



March 31, 2017

Mr. Ryan Frigo, Investigator in Charge
National Transportation Safety Board
490 L'Enfant Plaza East, S.W.
Washington, DC 20594

RE: Proposed Findings, Proposed Probable Cause, and Proposed Safety Recommendations in the matter of Amtrak Train 89 Collision with a Backhoe and Engineering Employees near Chester, PA on April 3, 2016; NTSB Docket No: DCA16FR007

Dear Mr. Frigo:

Amtrak respectfully submits the following proposed findings and recommendations with respect to the April 3, 2016 collision in Chester, Pennsylvania. Amtrak requests that the NTSB consider this submission prior to issuing its final report and that this submission become part of the official public record.

We appreciate the assistance, cooperation and guidance of the NTSB throughout the investigative process and for allowing Amtrak to participate in the investigation.

Incident summary

On Sunday, April 3, 2016, at 07:50 AM, Eastern Daylight Time (EDT), Amtrak southbound train 89, consisting of one locomotive, nine passenger coaches and one baggage car, was operating on main track 3 at 106 MPH in the area of Milepost 15.7. The engineer observed work equipment on the track ahead and initiated an emergency brake application; however, the train struck a backhoe which was fouling track 3, resulting in the derailment of the locomotive.

Two Amtrak Maintenance of Way (MOW) employees, the backhoe operator and an ARASA Supervisor, were fatally injured as a result of the collision between the train and the backhoe. The National Transportation Safety Board (NTSB) and the Federal Railroad Administration (FRA) launched investigations into the incident.

The incident took place around the time of the shift change from the night shift foreman to the day shift foreman. Interviews with these two foremen reveal that an informal transfer discussion took place while work fouling the tracks continued. Track 2 was out of service via Form D. Tracks 1, 3, and 4 were protected via the use of foul time. A Loram Vacuum truck was occupying Track 2. Ballast vacuuming on track 2 was assisted by the use of a backhoe on track 3. The day shift foreman received a Form D to occupy track 2 at 7:26 AM and the night shift foreman cancelled his Form D for track 2 at 7:28 AM. At 7:29 AM, the night shift foreman cleared his fouls via telephone on Nos. 1, 3, and 4 tracks between Baldwin and Hook while



work continued. The night shift foreman did not ensure that the tracks were clear of personnel and equipment prior to releasing his fouls. The day shift foreman never requested foul time prior to the collision, apparently believing that the night shift foreman still held the foul protection. The day shift foreman did not stop all work, order the tracks cleared of personnel and equipment and conduct a full on track safety briefing with the work crew. The ARASA Supervisor arrived on scene shortly before the collision. Once at the scene, he exited his company vehicle and fouled the track adjacent to the backhoe without first asking for or receiving a safety briefing.

At no time throughout the duration of the work under the authority of either the night shift or day shift foremen was a supplemental shunting device ("SSD") used to provide redundant protection when fouling, as required by NORAC Special Instruction 140-S2.

Proposed Findings

1. The following factors did not cause or contribute to the accident: the physical condition or actions of the engineer of Amtrak Train 89; the mechanical condition of the train, tracks and signal system; and railroad operating rules, policies and procedures.
2. The use of a SSD was required at all relevant times because equipment (i.e., the backhoe) was fouling Track 3 for more than five (5) minutes.
3. A SSD was not utilized under either the night shift or day shift foremen's authority.
4. Prior to the night shift work being performed, an on-track safety briefing was conducted and an Amtrak On-Track Safety Briefing Sheet was signed by all roadway workers at the scene, including the backhoe operator and ARASA Supervisor.
5. The Safety Briefing Sheet reflects that an SSD was not going to be utilized despite the clear Amtrak requirement that it be utilized under the circumstances present at the job site.
6. None of the employees who participated in the safety briefing and signed the Safety Briefing Sheet, including the ARASA Supervisor and backhoe operator, took exception to or otherwise challenged the failure to use a SSD despite all employees' right and obligation to assert a good faith challenge if adequate safety precautions and /or rules are not being followed.
8. SSDs were available for use at all relevant times.
9. A Site Specific Work Plan ("SSWP") was not necessary for the work being performed at the time of the incident because the work was ongoing maintenance performed routinely at various different locations. A safe work environment could have and should have been insured through proper and thorough Job Briefings conducted by both the night shift foreman and day shift foreman, which would have and should have covered all the necessary issues and risks to ensure safety, including the scope of the work being performed,



the location of the work being performed and the type of protection that was necessary and required, including the use of SSDs. Moreover, the Job Briefings should have been performed with all personnel and equipment clear of the tracks.

10. The applicable railroad rules, procedures and practices were adequate, and if followed, would have prevented the happening of this incident.

11. The night shift foreman should not have released his foul time unless and until all personnel and equipment were clear of the tracks and in a safe location as clearly mandated by Amtrak rules and procedures.

12. Because there was a transition between foremen, there should have been a job safety briefing in which all aspects of the job were discussed, including the protection to be used and foul time. This should have occurred while all employees and equipment were clear of the tracks and before employees and equipment were deployed. This was not done.

13. When the ARASA Supervisor arrived at the job site at some point shortly before the incident, he left his company truck and walked to and fouled Track 2, where he remained until the incident occurred. At no time prior to his going out to the tracks, did he receive or ask for a job briefing. Nor did he make any effort to determine what on-track protection was in place.

