

[4910-06-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Railroad Administration**

**Notice of Safety Advisory 2005-01; Position of Switches in Non-Signaled Territory**

**AGENCY:** Federal Railroad Administration (FRA), Department of Transportation (DOT).

**ACTION:** Notice of Safety Advisory.

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**SUMMARY:** FRA is issuing Safety Advisory 2005-01 to advise all railroads to review their operating rules and take certain other action necessary to ensure that train crews who operate manual (hand-operated) main track switches in non-signaled territory restore the switches to their normal position after use. FRA intends this advisory to reduce the risk of serious injury or death both to railroad employees and the general public due to not restoring such switches to their normal position after use.

**FOR FURTHER INFORMATION CONTACT:** Douglas H. Taylor, Staff Director, Operating Practices Division, Office of Safety Assurance and Compliance, FRA, 1120 Vermont Avenue, N.W., RRS-11, Mail Stop 25, Washington, D.C. 20590 (telephone 202-493-6255).

**SUPPLEMENTARY INFORMATION:**

**Factual Background**

A review of FRA's accident/incident data shows that, overall, the safety of rail transportation continues to improve. However, FRA has particular concern that recent accidents on Class I railroads in non-signaled territory were caused, or apparently caused, by the failure of railroad employees to return manual (hand-operated) main track switches

to their normal position, i.e., lined for the main track, after use. As a result, rather than continuing their intended movement on the main track, trains approaching these switches in a facing-point direction were unexpectedly diverted from the main track onto the diverging route, and consequently derailed. Most recently:

- On January 8, 2005, a Burlington Northern and Santa Fe Railway Company (BNSF) freight train was unexpectedly diverted onto an industrial track in Bieber, California. The BNSF train struck two loaded grain cars, derailling seven locomotives and 14 cars. Two railroad employees were injured. Initial damages to equipment and track are in excess of \$970,000.

- On January 6, 2005, a Norfolk Southern Railway Company (NS) freight train was apparently unexpectedly diverted from the main track onto an industrial lead in Graniteville, South Carolina. The NS train struck a standing train on the industrial lead, derailling three locomotives and 16 cars. One of the derailed cars that contained chlorine ruptured and released product. As a result, eight citizens and one railroad employee were killed, 5,400 local residents remain evacuated, and 234 people have sought medical treatment. The National Transportation Safety Board (NTSB) began its investigation immediately and will not make its findings of probable cause for some time. FRA has representatives at the site assisting in the investigation. By stating here its preliminary impression of what may have contributed to this tragic accident, FRA in no way intends to supersede the NTSB's thorough and painstaking efforts that will ultimately lead to its official findings of cause.

FRA's regulations (49 CFR part 217) require each railroad to instruct its

employees on the meaning and application of its code of operating rules, and to periodically test its employees to determine their level of compliance. Railroad operating rules provide that the normal position for a main track switch is lined and locked for movement on the main track. Another related rule provides that, where trains or engines are required to report clear of the main track, such a report must not be made until the switch and derail, if any, have been secured in the normal position. Where no signal or other system is in service that indicates, through wayside or cab signals, or both, the possibility that a main track switch may be in other than its normal position, compliance with these railroad operating rules is the critical element in ensuring route integrity for main track movements.

Failure to comply with these important operating rules are the result of various causes. Difficulties may be especially likely to arise where a train crew has exclusive authority to occupy a specific track segment until they release it for other movements, but due to inattention to duty, their train does not return to a main track switch that they may have inadvertently left lined for movement to a secondary track before going off duty. Some railroads have very recently amended their operating rules to address this issue. Two recent examples are:

- On October 1, 2004, Union Pacific Railroad Company (UP) adopted a requirement that before reporting clear of the limits of a track warrant, the crewmember releasing the track warrant must first advise the train dispatcher that main track switches have been restored to their normal position. The train dispatching system prompts the dispatcher to request this information if it has not been provided by the crew. The change

was made because of a collision that occurred at Thomaston, Texas, on September 29, 2004. A Texas Mexican Railway Company (TM) crew released their main track authority, in this case a track warrant, without verifying that the north siding switch was properly lined for the main track. A southbound UP train entered the siding and collided with the unattended TM train. The change was issued by System General Order and was a change to General Code of Operating Rules, Rule 14.7, Reporting Clear of Limits.

