Brotherhood of Locomotive Engineers and Trainmen

A Division of the Rail Conference
International Brotherhood of
Teamsters

Safety Task Force

INDEPENDENCE, OHIO

Before the National Transportation Safety Board

NTSB Accident Number: DCA-16-FR-007

Class: Regional

April 3, 2016

Proposed findings, probable cause, and safety recommendations, in connection with the collision of National Railroad Passenger Corporation ("Amtrak") train No. 89 with Amtrak Maintenance of Way ("MOW") equipment subsequently causing two MOW employee fatalities on April 3, 2016 in Chester, Pa.

Stephen J. Bruno, BLET-Safety Task Force, National Chairman
Donald Hill, BLET-Safety Task Force, Party Spokesman

FINAL SUBMISSSION

ACCIDENT SYNOPSIS

On April 3, 2016, at 7:52 a.m.[1] a southbound National Railroad Passenger Corporation, ("Amtrak" or "ATK") train ("No.") 89 collided with a maintenance of way ("MOW") equipment, (a backhoe), at milepost ("MP") 15.7 on ATK's Philadelphia to Washington line ("PW"). The collision resulted in the derailment of the locomotive, damage to several coaches, injuries to thirty-six (36) passengers and five (5) employees, and two (2) employee fatalities.

Amtrak's damage to its equipment was estimated at $2.5 million dollars. The weather at the time of the accident was scattered clouds, winds from the west at thirty-eight (38) miles per hour ("MPH") gusting up to fifty (50) MPH and a temperature of 37° F.

ACCIDENT NARRATIVE

ATK No. 89, ("the Palmetto"), is a passenger train service operated by Amtrak over 829 miles from New York City, NY south to Savannah, Georgia. According to interviews, the crew of ATK No. 89 reported to New York City, New York, at 5:25 a.m. where they conducted a comprehensive job briefing facilitated by the Conductor. ATK No. 89 departed Penn Station, New York City, NY "on-time" at 6:05 a.m. with a crew of seven (7) as follows:

Amtrak No. 89 Train crew

- Locomotive Engineer
  Hired: 5/05/14
  Current Engineer certificate: 1/19/16
- Conductor
  Hired: 2/22/08
  Current certificate: 6/18/13

[1] All times throughout this report will be Eastern Standard Time ("EST").

- Assistant Conductor (AC) No. 1
  Hired: 6/18/15
  Current certificate: N/A
- Assistant Conductor No. 2
  Hired: 12/24/14
  Current certificate: N/A
- On-Board Service Person
- On-Board Service Person
- Lead Service Attendant (LSA)

The crew stated the train travelled to Philadelphia's 30th Street Station without exception. The train departed 30th Street Station at 7:38 a.m. on Main Track No. 3 southward toward Wilmington, Delaware. ATK No. 89 had clear signal indications[2] on all the signals it encountered as it departed Philadelphia and approached MP 15.7[3]. Per the download of ATK 89's locomotive event recorder, the train was travelling 106 MPH prior to the collision.

The Locomotive Engineer stated he first saw large equipment (LORAM, a subcontractor utilized by Amtrak) located on Main Track No. 2. Once the Locomotive Engineer realized that there was a backhoe fouling Main Track No. 3, he immediately initiated an emergency application of the brakes and sounded the locomotive horn.

The train consisted of one (1) locomotive, eight (8) coaches, one (1) café car and one (1) baggage car, see table 1 below:

Consist Position	**Equipment Type**	**Number**
1	Locomotive	627
2	Coach	82993
3	Coach	82524
4	Coach	82781
5	Coach	25034

[2] Northeast Operating Rules Advisory Committee "NORAC", "clear" indication is governed by rule 281 and is defined as "proceed not exceeding normal speed".

[3] See Appendix No. 1 picture of "clear signal indication".

Consist Position	Equipment Type	Number
6	Coach	25040
7	Coach	25013
8	Coach	25088
9	Café	43364
10	Business	81543
11	Baggage	61028

Table 1. A list of the equipment consist for Amtrak train No. 89.

