d. Pass.Empty d. Pass.N/A80. Loconotive Unitsa. Head EndMit Train b. Manual c. Remote00000000000(2) Total Derailed0000000000000000091. Equipment Damage This Consist00000000000000000000000000000000000000 </td <td colspan="7">d. Cab J. Hack waita</td> <td></td> <td></td> <td></td> <td>narrative)</td> <td></td> <td></td> <td></td> <td></td>	d. Cab J. Hack waita										narrative)						
I) First involved (derailed, struck, etc) 0 N/A enter the number that were positive in the appropriate box. Alcohol N/A Drugs N/A (2) Causing (if mechanical cause reported) 0 0 N/A 88. Was this consist transporting passengers? (Y/N) N/A (2) Causing (if mechanical cause reported) a. Head End Mid Train b. Manual Rear End c. Remote 90. Cars Isomotical a. Freight b. Pass. c. Freight d. Pass. c. Canoose (1) Total in Train 0 <td< td=""><td></td><td></td><td>f.</td><td>Interlocking</td><td>g 1.Y</td><td>ard limits</td><td></td><td>N/A N/A 1</td><td>N/A N/A</td><td>remote c</td><td>ontrol tra</td><td>ansmitter</td><td>N/A</td></td<>			f.	Interlocking	g 1.Y	ard limits		N/A N/A 1	N/A N/A	remote c	ontrol tra	ansmitter	N/A				
0 1 1 1 1 1 1 1 1 1	86. Principal Car/Un	and N	lumber	b. Positi	on in Train	c. Load	led(yes/no)	87. If railroad empl	oyee(s) test	ed for drug	g/alcohol	use,	l				
1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1						0		N/A			e positive i	n					
89. Locomotive Units a. Head End Mid Train b. Manual Rear End d. Manual 90. Cars Loaded Empty e. Caboose (1) Total in Train 0<	(2) Causing (if mechanical 0					0	1	N/A			ing passen	gers? (Y					
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $						Train			90. Cars								
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	(1) Total in Train	n		b. Ma					(1) Total in	a Equipment Consist			-				
This Consist0 A Structure Damage0 N/A Code N/A Number of Crew MembersValueVa	(2) Total Deraile	d	0		0		0	0	(2) Total E	Derailed	0	0	0	0	0		
95. Engineer/ Operators 096. Firemen 097. Conductors 098. Brakemen 099. Engineer/Operator Hrs 090. Mi 0100. Conductor Hrs 0100. Conductor Hrs 0100. Conductor Hrs 0Mi 0Casualties to:101. Railroad Employees102. Train103. Other104. EOT105. Was EOT Device ProperlyFatal0001. Yes 1. YesN/A1. Yes 2. No2. NoN/ANonfatal0001. Yes 1. Yes2. NoN/ANonfatal0001. Yes 1. Yes2. NoN/ANickJ. Other Motor Vehicle K. PedestrianCode N/A107. C. Truck-Trailer. B. Truck E. VanJ. Other Motor Vehicle K. PedestrianCode N/A3. Train (standing) 2. Train(units pulling)6. Light Loco(s) (moving) 7. Light(s) (standing) 8. Other (spec. in narrative)N/A108. Vehicle Speed109. geographical)Code geographical)112. Position of Car Unit inN/A	91. Equipment Damage 9					2. Track, Signal, Way,			93. Primar								
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		-	Numbe	r of Ci		5 1											
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Fatal 0 0 0 Nonfatal 0 0 0 106. Caboose Occupied by Crew? Nonfatal 0 0 0 1. Yes 2. No Highway User Involved N/A N/A Rail Equipment Involved 107. C. Truck-Trailer. F. Bus J. Other Motor Vehicle Code A. Auto D. Pick-Up Truck G. School Bus K. Pedestrian S. Train(units pulling) 4. Car(s) (moving) 7. Light(S) (standing) B. Truck E. Van H. Motorcycle M. Other (spec. in narrative) N/A 108. Vehicle Speed 109. geographical) Code 112. Position of Car Unit in N/A	Casualties to:	101. Rail	101. Railroad Employees			Train	103. Oth	103. Other									
Image: Non-angle interview Image: Non-angle interview Image: Non-angle interview Highway User Involved Image: Non-angle interview Image: Non-angle interview 107. C. Truck-Trailer. F. Bus J. Other Motor Vehicle A. Auto D. Pick-Up Truck G. School Bus J. Other Motor Vehicle Code B. Truck E. Van H. Motorcycle M. Other (spec. in narrative) N/A 109. geographical) Code 112. Position of Car Unit in	Fatal		0			0		0									
Interpretation Interpretatio	Nonfatal 0					0		0	1. Yes 2. No N/A								
C. Truck-Trailer. F. Bus J. Other Motor Vehicle Other Motor Vehicle 3.Train (standing) 6.Light Loco(s) (moving) Court A. Auto D. Pick-Up Truck G. School Bus K. Pedestrian 1.Train(units pulling) 4.Car(s) (moving) 7.Light(s) (standing) N/A B. Truck E. Van H. Motorcycle M. Other (spec. in narrative) N/A N/A 2.Train(units pushing) 5.Car(s) (standing) 8.Other (specify in narrative) N/A 108. Vehicle Speed IMA Image: Specify in the specific interval in the specific interval interva											Equipmen	t Involved	d				
A. Auto D. Pick-Up Truck G. School Bus K. Pedestrian 1.Train(units pulling) 4.Car(s) (moving) 7.Light(s) (standing) B. Truck E. Van H. Motorcycle M. Other (spec. in narrative) N/A 2.Train(units pushing) 5.Car(s) (standing) 8.Other (specify in narrative) N/A 108. Vehicle Speed 109. geographical) Code 112. Position of Car Unit in N/A	C. Truck-7	Frailer. F	7. Bus	J	I. Other	Motor Veh	icle	Code	3.Train (standing) 6.Light Loco(s) (moving)								
N/A N/A	A. Auto D. Pick-Up Truck G. School Bus K. Pedestrian B. Truck E. Van H. Motorcycle M. Other (spec. in narrative) N/A							1.Train(units pulling) 4.Car(s) (moving) 7.Light(s) (standing) 2.Train(units pushing) 5.Car(s) (standing) 8.Other (specify in narrative)									
	N/A																

