



**U.S. Department  
of Transportation**

Federal Railroad  
Administration

1200 New Jersey Avenue, SE  
Washington, DC 20590

**MAY 12 2015**

Mr. Thomas D. Simpson  
President  
Railway Supply Institute  
425 Third Street SW, Suite 920  
Washington, DC 20024

Dear Mr. Simpson:

Thank you for the Railway Supply Institute's (RSI) April 24, 2015, letter to the Federal Railroad Administration (FRA) requesting an extension of time to comply with the requirements of FRA's Railworthiness Directive (Directive) issued on March 13, 2015,<sup>1</sup> and seeking certain modifications of the Directive's requirements.

As issued, the Directive mandates the removal and replacement of certain valves sold by McKenzie Valve & Machining (McKenzie)<sup>2</sup> and installed on U.S. Department of Transportation (DOT) specification railroad tank cars. The Directive mandates the removal and replacement of certain identified valves by May 12, 2015, and others by June 11, 2015. RSI's letter indicates that industry is unable to comply with these deadlines, citing a lack of available replacement valves and inadequate capacity at tank car repair facilities available to perform such work.

FRA appreciates and understands the practical challenges industry faces to complete the valve replacements the Directive requires. FRA believes, however, that the amended deadlines RSI requests would not adequately address the concern posed by the continued long-term use of the identified unapproved valves. Thus, as described below, FRA is extending the deadlines of the Directive as originally issued, but not for the specific lengths of time RSI requested.

## **I. Background**

As noted above, the Directive requires the identification, inspection, and replacement of certain ball valves marketed and sold by McKenzie and installed on railroad tank cars. The valves identified by the Directive include 1", 2", and 3" McKenzie UNNR threaded ball

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<sup>1</sup> FRA published the Directive on March 18, 2015. [See](#) 80 FR 14027 (Mar. 18, 2015).

<sup>2</sup> McKenzie, formerly McKenzie Valve & Machining Company, is an affiliate company of Union Tank Car Company.

valves. As explained in the Directive, these valves are not approved by the Association of American Railroads (AAR), and the applicable Federal regulations do not permit the valves' use on DOT specification railroad tank cars. Further, as detailed in the Directive, FRA found that certain closure plugs installed on the 3" valves cause mechanical damage to the valves, leading to leaks of hazardous material. The Directive required tank car owners to identify, inspect, remove, and replace these valves with AAR-approved valves consistent with Federal regulations. The Directive established timelines of 60 days to remove and replace the 3" valves and 90 days to remove and replace the 1" and 2" valves, after which tank cars still equipped with such unapproved valves cannot be loaded and offered into transportation. The 60-day deadline applicable to the 3" valves occurs on May 12, 2015, and the 90-day deadline applicable to the 1" and 2" valves occurs on June 11, 2015.

## **II. RSI's Request**

RSI asserts that the design and serviceability of only the 3" carbon steel McKenzie valves are in question. Further, RSI states that there are only two AAR-approved vendors of 1", 2", and 3" valves that can be used to replace the McKenzie valves affected by the Directive and the current supply of valves is not adequate to meet the Directive's deadlines. RSI also asserts that even if an adequate supply of replacement valves did exist, the capacity of the existing tank car repair facilities is not adequate to meet the deadlines of the Directive.

As a result of the above, RSI's letter requests extensions of the deadlines for replacement of the affected McKenzie valves. RSI requests an extension of up to 3 years for replacement of all 3" unapproved McKenzie valves used in hazardous materials service, and up to 5 years (or next service date) for 3" valves on cars used in nonhazardous materials service. RSI also proposes certain mitigation measures in the interim period before the valves' replacement depending, for example, on the type of service the valve is used for or the specific configuration of the valve. Further, RSI proposes the replacement of the 1" and 2" McKenzie valves at each car's next service equipment qualification date.

## **III. Discussion and Modification of Directive**

RSI's request for relief applies to numbered paragraphs (4) and (5) of the Directive. The requirements in numbered paragraphs (1) and (2) of the Directive address the identification of tank cars containing the McKenzie valves in question, and the reporting of each such car's reporting mark and number and the type of affected McKenzie valve(s) the car is equipped with.

To date, FRA has received what it believes to be a significant percentage of that required information and these requirements remain in place. However, if any tank car owner has not yet reported the required information to FRA, FRA requests that they do so by June 1, 2015. Numbered paragraph (3) of the Directive required tank car owners to create and maintain a record of the inspection of each McKenzie valve for a minimum of 6 months from the Directive's effective date, and to make that record available to FRA upon request. In light of FRA's extension of the deadlines for replacing the identified valves (discussed below), FRA is revising this recordkeeping requirement to require that tank car owners maintain the

records of the inspection and replacement of the 3" McKenzie valves until at least June 30, 2016, and maintain the records of the inspection and replacement of the 1" and 2" McKenzie valves until the next service equipment qualification event.