Figure 1. Picture of ATK No. 89's locomotive (No.627) post-collision

METHOD OF OPERATION

The Northeast Corridor ("NEC") is an electrified rail line in the northeast cities of the United States. Owned primarily by AMTRAK, it runs from Boston through New York City, Philadelphia, and Baltimore to Washington, D.C. on Amtrak's Mid-Atlantic Division. The NEC is used by numerous Amtrak trains, including the high-speed Acela Express and several long-distance trains.

The operating rules in effect at the time of incident were Northeast Operating Rules Advisory Committee ("NORAC") Tenth Edition, effective on November 6, 2011, and Amtrak NEC Timetable General Order Number 601, effective February 22, 2016, Amtrak NEC Region Summary Bulletin Order NYW6-03SUM, effective March 7, 2016, and National Railroad Passenger Corporation ("Amtrak") NEC Region Summary Notice Number 6-S05, effective April 1, 2016.

The authorities for movement of ATK No. 89 were signal authority per NORAC signal rule 261,[4] Automatic Block Signal ("ABS") system rules,[5] Interlocking rules, Cab Signal System rules ("CSS"),[6] and Advanced Civil Speed Enforcement System ("ACSES")[7] rule by Bulletin Order.

The fixed wayside signals are comprised of automatic block signals and interlocking signals. The interlocking signals are controlled by the Train Dispatcher(s) located in Wilmington, DE at the

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[4] "Rule 261" is defined by NORAC: signal indication will be the authority for a train to operate in either direction on the same track.

[5] "ABS" is defined by NORAC: a block signal system in which the use of each block is governed by an automatic block signal, cab signal, or both.

[6] "CSS" defined by NORAC: a signal that is located in the engine control compartment and which indicates track occupancy or condition. The cab signal is used in conjunction with interlocking signals and with or in lieu of block signals.

[7] "ACESS" definition: ACSES is a continuous overlay of the CSS that works through a system of transponders and radios that communicate to the locomotives, which are equipped with a nine (9) aspect cab signal system capable of receiving data and translating the data for easy reading and enforcement of the applicable rules/speeds. The enforcement system will force compliance with proper speeds and signal indication (i.e., it will prevent a train from passing a "Stop" signal or operating above the proper speed if ACSES detects non-compliance by initiating an application of the brakes). To pass a signal displaying "Stop", the Locomotive Engineer must receive a special code from the Dispatcher and enter the code into the system.

Amtrak Centralized National Operations Center ("CNOC") using a Centralized Electrification Traffic Control ("CETC").

ATK No. 89 originated at Penn Station, New York City, NY within Amtrak's Metropolitan Division heading west to Zoo Interlocking located in Philadelphia, PA within Amtrak's Mid-Atlantic Division of the NEC. NEC Timetable No. 6 specifies the direction of traffic on the mainline tracks between Baldwin Interlocking and Hook Interlocking south of Philadelphia as North and South.

ATK No. 89 departed 30th Street Station heading in a South direction on Main Track No. 3. The milepost numbering in this territory ascends numerically in the southward direction. At the point of impact ("POI") the mainline tracks are numbered 1 through 4 with Track No. 1 being the easternmost track.

Amtrak's Track Maintenance Program

Per interviews, Amtrak's Engineering Department developed a maintenance program to address short- and long-term repairs to the railroad's right of way. Through tests of the railroad's roadbed it was discovered that a series of "mud-spots" or "fouled ballast"[8] had developed between Baldwin Interlocking (MP 11.7) and Hook Interlocking (MP 16.8) — both remotely controlled by CETC 4 — and the spots were causing "rough" rides for trains that traversed over them.

To address the series of mud spots, Amtrak's Engineering Department planned to remove the mud spots via a "fifty-five (55) hour track outage" on Main Track No. 2 with periodic foul-time on the remaining three (3) main tracks. The outage began on April 1, 2016, at 10:00 p.m. and was scheduled to conclude on April 4, 2016, at 5:00 a.m. Main Track No. 2 was out of service via a Form D[9] throughout the outage and under the control of various ATK MOW Foremen during the outage.

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[8] Amtrak Supervisors stated, per interviews, that "mud spots or fouled ballast" are used interchangeably and that ballast degrades over time and can cause poor drainage and mud to appear in the track structure, compromising track surface and stability.

[9] Form D defined by NORAC: a document that the Train Dispatcher issues to restrict or authorize movements. Form Ds also are issued to convey instructions in situations not covered in the Operating Rules.