14. At the time of the incident, the ARASA supervisor was performing manual work and fouling track 2 when he should have been supervising the work being performed. The ARASA supervisor should not have been fouling the track without first receiving a safety job briefing and ascertaining, among other things, the protection being utilized, including the use of a SSD.

15. The watchman protecting the track failed to hold up the handheld whistleboard in advance of the train approaching the work area.

Probable Cause

The probable cause of the incident was the failure on the part of the night shift and day shift foremen to comply with Amtrak's rules, policies and procedures, including the failure to: ensure that all personnel and equipment were clear of all tracks and in a safe location prior to releasing foul time; conduct an adequate and complete safety briefing; and use a SSD. In addition, the ARASA Supervisor failed to obtain or require a safety briefing before fouling the track in violation of Amtrak's safety rules and his training. Finally, also contributing was the failure of all roadway workers, who participated in the safety briefing prior to the night shift work beginning, to assert a good faith challenge to the failure to use a SSD.

Post Incident Actions By Amtrak



Amtrak has taken the following actions post incident:

Communications

Immediately after the incident, Amtrak issued a series of Rules Alerts and Safety Advisories pertaining to specific rules and procedures associated with the incident. Amtrak managers and supervisors conducted a Safety Stand-Down per FRA requirements. Topics reviewed in the stand-down and advisories included the incident scenario, Amtrak's commitment to safety and the standards of excellence, conducting effective job briefings, communications, good faith challenge provisions and the associated process for executing a good faith challenge, FAMES committee guidance, and the protocols for Fouling a track- Actions taken before fouling, the use of SSDs, actions taken before returning a track to service, communication of mandatory directives, and where to direct any questions or concerns.

Rules and Training Improvements

Amtrak has performed a comprehensive review of the Roadway Worker Protection manual and associated instructions as well as an assessment of the initial and recurrent Roadway Worker Protection training programs. As a result of the review and assessment, Amtrak has revised the Roadway Worker Protection Manual and associated instructions to clarify requirements for the use of redundant protection when fouling with equipment. Using the revised Roadway Worker Protection Manual, Amtrak completely re-designed the roadway worker protection training courses using the services of professional instructional system designers. This new course couples rules instruction with scenario based exercises to improve participant understanding of protection protocols. These revisions were issued in December 2016 and new courses began in January of 2017.

Amtrak created an independent department dedicated to compliance assessment activities. This department reports to the Vice President of Safety, Training and Compliance and is initially focused on compliance with Roadway Worker Protection protocols. Amtrak plans to expand the compliance assessment activities to include other safety critical protocols. Amtrak also partnered with the Federal Railroad Administration (FRA) to enact a program to conduct joint-efficiency testing along the northeast corridor. This program, referred to as the Amtrak Roadway Worker Joint Efficiency Testing (ARJET) initiative, identified opportunities to improve the clarity of rules and procedures in the RWP manual and guided the focus of the compliance department efforts.

The efficiency testing program has also been reviewed and revised to include additional activities related to RWP rules compliance. Enhancements to the program were made in the following areas:

- Supervisor testing targets were revised to increase the number of tests each quarter.
- Core safety tests were identified and minimum quarterly targets were established for each testing officer.
- Minimum testing targets were established for specific safety critical tasks such as radio communication, copying and executing mandatory directives including establishing working limits, and operation of roadway maintenance machinery.



- Specific requirements for testing and supervisor engagement with work gang members to evaluate their understanding of the on-track protection being provided, working limits and applicable restrictions.
- Specific requirements for testing on each Amtrak main line territory to ensure adequate coverage of divisional testing activities. Such tests are required to be real-time observations focusing on the procedures associated with copying and implementing mandatory directives, proper completion of all forms associated with on-track protection, job/safety briefings and transfer of RWIC authorities.

Engineering Improvements

Amtrak is working with a contractor to enhance our dispatch system to provide redundant protection for fouling activities. This system will provide an additional level of safety for employees working under foul time protection and will overlay the existing protocols for the use of SSDs.

Amtrak is working with an equipment supplier to develop a supplemental shunting device with LED indication to allow employees to visually confirm the shunt in the field in addition to the required confirmation process with the dispatcher.

Amtrak is outfitting all roadway equipment with a dedicated box to store SSDs and will include the storage in the inspection forms for all equipment.

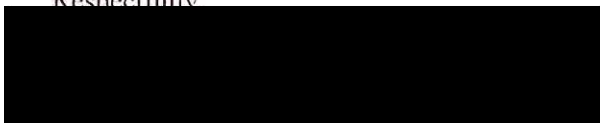
Suggested Recommendations

To Amtrak

- 1) Continue to conduct training in order to reinforce Amtrak requirements to utilize SSDs, to follow procedures for the transfer of work from one foreperson to another, and to conduct a safety job briefing before any employee fouls a track.
- 2) Regularly review its RWP manual in order to ensure that all reasonable safety measures are clearly set forth.
- 3) Utilize efficiency testing to secure compliance with RWP procedures.

Amtrak appreciates the opportunity to participate as a party to this investigation.

Respectfully,



Scot Naparstek
Executive Vice President and Chief Operating Officer