Numbered paragraph (4) of the Directive requires tank car owners to immediately inspect the 3" McKenzie valves on each affected car and if any valve is configured with a 3" standalone plug, ensure that the car is not loaded and offered into transportation until that valve is replaced with an approved valve consistent with Title 49 Code of Federal Regulations (CFR) Part 179—Specifications for Tank Cars. That same paragraph further prohibits any tank car equipped with an unapproved 3" McKenzie valve from being offered into transportation (whether loaded or residue) after May 12, 2015.

RSI asserts that the design and serviceability of only the 3" carbon steel McKenzie valves are in question and that there are only approximately 600 cars with these types of valves. RSI requests an extension of the Directive's May 12, 2015, deadline to June 12, 2015, to replace the 3" carbon steel valves, but requested an extension until as late as May 2018, to replace the stainless steel 3" McKenzie valves. RSI did not, however, provide any evidence or explanation of how the difference in the valves' composition relates to the risk of damage to a valve's ball and seal integrity. Therefore, FRA has no basis to apply different timeframes based on the valves' composition.

As discussed in the Directive, FRA's field testing of a 3" valve with a 3" standalone plug showed damage to the valve's ball, and lack of seal integrity could occur as a result of normal use. However, since issuance of the Directive, FRA learned through the service history of these 3" valves that when properly configured, the valves can maintain their integrity (e.g., the valves may be configured with a 2" plug and reducer bushing, a 3" plug with joint lubricating and sealing material such as Teflon tape may be used and the plug not tightened to the point of contact with the ball). Thus, FRA finds a basis for extending the deadline for replacement of the 3" valves until December 31, 2015. Accordingly, tank car owners may continue in service a tank car equipped with a 3" McKenzie valve identified by the Directive until December 31, 2015. As applied to tank cars equipped with a 3" McKenzie valve configured with a 3" plug, this allowance for continued use in hazardous materials service is conditioned upon the performance of a visual inspection of the valve (including the ball of the valve) for evidence of damage prior to each time the car is offered for transportation (whether loaded or residue). If upon inspection, a valve shows any signs of damage, the affected car must not be offered into transportation until the valve is replaced consistent with the Directive. FRA will audit compliance with this letter periodically to ensure industry is making satisfactory progress.

As noted in the Directive, the 1" and 2" McKenzie valves do not appear to present similar safety concerns. FRA is not aware of any non-accident or other release involving the 1" or 2" McKenzie valves. However, as noted in the Directive, the valves are not approved for use on railroad tank cars and any tank car equipped with such valves is not "qualified" as 49 CFR Part 180—Continuing Qualification and Maintenance of Packagings requires. Nevertheless, in response to RSI's request, FRA is amending the requirements of the Directive to require that cars equipped with 1" or 2" McKenzie valves be inspected initially,

and that the valves be replaced: (1) at the time of the car's next shopping for any major repair; (2) during the next qualification event; or (3) at the time of retrofit consistent with HM-251, whichever occurs first. FRA will monitor the performance of the 1" and 2" valves. If we discover a safety issue with these valves, we will reconsider imposing compliance dates for removal and replacement of these valves.

Although not subject to the Directive as originally issued, RSI's letter states that DOT specification tank cars utilized in nonhazardous materials service are also equipped with these unapproved McKenzie valves. Recognizing the limited concern these cars present, FRA is requiring that any McKenzie 1", 2", or 3" valves subject to the Directive on any DOT specification tank car not used in hazardous materials service be replaced: (1) at the time of the car's next shopping for any major repair; (2) during the next qualification event; or (3) at the time of retrofit consistent with HM-251, whichever occurs first.

FRA believes its approach ensures safety, helps to facilitate compliance with the applicable Federal regulations governing the safe movement of hazardous materials by rail, and will restore the rail worthiness of all tank cars equipped with the above-described McKenzie valves as soon as practicable.

FRA notes that numbered paragraphs (6) and (7) of the Directive remain in effect as issued. FRA further notes that regardless of any entity's compliance with the requirements of the Directive as originally issued, or as amended by this letter, FRA reserves the right to seek civil penalties or to take any other appropriate enforcement action for violations of the Hazardous Materials Regulations that have occurred.

Sincerely,



Robert C. Lauby  
Associate Administrator for Railroad Safety  
Chief Safety Officer

cc: Mr. Ken Dorsey, Association of American Railroads  
Mr. John R. Byrne, GE Railcar Services  
Mr. David Eggermann, BASF Corporation  
Mr. William Finn, RSI  
Mr. Rich Gore, PE, VTG Rail  
Mr. Mike Henderson, Greenbrier Management Services  
Mr. Donald Langdale, ERCO Worldwide  
Mr. Matthew Leshinskie, Chemours Sourcing and Logistics  
Mr. Joe Perez, Union Tank Car  
Mr. Tom Simpson, RSI  
Mr. Kenneth E. Thurman II, Chevron Products Company