	ENT OF TRA RAILROAD A				FRA F	FACTUA	AL RAILR	COAD AC	CIDENT	REPORT	F	FRA File # <u>HQ-2007-</u>	<u>23</u>	
110. Position Code 113. Circumstance												Code		
1.Stalled on Crossing 2.Stopped on Crossing 3.Moving Over Crossing 1. Rail Equipment Struck Highway User 4. Trapped N/A												N/A		
	114a. Was the highway user and/or rail equipment involved Code 114b. Was there a hazardous materials release												Code	
in the impact transporting hazardous materials? 1. Highway User 2. Rail Equipment 3. Both 4. Neither N/A 1. Highway User 2. Rail Equipment 3. Both 4. Neither											N/A			
1. Highway User 2. Rail Equipment 3. Both 4. Neither 114c. State here the name and quantity of the hazardous materials released, if any. N/A 1. Highway User 2. Rail Equipment 3. Both 4. Neither												<u> </u>		
TT-te. Blate he	ie die nume un	u quanti	y or ui	e nuzu	dous materia	lis released	N/A							
115. Type	1.Gates	4.V	Vig Wa	ıgs	7.Cros	ssbucks 1	0.Flagged by	crew	116. Signaled	Crossing	Code	117. Whistle	Code	
Crossing 2.Cantilever FLS 5.Hwy. traffic signals 8.Stop signs 11.Other (spec. in narr.) (See instructions for codes) 1. Yes														
3. Unkn										3. Unknown	N/A			
Code(s)	N/A	N/A		A	N/A	N/A	N/A	N/A		100 G			Code	
118. Location 1. Both Sig	0				Code							Illuminated by Street Special Lights		
		ach					1. Yes	Silais		1. Y		1105		
							2. No		N/A	2 No.				
3. Opposite Side of Vehicle Approach N/A 3							3. Unknown				nknown		N/A	
121.	122. Driver's	Gender	Code				r in Front of	Code			1.0.		Code	
Age	1. Male						k by Second 7			e around or thru		4. Stopped on Crossing		
0	2. Female	e I	N/A		1. Yes	2. No	3. Unknown	n N/A		bed and then Protect Stop	bceeded	5. Other (specify in narrative)	N/A	
									5. Diu 1	lot Stop			IN/A	
125. Driver Pa Highway V		Cod	e 12				(primary ob			5.01	/ ·c ·		Code	
1. Yes 2. No		N/	4		ermanent Str			ng Train 5.	vegetation Highway Vehi	7. Other cle 8. Not obs	(specify in a	narrative)	N/A	
1. 105 2. 10	J. UIIKIIOWII			2.5	tanung Ram	127. Driv		graphy 0.	Cod		si ucicu is Driver in th	a Vahicla?	Code	
Casualties to: Killed Injured							d 2.Injured 3.	Uninjured			Yes	2. No	N/A	
129. Highway-Rail Crossing Users 0 0						-	hway Vehicle dollar damaş		mage 0	f Highway-Rail Crossin 0	g Users			
132. Locomotive Auxiliary Lights? Code 133. Locomotive Auxiliary Lights Operational?												Code		
1. Yes 2. No							N/A 1. Yes 2. No					N/A		
134. Locomotive Headlight Illuminated? Code 135. Locomotive Audible Warning Sounded?											Code			
1. Y	es	2.	No				N/A	1.	Yes	2. No			N/A	



