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425 Third Street, SW | Suite 920 | Washington, DC 20024 | phone (202) 347-4664 | fax (202) 347-0047 | www.rsiweb.org

December 19, 2014

Mr. Timothy P. Butters
Acting Administrator
Pipeline and Hazardous Material Safety Administration
U.S. Department of Transportation
1200 New Jersey Avenue, SE
East Building, 2nd Floor, Suite E27
Washington, DC 20590

Mr. Joseph C. Szabo
Administrator
Federal Railroad Administration
U.S. Department of Transportation
1200 New Jersey Avenue, SE
West Building, Room W30-308
Washington, DC 20590

Re: Follow up Information Related to Questions Raised at the December 2, 2014 Meeting between the RSI-CTC and PHMSA, FRA, and DOT Personnel

Dear Acting Administrator Butters and Administrator Szabo:

I am writing on behalf of the Railway Supply Institute's Committee on Tank Cars ("RSI-CTC")[1] to provide follow up information in response to questions raised by your staff at a recent meeting with the RSI-CTC that took place in Washington, D.C. on December 2, 2014. Included in this letter is additional information regarding: 1) Electronically Controlled Pneumatic ("ECP") brake-capable tank car configurations; 2) ECP-brake interoperability; and, 3) the methodology used by the RSI-CTC to collect data for its maintenance and repair shop capacity survey. We respectfully request that this letter be included in Docket No. PHMSA-2012-0082 (HM-251).

ECP-Capable Tank Car Configurations

As explained in our public comments on the Pipeline and Hazardous Materials Safety Administration's ("PHMSA") Notice of Proposed Rulemaking for Hazardous Materials: Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains ("NPRM"), filed on September 30, 2014, the RSI-CTC opposes ECP brakes as a requirement for new or modified tank

[1] The RSI-CTC members that support this letter include: American Railcar Industries; American Railcar Leasing; CIT Rail; GATX Corporation; General Electric Railcar Services Corporation; Trinity Rail Group, LLC; and Union Tank Car Company.

cars.[2] ECP brake systems are both technologically and operationally complex because they require investment, training, revised practices and significant in-service support from operating railroads, tank car and locomotive owners, and maintenance providers. ECP brakes do not offer significant safety advantages during a derailment scenario, as compared to the Distributed Power or two-way End-of-Train braking systems that are already in use. Further, ECP brakes can only be installed at a premium per-car cost of $7,300 for new tank cars and $7,800 for modified tank cars.

Rather than attaching an ECP mandate to a safety related rulemaking impacting only a segment of the fleet, should PHMSA and the Federal Railroad Administration ("FRA") seek to require this technology, it should be the subject of an independent wider strategic application study applicable to the entire North American rail car fleet. In support of a longer strategic review and future potential applications, the RSI-CTC would endorse "ECP-capable configurations" for newly manufactured and modified tank cars used to transport Class 3 flammable liquids. By definition, ECP-capable configurations would consist of a fixed conduit on the tank car to facilitate the future application of additional ECP componentry and required cables. This approach would allow tank car owners to dedicate more of their human and capital resources to other recommended tank car requirements that have a far greater impact on safety and derailment mitigation.

The estimated cost of applying an ECP-capable configuration, as defined by the RSI-CTC, to either a new or modified tank car is $1,170.

An incremental method to fully equip a tank car with ECP brakes is estimated below. These estimates assume a typical labor rate of $65/hr. In reality, labor and material costs will vary based on specific plant labor costs, overhead rates and material costs.

