Memorandum

U.S. Department of Transportation

Federal Railroad Administration

Date: JUN - 6 2005 Reply to Attn. of: S-05-01

Subject: Application and Enforcement Guidance Related to Interpretation of Movable Bridge Interlocking of Signal Appliances with Bridge Devices

From: Edward W. Pritchard
Director, Office of Safety Assurance and Compliance

To: All Regional Administrators, Deputy Regional Administrators, S&TC Specialists, SACP Project Coordinators, State Program Managers, and All Federal and State S&TC Personnel

This bulletin is in regard to the Federal Railroad Administration's (FRA) December 27, 2004, letter responding to Mr. William Peterson of the Burlington Northern Santa Fe Railway Company (BNSF), which was signed by Michael Haley for S. Mark Lindsey, FRA's Chief Counsel. This letter was forwarded to all FRA regions, and I believe there is a need for this related guidance and tracking through the Technical Bulletin process.

The letter was written as formal legal interpretation from FRA's Office of Chief Counsel in response to specific inquiries from Mr. Peterson regarding signal appliances associated with movable bridges. It was intended to clarify the meaning and interpretation of applicable terms and requirements found in Title 49 Code of Federal Regulations (CFR) Section 236.312.

Movable bridges are a functionally necessary and a highly important part of the rail network infrastructure. The signal appliances associated with movable bridges are equally highly safety-critical and must be installed and maintained so that proper bridge position and locking are as prescribed in 49 CFR Section 236.312. Even though there are many different types and ages of movable bridges with various associated signal appliances, the functions of <u>each</u> signal appliance on <u>every</u> movable bridge must meet the criteria specified in the rule.

The imminent safety implications to rail operations over a movable bridge not in proper position and/or not being locked will most often warrant a recommendation for civil penalty. However, inspectors should use their discretion in making such a recommendation for each given factual scenario. Inspectors should consult their regional S&TC specialists, a regional manager, or headquarters staff when there is any doubt as to the appropriate action to take.

Enclosure: Electronic copy of the interpretive letter to Mr. Peterson

U.S. Department
of Transportation

**Federal Railroad
Administration**

1120 Vermont Ave., N.W.
Washington, D.C. 20590

DEC 27 2004

Mr. William G. Peterson
Director Signal Engineering
Burlington Northern Santa Fe
4515 Kansas Avenue
Kansas City, Kansas 66106

Dear Mr. Peterson:

I am writing in response to your May 5 letter to the Acting Associate Administrator for Safety, seeking a legal interpretation of the Federal Railroad Administration's (FRA's) regulations governing signal and train control. Your letter specifically addressed 49 C.F.R. §236.312, "Movable bridge interlocking of signal appliances with bridge devices." I have been informed that officials from the Burlington Northern Santa Fe (BNSF) and FRA staff participated in a joint inspection of BNSF's Crescent Bridge in late July, where FRA staff conveyed to you their concerns and an understanding regarding this issue was reached. This letter provides the legal interpretation supporting the verbal advice you were given during that inspection.

FRA strives to ensure the safety of all movable bridges protected by interlocked signal appliances on the nation's railroads through proper inspection and testing. Maintaining the safety of movable bridges is quite challenging as the movable bridges on the railroads vary greatly in age, design, and condition. Given the variance in types of bridges, FRA's regulations are structured to allow an assortment of techniques for the alinement, locking, and achieving proper surface of movable bridges. Any technique utilized however must be functionally compliant with the requirements of the rule, including the appropriate detection of the necessary locking components as well as surface and alinement.

Your letter addresses two specific questions. First, you inquired whether §236.312 requires physical monitoring and detection of bridge locking or bridge seating at more than one point per moveable bridge. It is important to note that the regulation does not use the term *monitoring*. We believe your first inquiry really addresses *detection* instead of *monitoring*. Your concerns seem to be whether the signal circuitry must be connected with all the bridge locking members in order to detect whether the bridge is properly locked. Secondly, you inquired whether §236.312

restricts physical monitoring and detection of bridge locking or bridge seating to the end points of rollers and end lifts on swing spans. Once again, since the term *monitoring* is not used in the regulation, we believe your real concern is *detection.*

Section §236.312 reads as follows:

> When movable bridge is protected by interlocking the signal appliances shall be so interlocked with bridge devices that before a signal governing movements over the bridge can display an aspect to proceed the bridge must be locked and the track alined, with the bridge locking **members** within one inch of **their proper positions**, and with the track rail on the movable span within three-eighths inch of correct surface and alinement with rail seating device on bridge abutment or fixed span. Emergency bypass switches and devices shall be locked or sealed. (emphasis added)

Your first concern is answered by a literal reading of this provision which reflects the reality that there is more than one bridge locking member and that they all must be within one inch of their proper positions. Accordingly, detecting the appropriate position of each bridge locking member is imperative to ensure proper positioning. Such determination that each bridge locking member is within one inch of its proper position is required by §236.312.

Your second question is also answered by examining the language of §236.312, ". . . the signal appliances shall be *so interlocked* with bridge devices that before a signal governing movements over the bridge can display an aspect to proceed the bridge must be locked and the track aligned." This requirement indicates that the connection between the position detection devices on bridges (bridge device) and the actual locking members is critical to the determination, or detection, that the bridge locking members are positioned properly.

Recent FRA bridge inspections have found instances in which the signal detection devices have been as much as 30 feet from the bridge locking members, making safety-critical detection of improper positioning nearly impossible. In those instances, the detection devices have been connected to the locking members by poorly maintained linkages and even chains which have rendered inaccurate measurements. The regulation does not impose a specific distance requirement between the bridge device and the bridge locking members. Although a specific maximum distance is not mandated by the regulation (and thus violations will not be written based solely on such distances), FRA recommends that the connection between the position detection device be located as close as possible to the bridge locking member in order to provide an accurate and reliable reading of its position. Please note that although distance between the bridge device and the bridge locking member is not a basis for a violation under §236.312, if FRA finds that any bridge locking member is more than one inch from its proper position, FRA will not hesitate to issue a civil penalty for such safety violation.

If there are any further questions concerning this matter, please contact Tom McFarlin, Signal and Train Control Staff Director at 202-493-6203, Bob Scieszinski, Railroad Safety Specialist at (360) 883-5811, or Mark Tessler of my staff at (202) 493-6061.

Sincerely,

Michael Haley

for S. Mark Lindsey
Chief Counsel