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

137. SYNOPSIS OF THE ACCIDENT

On Wednesday, April 25, 2007, at 1:26 p.m., MDT, an eastbound BNSF Railway Company (BNSF) loaded coal train derailed. The derailment occurred on the Powder River Division, Orin Subdivision at about milepost 123.5. The location of the derailment is about twelve miles southeast of Douglas, WY.

The train consisted of two locomotives on the head end of the train, 128 loaded coal hopper cars, and two locomotives on the rear end of the train. A total of 23 loaded coal hopper cars were involved in the derailment. The derailed cars were the 91st through the 113th car of the train consist.

There was no report of injuries, evacuations or release of hazardous materials.

The reported estimated damage to equipment is \$1,090,197 and track is \$125,000.

At the time of the accident it was daylight and cloudy. The temperature was 65° F. The rail temperature at the time of the derailment was 92 degrees.

The probable cause of the derailment is track alignment irregular or buckled track.(T109)

The contributing cause of the derailment is Defective spikes or missing spikes or other rail fasteners(T206)

138. NARRATIVE

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

Circumstances Prior to the Accident

On April 25, 2007, after completing more than the statutory off duty time, a crew consisting of an engineer and conductor reported for duty at their home terminal, Gillette, Wyoming at 7:40 a.m. MDT. The crew was assigned to operate an eastbound loaded unit coal train from West Nacco to Guernsey, Wyoming, a distance of 108 miles.

The train consisted of four locomotives (two at the head end of the train and two at the rear of the train), 128 loaded coal cars, and 0 empty cars. The length of the train was 7,089 feet with 18,277 trailing tons. The crew went on duty in Gillette and was transported by a crew van to West Nacco, Wyoming. They boarded the train at 9:30 a.m. MDT and departed West Nacco at 9:35 a.m. MDT.

The train approached the accident site traveling geographically south and timetable east direction. Timetable directions will be used throughout this report. The locomotive engineer was seated at the controls of the leading locomotive on the right (south) side of the cab. The conductor was seated on the left (north) side of the leading locomotive cab.

Approaching the accident site from west to east starting at about milepost 122.02 there is tangent track for approximately 3,168 feet, followed by a 2-degree right hand curve for approximately 2,200 feet. From the end of the 2-degree curve to the point of derailment (POD) there is approximately 2,640 feet of tangent track. Beginning at milepost 122.02, the grade of the track is descending on a .30 percent grade in the direction of the train movement. From milepost 122.47 to milepost 123.1 the grade descends at .92 percent. From milepost 123.1 to the POD the grade of the track continues to descend at 1.0 percent.