Amtrak decided to utilize a sub-contractor (LORAM) to perform the removal of the fouled ballast from Main Track No. 2 via its "rail-vacuum vehicle" and Amtrak decided to use its MOW employees to assist LORAM with a backhoe tractor, which was used to loosen up and position the fouled ballast so it could be vacuumed up by the LORAM personnel..

On Saturday, April 2, 2016, at 7:00 p.m., an Amtrak MOW Foreman ("night-Foreman") assumed charge of the worksite and was relieved by another Amtrak MOW Foreman ("day-Foreman") on April 3, 2016, at approximately 7:27 a.m. Per the night-Foreman's interviews, he left the worksite approximately 7:30 a.m.

At the time of the collision (7:50 a.m.), the backhoe operator was inside the backhoe as it fouled Main Track No. 3 assisting the LORAM "rail-vacuum vehicle". Additionally, an Amtrak MOW track supervisor was standing near the backhoe working on the track with an employee under his charge. The collision caused the fatalities of the backhoe operator and the track supervisor.[10]

Amtrak's Maintenance of Way Night-Foreman/Day-Foreman

On the day of the incident, the ATK MOW night-Foreman stated that he moved his truck after observing day-shift personnel arriving at the worksite. Prior to reporting to the worksite, the ATK MOW day-Foreman reported to a track office in Wilmington at 6:00 a.m. The day-Foreman arrived at the worksite at 7:00 a.m. and pulled his vehicle next to the night-Foreman, who was in his vehicle.

The day-Foreman briefly spoke to the night-Foreman to ascertain the type of protection on each of the tracks (part of the responsibilities of the foremen were to conduct comprehensive job briefings with each other and safety briefings with all employees and contractors at the worksite). The night-

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[10] Post-accident toxicology testing was performed on the decedents and on all covered employees directly involved in the accident pursuant to 49 C.F.R. Part 219, Subpart C. Positive test results were returned for both decedents and for the locomotive engineer; however, we are unaware of any evidence either of impairment or of a causal relationship between possible improper use of controlled substances and the happening of the accident.

Foreman informed the day-Foreman that Main Track No. 2 was out of service and Main Tracks Nos. 1, 3 and 4 at that time had foul time between Baldwin Interlocking and Hook Interlocking.

At 7:26 a.m., the day-Foreman used his personal cell phone to contact Amtrak's CETC-4 Train Dispatcher to take control of Main Track No.2 under his name via Form-D No. A1401.[11] At 7:28 a.m., the night-Foreman called the same Train Dispatcher via cell phone, giving up his control of Main Track No. 2, thereby cancelling the Form-D in his name and, unbeknownst to the day-Foreman, he also released the foul-time protection on Main Tracks Nos. 1, 3 and 4.

Once the day-Foreman was issued Form-D No. A1401 from the Train Dispatcher, he walked north to the work location to ascertain what work had been completed by the night crew and to prepare his job-briefing forms. When he arrived at the equipment, the LORAM vacuum train was idle on Main Track No. 2 and the backhoe was fouling Main Track No. 3. The MOW track supervisor and a trackman were using hand tools on Main Track No. 2 as a watchman was posted on the field side of Main Track No. 4.

The day-Foreman spoke with the MOW track supervisor about the workload for the day and then he entered the LORAM vacuum train to talk to the contractors. At 7:50 am, while the day-Foreman was still in the LORAM vacuum train, ATK No. 89 collided with the backhoe that was fouling Main Track No. 3.

Expectations of the Amtrak MOW Foremen

The interviews of the day and night Amtrak MOW Foremen revealed discrepancies in their perspectives of their duties. The night-Foreman believed that once he "gave-up" control of Main Track No. 2 the day-Foreman became the employee-in-charge ("EIC") and that the night-Foreman was obligated to release all foul times under his authority. He stated that there could be only one EIC and that the EIC was responsible for the obtaining and releasing of foul times.

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[11] *See* Appendix No. 2.

Interviews with the day-Foreman and various Amtrak managers contradicted the night-Foreman's perspective. Their interviews revealed that the rules allowed the night-Foreman to maintain the foul-time on the adjacent tracks even though he released control of Main Track No. 2. Additionally, all Amtrak personnel interviewed, including the night-Foreman, stated the rules mandate that all Foremen must clear any tracks of all equipment prior to releasing foul times.

