U.S. Department
of Transportation

Federal Railroad Administration

Memorandum

Date: February 3, 2004 Reply to Attn of: OP-04-19

Subject: **Part 220 - Railroad Communications - Letter of Interpretation Covering:**

- Accessibility of Radios for Roadway Workers
- Definition of Control Center
- Definition of Working Radio
- Radio and Wireless Communication Coverage
- Explanation of the term Switching Operations
- Clarification of Communications Redundancy

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

To: Regional Administrators

The attached letter to C. E. Dettmann of the AAR further explains and clarifies FRA's position on several issues relating to the newly-revised Part 220, Railroad Communications. It is intended to provide specific interpretive guidance to the field concerning these issues. As always, inspectors should continue to consider the specific circumstances of each situation in applying this guidance.

Attachment

Attachment to OP-04-19

Mr. C. E. Dettmann
Executive Vice President
Safety and Operations
Association of American Railroads
50 F Street, N.W.
Washington, D.C. 20001-1564

May 18, 1999

Dear Mr. Dettmann:

Thank you for your letters of January 12 and March 17, 1999, requesting clarification of certain provisions of Title 49, *Code of Federal Regulations* (CFR), Part 220 (Radio Communications) which was revised and published in the *Federal Register* on September 4, 1998 (Vol. 63, No. 172) beginning on page 47182. This rulemaking is a product of the Railroad Safety Advisory Committee (RSAC) process. Representatives from the Federal Railroad Administration (FRA), the Association of American Railroads (AAR), the American Public Transit Association, railroad suppliers, and affected rail labor organizations participated in the RSAC working group deliberations to update the regulation through the consensus process. I am please to provide further clarification for your members.

The first concern noted in your January 12 letter centered on ". . . the mandate that roadway workers have at least a radio for monitoring transmissions concerning train movements." Part 220.11(b), page 47196, is quite explicit in its requirement that ". . . each employee designated by the employer to provide on-track safety for a roadway worker group or groups, and each lone worker, shall be provided, and where practicable, shall maintain immediate access to a working radio." *Immediate access*, as defined in Section 220.5, page 47195, means". . . a radio on the employee's person, or sufficiently close to the employee to allow the employee to make and receive radio transmissions." Therefore, the radio does not need to be physically attached to an employee's person but must be in close proximity so that the employee can access it to initiate and receive voice communications for safety purposes in the event of an emergency.

The definition of *"control centers"* in Section 220.5 (Definitions, page 47195) is "the location on a railroad from which the railroad issues instructions governing railroad operations." This language is intended to include the more traditional train dispatcher's offices typically located on each division, as well as the large centralized dispatching centers often referred to as network operations centers, system operation centers, rail traffic control centers, etc., to include the so-called joint dispatching centers, such as the Union Pacific/Burlington Northern Santa Fe office located at Spring, Texas.

The word *"locations"* contained in the definition of "control center" is intended to provide recognition to the differing control center types. In the definition of *"working radio,"* the word "location" is singular to capture the concept that the radio needs only to be capable of reaching the appropriate center having jurisdiction over the territory in which the transmitting party is operating.
Further, the language recognizes the numerous locations where instructions are issued governing railroad operations, such as yardmaster offices, communications centers (often referred to as control centers common to passenger railroads at major terminals), and interlocking stations. Although not falling under the traditional concept of a train dispatcher's office, these locations are *control centers* under the rule as revised, provided they are continuously manned with trained and qualified employees during the time railroad operations are being conducted and have the capability of notifying appropriate emergency responders should the need arise. In the absence of either of these requirements, the default would need to be the capability of reaching the train dispatcher's office, a joint center, or a centralized train dispatcher's center.

The term "repeater stations," as used in the definition of *"working radio,"* (Section 220.5, Definitions, page 47195) means a device that extends the transmission range of radio signals originating from low-powered radios or those originating from a considerable distance. Repeater stations serve to boost the vitality of transmissions in clarity and distance. This procedure is in use throughout the rail industry.

The term "dead spots" refers to temporary lapses of radio coverage. As FRA explained in the preamble to the regulation, the final rule requires that radio coverage in all territories be provided with two exceptions: (1) tunnels or localized places of extreme topography; and (2) temporary lapses of coverage due to atmospheric conditions. These are the only exceptions to complete coverage required by the regulation. Although distance coverage was a consideration in the deliberations of the working group, broad exceptions were neither provided nor was relief implied. In the two exceptions herein referenced, neither should be considered to be implicit. Again, the purpose of using repeater stations is to extend coverage, in this case, to appropriate railroad operation segments and to close the gaps in the exceptions where practicable. A compromise to system coverage completeness is viewed as contrary to the intent of the rule.

Regarding the meaning of "switching operations" as used in the definition of a *"train*," FRA sees no ambiguity. "Switching operations" are those traditional activities such as coupling or uncoupling cars, the blocking of cars, and moving cars from one place or track to another within a terminal, yard, or industry. These activities generally would not require a working radio or the redundancy of communications under Section 220.9 (Requirements for trains). Contrary to the belief expressed in your letter, "switching operations" is not referenced in Part 232.13(e), "Road train and intermediate terminal train air brake tests." Instead, Part 232.13(e) requires that transfer trains or yard train movements, not exceeding 20 miles, receive what is termed in the industry as a "transfer air brake test." Accordingly, the movement becomes a "train" under Part 220 and would require a working radio and communications redundancy.

The final request for clarification in your letter of March 17 concerns the "communication redundancy" requirement contained in Section 220.9 (Requirements

for trains) at page 47195. The rule states ". . . each occupied controlling locomotive in a train shall have a working radio, and each train shall also have communication redundancy." For the purpose of this section, "communication redundancy" is defined as a working radio on another locomotive in the consist or other means of working wireless communications.

If the redundancy is another working radio, that radio would, of course, be required to be capable of directly communicating with the control center; however, it is not required to reach emergency responders. On the other hand, if the redundancy is another means of wireless communication, such as a cellular phone, that device is required to be capable of directly communicating with the control center, as well as an off-rail system emergency responder, should the need arise. Inherent in cellular phone technology are the added capabilities that enable many small railroads which typically are not equipped with radio systems and control centers to satisfy the communications needs for business, as well as the emergency response requirements of Part 220 (Railroad Communications).

Regarding the option of communicating with an off-rail system emergency responder, the intent was to facilitate the direct emergency responder contact by all railroads as may be necessary; however, the benefit and need accrues largely to short line railroads where radio systems and control centers do not exist.

The rule was published in the *Federal Register* on September 4, 1998, with an effective date of July 1, 1999, for both Sections 220.9 (Requirements for Trains) and 220.11 (Requirements for Roadway Workers). The elapsed time between these two dates is considerable. Neither the elements nor the requirements of the rule were modified. Therefore, the effective date of July 1, 1999, will remain unaltered.

I appreciate the opportunity to respond to your concerns. I hope this information is helpful.

Signed by George Gavalla, Associate Administrator for Safety