According to the train crew, the trip had been uneventful until the train approached the accident site.

The Accident

As the train approached the accident site and at the time the accident occurred, the train was being operated at a recorded speed of 45 miles per hour (mph). The speed was recorded by the event recorder of the lead locomotive (BNSF 8831).

The track in the area of the accident is Traffic Control System (TCS) and is controlled by a dispatcher in Fort Worth, Texas. The maximum authorized speed for trains operating on the Orin Subdivision and at the location of the accident is 50 mph as designated in the current BNSF Timetable No. 7.

According to the train crew, as they approached the accident site they both noticed a small thermal misalignment in the track in the area where the POD occurred. While attempting to contact the dispatcher a train line induced emergency air

brake application occurred. The engineer then contacted the dispatcher and advised that their train had gone into emergency. The conductor walked toward the rear of the train per applicable BNSF rules.

Analysis and Conclusion

The accident met the requirement for FRA Post Accident Toxicology Testing, as required under Title 49 CFR, Part 219, Subpart C. The result of the tests were negative.

A total of 23 loaded coal hopper cars were derailed. The derailed cars were the 91st through the 113th car of the train consist.

The investigation revealed that BNSF track maintenance crews removed a switch on September 11, 2006, at milepost 123.6., immediately east of the POD. The turnout was replaced with new concrete tie panels, CWR and anchors.

The existing track on both ends of the newly installed CWR track panel was found to have insufficient anchors in the area of the POD, there was a gap in the track structure not anchored between the new track panel and existing track. The rubber pads between the base of the rail and the top of the concrete tie were found to be deteriorated or missing leaving a void between the base of the rail and the top of the concrete ties in the existing track. The rail was also discovered to be moving 10 to 12 inches longitudinally on both ends of the newly installed track panel area.

BNSF replaced the former turnout with new concrete tie panels, CWR, and rail anchors. They did not adjust the neutral temperature of the existing track on both ends of the new installation. This created a fixed object that ultimately contributed to high compressive forces in the track structure causing the thermal misalignment (sunkink) in the main track.

The latest BNSF rail defect summary report which details defective rail discovered by a rail detector car or service failure rails revealed no defective rail conditions in the immediate area of the accident.

On April 24, 2007 a BNSF track inspector conducted an FRA required track inspection by hi-railing between milepost and 123.1 to milepost 127.2. No defective conditions were noted in the accident area.

The event recorder data indicated that the train was traveling at a recorded speed of 45 mph. The posted speed for the track being operated on was 50 mph. The event recorder data shows no indication of improper train handling. The train was in dynamic brake position 4 and was gradually transitioning from braking to drift.

The lead locomotive in the train was equipped with an on board video recording device which captures video of the track and surrounding right of way as the train is traverses down the track. The DVR Video Snapshot of the immediate area of the accident clearly shows a track alignment irregularity in the area the accident occurred.

A thorough inspection of the derailed equipment revealed no evidence of mechanical defects that would have contributed to the cause of the accident.

FRA obtained fatigue related information, including a 10-day work history, for the engineer and conductor involved in the accident. FRA concluded fatigue was not probable for the conductor or engineer

As a result of the accident the BNSF will identify all areas of similar instances (rail running due to pad deterioration, etc.) and escalated to the division engineer. Results will be prioritized for remedial action.

The BNSF will conduct field audits of all concrete tie locations on the Powder River Division. Also, reviews will be held with maintenance personnel regarding BNSF's requirements pertaining to identification of worn pads and insufficient fasteners. A stand down with all roadmasters, foremen, and inspectors will be done to review this incident. The resulting information will be passed throughout the system to insure similar areas are in compliance. A review with all MOW employees will be done regarding how to identify potential excessive rail movement, the inspection requirements, and the proper remedial actions to apply. Also, employees will conduct monthly hy-rail, ride-alongs and CWR track inspections to ensure work orders are completed and reviewed for accuracy pertaining to CWR issues.

Probable Cause

The contributing cause of the derailment is Defective spikes or missing spikes or other rail fasteners(T206)