The night-Foreman stated that the day-Foreman asked him to "cancel his Form-D" and that the night-Foreman replied "but if I cancel my Form-D ... I have to give up my fouls". The night-Foreman stated that the day-Foreman replied "I know what you have to do ...." The night-Foreman replied "alright but you will have to get your fouls immediately" and he stated to the investigators "just like it's always done" released the foul times.

The day-Foreman stated he assumed that the foul times remained in place because the backhoe was still fouling Main Track No. 3 and he never heard any release of foul times from the night-Foreman via radio or in person. He stated that he told the night-Foreman that after the night Foreman released his foul times the day-Foreman would pick them up (i.e., then he would get foul times himself). He stated that he expected the night-Foreman to clear the backhoe from fouling all tracks before he released his foul times.

Amtrak managers stated that the rules require that the obtaining or releasing of foul times be conducted via radio, as this is an added step of safety to provide the opportunity for more persons to hear this communication.

The night-Foreman stated that throughout his shift he communicated with the 3rd shift Train Dispatcher via radio and cell phone to obtain or get release of foul times. He stated that he used his cell phone at times because of intermittently poor radio reception and transmission.

SUPPLEMENTAL SHUNTING DEVICES

Both Foremen stated that they did not use supplemental shunting devices ("SSDs") during the track outage. Amtrak's managers stated that pursuant to Amtrak Special Instruction 140-S2[12] SSDs are required to be used when fouling for longer than five (5) minutes and the track is obstructed with heavy equipment.

The 3rd shift Train Dispatcher

The 3rd shift Train Dispatcher reported to work on April 2, 2016, at 11:30 p.m. and was scheduled to work until 7:30 a.m. on April 3, 2016. He stated that his shift was routine and that there was a Form-D in effect for the "55-hour track outage" that became effective on April 1, 2016. He stated that foul time authority on the adjacent tracks was intermittently exchanged between the night-Foreman and him throughout the night and into the morning.

The 3rd shift Train Dispatcher stated that no one informed him from the field that SSDs were in use. He stated that in the past the MOW has contacted him to verify that the SSDs were working as intended and that a track occupancy light ("TOL") would appear on his computer screen (if working as intended he stated that the placement of an SSD turns the color on his computer screen red, which indicates that the track is occupied).

The 3rd shift Train Dispatcher stated that the 1st shift Train Dispatcher arrived approximately 7:00 a.m. and the two performed a comprehensive job briefing. He stated to the investigators that it is normal for Train Dispatchers to arrive approximately fifteen (15) minutes early to conduct a job briefing. He stated that at 7:11 a.m. he returned foul time authority to the night-Foreman on Main Track No. 1, and he left at 7:15 a.m.

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[12] *See* Appendix No. 3.

1st shift Train Dispatcher

The 1st shift Train Dispatcher stated that he arrived at 7:00 a.m. and conducted a comprehensive job briefing with the 3rd shift Train Dispatcher. He stated that, shortly after assuming charge of his desk, he received a phone call from the MOW day-Foreman requesting to assume control of Main Track No. 2 via Form-D. He advised the day-Foreman that he just assumed his duties and asked him to call back in a couple of minutes.

The 1st shift Train Dispatcher stated that the day-Foreman called back and he issued Form-D A1401, effective at 7:26 a.m. Shortly afterward, the night-Foreman called and cancelled his control via Form-D A1403[13] and that he (night foreman) released his foul times at 7:29 a.m.

Downloads of the phone system revealed that the 1st shift Train Dispatcher used Amtrak's landline phone to place a personal call and the accident occurred while he was talking on the phone. He stated that he observed an "emergency plate" indication[14] on the computer aided dispatch ("CAD") display and believed that some type of power problem had developed. He stated shortly after that he received a phone call from the MOW day-Foreman, who informed him of the collision.

