



M O V I N G T H E
AMERICAN
ECONOMY

Federal Railroad Administration
Office of Public Affairs
Washington, D.C.
February 13, 2008

Overview of FRA *Human Factors* Final Rule

Railroad Operating Rules: Program of Operational Tests and Inspections Railroad Operating Practices: Handling Equipment, Switches and Fixed Derails

Background

Presently, human factors constitute the largest category of train accident causes. In recent years some of the most serious train collisions or derailments resulting in release of hazardous materials, or harm to rail passengers, have been caused by human factors. Addressing the role of human factors in train accidents is a major component of the Federal Railroad Administration's (FRA) National Rail Safety Action Plan.

FRA analyses of train accident data reveal that a small number of particular kinds of human errors account for an inordinate and disproportionate number of human factor-caused accidents. The eight (8) human factor causes that are the central focus of this final rule involve noncompliance with long-established, core railroad operating rules and practices that are fundamental to ensuring safe railroad operations and include:

- improperly lined track switches (switch left in incorrect position);
- Failure to latch and or lock a track switch;
- Lack of point protection (i.e. shoving or moving rail cars without a person in front of the move to monitor conditions ahead);
- Shoving rail cars with point protection but failing to properly control the movement;
- Failure to determine the track ahead is clear before beginning a shoving movement;
- Leaving rail cars in a place that fouls or obstructs train movements on an adjacent track;
- Operating over a track switch previously run through (i.e. damaged or broken) and;
- Failure to apply or remove a derail (a precautionary safety device).

In each of these cases, compliance can be objectively and conclusively determined. Taken together, they account for approximately 48 percent of all human factor caused accidents. Documented cases of non-compliance may now result in a violation of federal rail safety regulations. Currently, these types of mistakes are subject to internal railroad standard operating procedures and addressed through employee disciplinary procedures or other corrective actions.

Establishing accountability is a major component this final rule. Railroad management will be held accountable for adopting appropriate rules, instructions, and programs of operational tests. Railroad supervisors will be held accountable for administering operational tests and establishing appropriate expectations with respect to rules compliance. Railroad employees will be held accountable for complying with specified operating rules, and will retain a right of challenge should they be instructed to take actions that, in good faith, they believe would violate the rules. It is intended that

this framework of accountability promote good discipline, prevent train accidents, and reduce serious injuries to railroad employees.

Major Provisions of the Final Rule:

- Each railroad shall be required to have an operating rule requiring equipment to be left in the clear so that it cannot be struck by movements on adjacent track.
- Each railroad will be required to have operating rules requiring certain basic provisions for positioning and locking hand-operated switches and fixed derails.
- Employees will be required to conduct job briefings at specific intervals to ensure accurate communication of switch positions and proper handling of main track switches, and also prior to and during pushing or shoving movements.
- In non-sigaled territory, employees shall report to the train dispatcher that a hand-operated main track switch (that is used to clear the main track) has been restored to its normal position and locked (unless the dispatcher directs otherwise). This is to occur only after conducting a job briefing, and before departing the switch's location. If the report of the switch position is correct, the dispatcher shall repeat the reported switch position to the employee and ask whether it is correct, after which the employee must confirm that the information is correct.

Amending 49 CFR Part 217: Railroad Operating Rules

- Freight and passenger railroads will be required to conduct quarterly reviews of employee testing, inspection, and accident data in order to focus existing internal procedures and protocols toward reducing accidents and non-compliance.
- Each railroad must designate a fully qualified officer who will oversee such programs and ensure their validity. On larger railroads, such oversight will be performed at both the system and division level. While railroads will not be required to submit operating rule programs for approval, FRA has the authority to disapprove the program in whole or in part should serious deficiencies be discerned during audits and investigations. In such cases, railroads may avail themselves of an appeal process.

Amending 49 CFR Part 218: Railroad Operating Practices

Addition of Subpart F – Handling, Equipment, Switches and Fixed Derails

- Each railroad must instruct, train, test and qualify all employees on the operating rules that are required by this new subpart by January 1, 2009.
- Each railroad will be required to adopt and implement “good faith challenge procedures” by which an employee is provided a prompt opportunity to question whether an order to perform work violates one of the operating rules covered in this subpart. Employees are free to raise challenges without fear of discharge or discrimination due to recently enacted statutory protections.

Shoving or Pushing Movements

Shoving or pushing movements will be made safer by: (1) requiring job briefings; (2) requiring that an employee directing such movements not engage in any task unrelated to overseeing the operation; and (3) point protection will be provided only by qualified employees who make certain by confirmed visual means that the “track is clear” and the intended move can be made safely.

Remote Control Locomotive Operations (RCOs)

- All RCO switching movements will be considered shoving movements, unless the operator controlling the movement rides the front end of the lead locomotive; and when starting such movements, either the operator or another crewmember must visually observe the direction the equipment moves.
- RCO zones will continue to be permitted in lieu of point protection but only on the end where the locomotive is located. Any technology used for that purpose shall be demonstrated to be failsafe or it must provide redundancy to prevent unsafe failure.
- As railroads have ventured into allowing RCOs to utilize technology, such as camera/monitor setups, to aid in providing point protection at highway-rail crossings, pedestrian crossings, and yard access crossings, FRA has established requirements for ensuring that those operations provide an equivalent level of protection to that of a direct visual determination.

A copy of the full and complete final rule can be found on the FRA web site at:
www.fra.dot.gov.

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