- On October 31, 2004, BNSF adopted a requirement that the train crew report to the train dispatcher the position of the switch that the train is using to clear the main track when releasing the limits of their track warrant. The dispatching system will not allow a track warrant to be cleared until the dispatcher confirms the switch position through a job briefing with the crew. The change was not made because of any specific incident, but rather as the result of a recommendation from BNSF's Northern California Division Safety Team. The BNSF Team had some concerns on a particular subdivision involving crews forgetting to line back main track switches and asked BNSF's System Rules Department to adopt a rule change to eliminate the potential for this oversight. The Rules Department then issued this change across BNSF's system.

### **Recommended Actions**

The recent accidents have convinced FRA that, on an industry-wide basis, railroad operating rules need to be strengthened, clarified and re-emphasized so as to ensure that all main track switches are returned to their normal position after use, irrespective of whether or not the crew releases (clears) the track warrant at that time. Furthermore, it is essential that all crewmembers communicate to each other the fact that all main track

switches have been properly restored after their use. Since this is strictly an issue of ensuring that employees remember to perform a simple but crucially important duty, FRA believes that additional procedures that serve as reminders of that duty may be of great value.

Accordingly, FRA strongly urges all railroads to immediately:

1. Ensure that their operating rules contain a provision, similar to that established on BNSF and UP, as described above, that clearly requires train crews who operate manual (hand-operated) main track switches in non-signaled territory to report to the dispatcher that the main track switches have been restored to normal position, before reporting clear of the limits of main track authority, such as a track warrant.

2. Require the conductor of a train crew operating in non-signaled territory to complete and sign a Switch Position Awareness Form (Form). FRA recommends that the Form be completed in ink and contain the train symbol, date, subdivision, conductor's and engineer's names, and a listing by name and location of each main track switch operated by any member of the crew. The listing should contain the switch location and name, the time the switch was reversed, the time the switch was returned to the normal position, and the initials of the conductor and the engineer. Entries made with respect to a specific main track switch must be completed by the conductor as soon as possible after the switch is reversed and as soon as possible after the switch is returned to its normal position. The engineer's initials on the Form are intended to serve as a cross-check measure to reflect that the engineer has been advised, through a job briefing with the conductor, that the main track switch or switches have been restored to their normal

position. The engineer's initials should be affixed to the Form as soon as practicable after the main track switch has been restored to its normal position. All initials required on the Form must be entered before any member of the crew reports clear of the limits of the main track authority.

3. Require that, at the completion of each trip or tour of duty, the original Form be submitted to the designated railroad official(s) as directed.

4. Require that railroad officers review the completed Forms for accuracy. The results of these reviews should be incorporated into the railroad's operational tests and inspections program as required by 49 CFR 217.9.

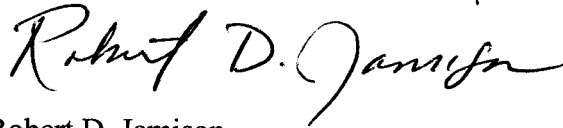
5. Ensure immediate dissemination of guidance on these revised rules and procedures and of the necessary Forms to all affected operating personnel.

FRA is considering the need for any additional action to address this situation, such as regulatory action or additional advisories. We are considering the form that any additional action might take, its specific content, and any necessary variations based on differing types of operations. FRA's operating practices inspectors will determine the extent to which railroads have taken action in accordance with the measures recommended in this advisory. These findings will be one important factor in determining FRA's future course of action. We are committed to taking whatever action appears necessary to prevent any further death or serious injury that might arise from additional failures to comply with the basic operating rules concerning the proper positioning of main track switches.

In the meantime, all railroads are strongly urged to immediately adopt and comply

with the measures recommended in this advisory.

Issued in Washington, DC, on January 10, 2005.

A handwritten signature in black ink that reads "Robert D. Jamison". The signature is written in a cursive style with a large initial "R" and a long, sweeping tail.

Robert D. Jamison  
Acting Administrator  
Federal Railroad Administration