System Safety

The NTSB Investigators and the respective party members conducted several off-scene interviews with the following groups:

- Amtrak's managers from the Engineering and Production Departments
- Amtrak's managers from the Training and Operating Practices Department
- Panel of Unions, Brotherhood of Maintenance of Way Employees Division (BMWED), Brotherhood of Railway Signalmen (BRS) and American Railway and Airway Supervisors Association (ARASA)

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[13] *See* Appendix No. 4.

[14] Amtrak per interviews defines "emergency plate" as a light indication on the CAD indicating a loss of overhead catenary power has occurred somewhere on the railroad.

- Safety personnel, which included a panel of Safety Liaisons and managers from Amtrak's System Safety Department

The interviews revealed that although Site Specific Work Plans ("SSWPs") are used on various projects, there was not one in place for the 55-hour outage project near Chester. There was conflicting testimony regarding Amtrak's position as to why there was not a SSWP prepared for the project. One supervisor stated that SSWPs are used only on large projects, contrary to a different supervisor, who stated that a SSWP should have been used in the 55-hour outage project near Chester. Management stated that there is no formal standard method for the preparation of the SSWPs.

Additionally, the panel revealed that there are different types of construction/maintenance projects. The larger production projects are very complex, as opposed to the maintenance project performed during the 55-hour outage.

During the interviews, the respective Amtrak unions stated that there is not a good working relationship with the management of the Engineering Department. The leadership of the different unions expressed concerns over high employee turnover rate, large numbers of inexperienced employees, low criteria for job placement within the Engineering Department, insufficient training, oppressive and burdensome discipline policies, and safety concerns that the rank and file are afraid to address due to fear of retaliation.

Interviews with various Amtrak managers and union officers revealed that Amtrak did not have a formal check in place to oversee the "job-briefing" and exchange between foremen at work locations. Additionally, various persons stated that they've noticed an increased presence of the Federal Railroad Administration ("FRA") since the accident.

The interviews revealed that managers at Amtrak have already made changes after the accident. The company has changed its training department, including its manual for the Roadway Worker Protection ("RWP") Rule with a stronger emphasis on the proper of use of SSDs and the proper use of fouling procedures.

PROBABLE CAUSE AND CONTRIBUTING FACTORS

The probable cause of the accident was the failure to use "approved supplemental shunting device(s)" for foul times that were lasting more than five (5) minutes, and the failure to ensure that all personnel and equipment were clear of all affected tracks prior to relinquishing foul time back to the Train Dispatcher.

Contributing to this accident was the lack of a comprehensive job briefing between the night-Foreman and the day-Foreman specifically including how the transition of foul times would be handled, and Amtrak's lack of oversight by their managers ensuring supplemental shunting devices were properly being installed on this project.

PROPOSED RECOMENDATIONS

TO NATIONAL RAILROAD PASSENGER CORPORATION (AMTRAK):

1. Upgrade, make available, and maintain Supplemental Shunting Devices ("SSDs"), ensuring those employees who should be using these devices are properly trained and qualified on their proper installation and use. Require the Train Dispatcher to verify to the MOW foreman that the SSD shunt is visible on the CAD display, and require the Train Dispatcher to withhold the issuance of foul time to MOW personnel unless and until the SSD shunt is confirmed via the CAD display.

2. Install readily available technology that would work in conjunction with Positive Train Control ("PTC") to provide advanced warning to both Maintenance of Way employees working in the field and approaching trains.

3. Provide proper oversight, through efficiency testing, of the proper use of SSDs, comprehensive job briefings, proper shift change protocols, fouling procedures, and radio/telephone usage.

4. Implement a procedure that requires the Train Dispatchers confirm — by specific question and answer — that all employees and equipment are in the clear prior to releasing foul time.

5. Implement a procedure that requires the relieving Track Foreman and the arriving Track Foreman conduct the transfer of authority in a conversation with the Train Dispatcher together so that all movement authorizing/restricting employees participate in the same conversation.

TO FEDERAL RAILROAD ADMINISTRATION (FRA):

1. Publish regulations requiring railroads to develop and enforce proper oversight of foul time and other protection obtained by Maintenance of Way employees.

2. Publish regulations prescribing that all railroads obtain and install available technologies that would provide advance warnings to both Maintenance of Way employees and approaching trains.

3. Publish regulations prescribing that all systems utilized to protect Maintenance of Way personnel remain active and that they alert the Train Dispatcher in real time.

CERTIFICATE OF MAILING

I certify that I have on this date electronically served upon Mr. Ryan Frigo [redacted] Investigator in Charge, a full and complete copy of the "Proposed findings, probable cause, and safety recommendations" with regard to the two Amtrak Maintenance of Way employee fatalities and subsequent derailment of Amtrak train No. 89, in Chester, PA on April 3, 2016. NTSB Docket No. DCA 16 FR 007, submitted by the Brotherhood of Locomotive Engineers and Trainmen's Safety Task Force to the National Transportation Safety Board. A hard copy was also forwarded addressed to the party of interest as required by 49 CFR§ 845.27 (Proposed findings).

Ms. Theresa Impastato
Deputy Chief Safety Officer
National Railroad Passenger Corporation
[redacted]

Mr. Steve Stearns
Vice Chairman
Brotherhood of Maintenance of Way Employes Division
[redacted]

Mr. Louis Tomassone
Railroad Safety Inspector
Federal Railroad Administration Region 1
Volpe Transportation Center
[redacted]

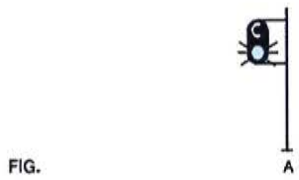
Mr. William Bates
District of Columbia Legislative Director,
Local Chairperson, 1933-Amtrak
Sheet Metal Air Rail Transportation Division (SMART)
[redacted]

Yours truly,

[redacted]

Stephen J. Bruno
Brotherhood of Locomotive Engineers & Trainmen
National Secretary Treasurer
National Chairman, Safety Task Force
7061 East Pleasant Valley Road
Independence, OH 44131

APPENDIX No. 1

Rule	Aspects
280a	
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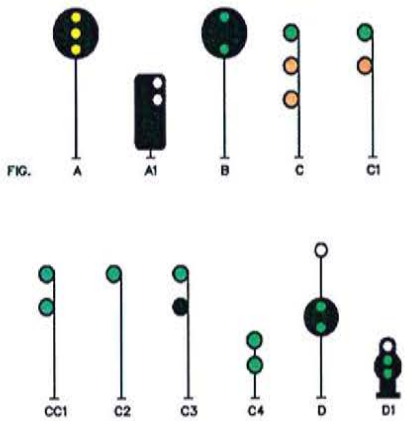
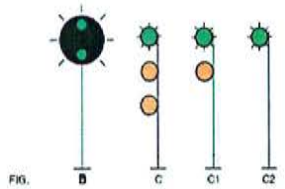
281	
281a	

APPENDIX No. 2

95

NORAC MOVEMENT PERMIT FORM D

rm D No. A1401
te 4/13/16

Form D No.(s) _____
Delivered To _____

Fax Vasc At Hook

Form D Cancelled

Time	Date	Dspr
	/ /	
	/ /	
	/ /	
	/ /	
	/ /	
	/ /	
	/ /	
	/ /	

1 Temporary Speed Restrictions

Line	Trk(s)	Between/At	Speed Psgr	Speed Frt	Signs

2. Operate in _____ direction(s) on ___ Line ___ Trk between _____ and _____
   On ___ Line ___ Trk between _____ and _____ Dspr_____ Time_____
   On ___ Line ___ Trk between _____ and _____ Dspr_____ Time_____
   On ___ Line ___ Trk between _____ and _____ Dspr_____ Time_____
3. Trains or track cars ahead _____
   TC proceed past Stop Signal(s) at _____
4. Rel Line N12 Trk out of service between/at Hooks And Beldens in charge of Fax Vasc
   ___ Line ___ Trk out of service between/at _____ in charge of _____
5. ___ Line ___ Trk obstructed for maintenance between _____ and _____
6. Non-signalled DCS rules in effect on ___ Line ___ Trk(s) between _____ and _____
7. Int and CP signals out of service on ___ Line ___ Trk(s) at _____
8. Remain at _____ on ___ Line ___ Trk until engine arrives to assist
9. Operate at Restricted Speed on ___ Line ___ Trk to _____ where train is disabled
10. TBS in service on ___ Line at _____
11. CSS rules out of service on ___ Line ___ Trk(s) between _____ and _____
12. Protect crossing(s) on ___ Line at _____
13. Other instructions/information _____

Train Dispatcher _____

Time Effective 726 A M.

139-S1. (Cont'd)

c. Any Division 2.1 flammable gas, Class 3 flammable liquid or combustible liquid, Class 1.1 or 1.2 explosive, or hazardous substance listed in 49 CFR 173.31(f)(2).

7. Requirements When Emergency Responders Work on Equipment

Prior to leaving trains, car(s) and other on-track equipment unattended, it must be inspected by a qualified employee when it is known that an emergency responder was on, under, between, or otherwise manipulated the equipment. Any Amtrak employee who has knowledge of an emergency responder being on, under, between or otherwise manipulating equipment must report their observation to the Train Dispatcher.

140-S1. FOUL TIME

In the application of Rule 140, Foul Time information must be recorded by the Dispatcher or Operator issuing the foul time, and recorded by the employee requesting the foul time on form NRPC 3045 "Authority to Foul Tracks Record".

Before allowing additional employees to join the work being performed under Foul Time permission, the employee who was granted Foul Time by the Dispatcher must conduct a job briefing with the additional employees, and must review the track(s) being protected, the Foul Time track and time limits, and all other factors affecting the work. The additional employees must not be permitted to foul the track(s) involved until they have verified their full understanding of all topics discussed during the job briefing.

The employee who was granted Foul Time by the Dispatcher or Operator must not release the Foul Time until they have ensured that all fouling activity under their authority has been cleared.

The Authority to Foul Tracks Record must be retained and held available for inspection for a period of 7 days.

140-S2. USE OF SUPPLEMENTAL SHUNTING DEVICE

This instruction requires the employee in charge of "covered fouling activities" to apply an approved Supplemental Shunting Device (SSD) to the track(s) to be fouled, after receiving foul time from the Dispatcher or Operator. The purpose of the SSD is to **supplement, not replace,** blocking device protection provided by the Dispatcher or Operator.

A. Covered Fouling Activities: Except as noted below, this instruction applies when equipment will be used to foul a track in signaled territory or within interlocking limits for more than 5 minutes.

This instruction does **not** apply when the fouling activity:

1. Requires Form D line 4 or line 5 authority,

or

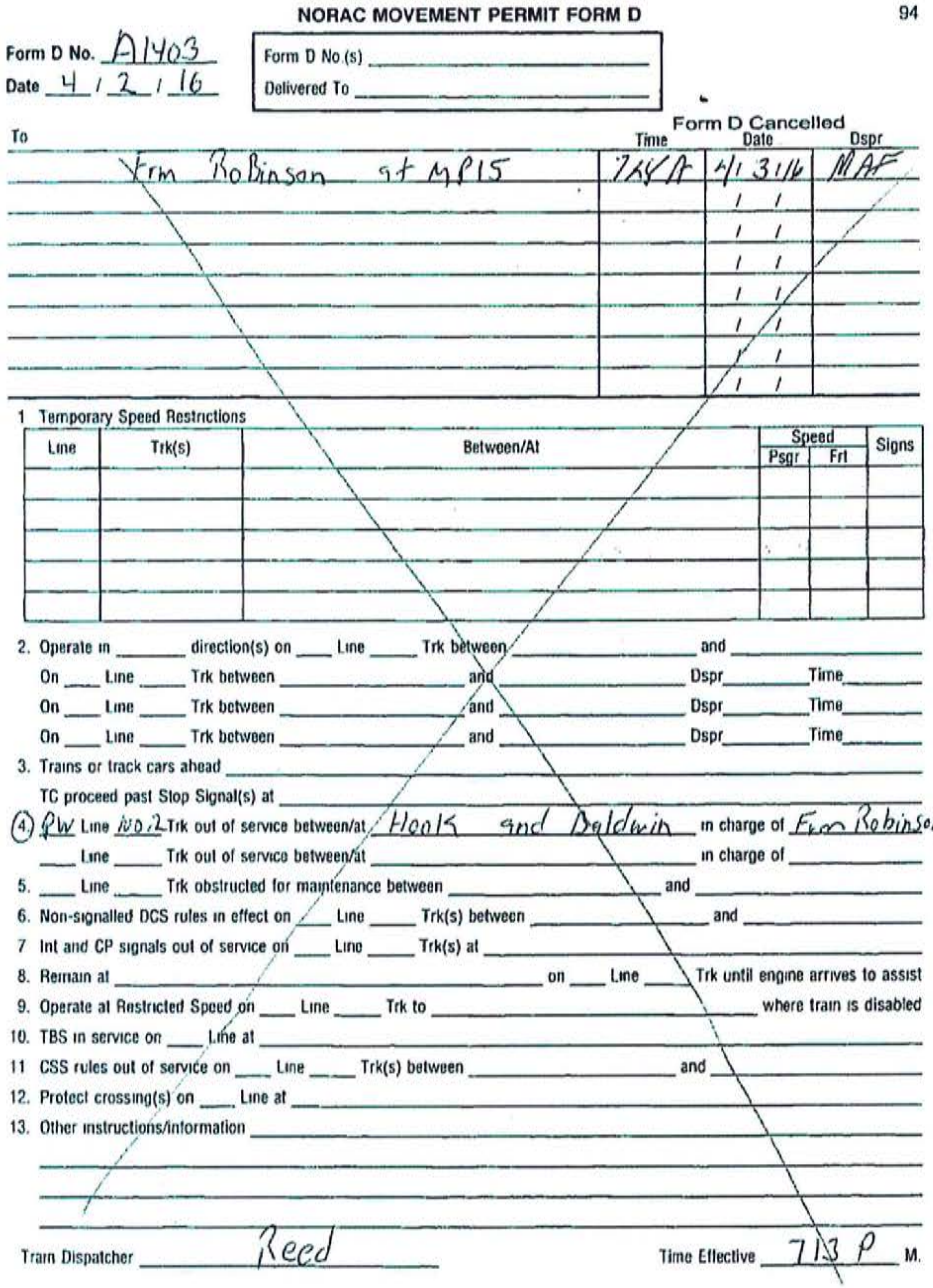
2. Is within the approach circuit to a highway crossing that is not equipped with a device that will automatically interrupt the operation of the crossing's warning devices (i.e., any crossing listed in Special Instruction 138 that does **not** have an "X" in Column 1 of that instruction),

or

3. Is within 200 feet of any highway crossing that is equipped with automatic warning devices.

Note: Roadway Workers performing service without equipment may elect to use an SSD. Roadway Workers electing to use an SSD must do so in accordance with sections "B" and "C" of this instruction.

APPENDIX No. 4



NORAC MOVEMENT PERMIT FORM D

94

Form D No. A1403
Date 4 / 2 / 16

Form D No.(s) _____
Delivered To _____

Form D Cancelled

To	Time	Date	Dspr
Frm Robinson at MP15	714A	4/13/16	MAF
		/ /	
		/ /	
		/ /	
		/ /	
		/ /	
		/ /	
		/ /	

1 Temporary Speed Restrictions

Line	Trk(s)	Between/At	Speed Psgr	Speed Frt	Signs

2. Operate in _____ direction(s) on ___ Line ___ Trk between _____ and _____
   On ___ Line ___ Trk between _____ and _____ Dspr _____ Time _____
   On ___ Line ___ Trk between _____ and _____ Dspr _____ Time _____
   On ___ Line ___ Trk between _____ and _____ Dspr _____ Time _____
3. Trains or track cars ahead _____
   TC proceed past Stop Signal(s) at _____
4. RW Line No.2 Trk out of service between/at Hook and Baldwin in charge of Frm Robinson
   ___ Line ___ Trk out of service between/at _____ in charge of _____
5. ___ Line ___ Trk obstructed for maintenance between _____ and _____
6. Non-signalled DCS rules in effect on ___ Line ___ Trk(s) between _____ and _____
7. Int and CP signals out of service on ___ Line ___ Trk(s) at _____
8. Remain at _____ on ___ Line ___ Trk until engine arrives to assist
9. Operate at Restricted Speed on ___ Line ___ Trk to _____ where train is disabled
10. TBS in service on ___ Line at _____
11. CSS rules out of service on ___ Line ___ Trk(s) between _____ and _____
12. Protect crossing(s) on ___ Line at _____
13. Other instructions/information _____

Train Dispatcher Reed

Time Effective 713 P M.