Componentry	Estimated Labor Hours	Estimated Materials Cost	Estimated Applied Cost
Fixed Conduit	5	$845	$1,170
Overlay manifold, Car Control/ID Box	Additional 3	$3,750	$3,945
Cables, end of car junction boxes, end of car connecting cables	Additional 3	$2,490	$2,685
ECP-Brake Total	**11**	**$7,085**	**$7,800**

ECP systems include electrical related componentry not normally applied to tank cars. Therefore, the application of any ECP brake components, including the fixed conduit, requires electrical competencies in addition to the normal mechanical competencies required for tank car construction and maintenance. Cost of this additional skillset will vary based on labor agreements and work rules. Specific hand tools may be required in addition to specialized training for this additional craft. Once a tank car is equipped, the facility needs certain test equipment including a laptop, software and training to evaluate ECP performance prior to the release of a tank car into service. The software and training is unique to the system applied and requires its own software maintenance and training for each vendor's system.

[2] The RSI-CTC has also expressed its opposition to ECP brake requirements linked to current tank car regulatory activity in comments submitted to Transport Canada on September 1, 2014 and October 27, 2014.

ECP-Brake Interoperability

With respect to the equipment on a single tank car, individual components cannot be mixed between supplier systems. The only exception is the end of car connecting cable – either supplier system can be used.

If one tank car has components from Supplier A, and one tank car has components from Supplier B, the two systems are functionally compatible and can operate in a mixed train consist. However, the components themselves are not physically interchangeable, as is the case with traditional pneumatic control valves. Therefore, once a car owner or manufacturer equips a tank car with one vendor's componentry, it must continue to use that vendor for as long as the equipment is applied to the tank car. Effectively, repair shops will be required to stock ECP parts inventory and test equipment for multiple brake systems because they are not interchangeable.

The RSI-CTC Shop Capacity Survey

A. Projected Annual Capacity

In order to estimate the annual capacity of the maintenance and repair network, the RSI-CTC surveyed its members requesting information about the shops they own and those that they regularly utilize for maintenance and repair work. The repair work was split into three different tiers according to the anticipated modifications that may be required. Tier I consisted of the most extensive modifications including: a jacket, full height head shield, top fittings protection, a ½ inch thermal blanket, up-graded trucks, a new pressure relief device, and bottom outlet valve handle modification.[3] A copy of the survey is provided as **Attachment A** to this letter. All data provided by the RSI-CTC members was anonymized and aggregated prior to public use.

The RSI-CTC also included information from the Alltranstek survey, commissioned by the American Petroleum Institute, in its annual capacity estimate to account for the capacity of Progress Rail, which was not covered by the RSI-CTC member survey. Included as **Attachment B** is a list of all AAR shops certified to do Type A, B, C, and D repairs.[4] We have highlighted in yellow those shops covered by the RSI-CTC survey and included in the final estimate, which accounts for a significant number of shops in the network.[5]

As stated in our public comments and relied upon in the Brattle Report, the RSI-CTC estimates the annual capacity of the maintenance and repair network to be approximately 6,400 tank cars/year in year two of the modification program (i.e. after the initial ramp-up period that would be

[3] At the time of the survey, which was conducted prior to the publication of the NPRM, the RSI-CTC included the application of top fittings protection as a modification in its Tier I package. Although we do not support this as a required modification, the RSI-CTC did not resurvey its members because top fittings modifications are still included as a required modification under the proposed Canadian regulations.

[4] This list of facilities also appears as Table 7 in the Brattle Report, "A Review of the Pipeline and Hazardous Materials Safety Administration's Draft Regulatory Impact Analysis" (November 14, 2014) (hereafter, "The Brattle Report").

[5] The RSI-CTC has not passed judgment on whether non-member shops or those that are not relied on regularly by RSI-CTC members would be capable of performing the Tier I modifications. For this reason, they are not contained in our capacity estimate.

required). This estimate is for Tier I modifications, which are those the RSI-CTC expects would be required for non-jacketed legacy DOT-111s. Our survey indicates that the shops would be able to accomplish approximately 20% more Tier II modifications in lieu of Tier I modifications. All Tier III modifications (i.e. application of the new valves) would be completed in addition to the annual 6,400 Tier I modifications. Although Tier III tank cars would still require cleaning and thus would utilize the resources of the shop network, the RSI-CTC members anticipate that car owners would complete these modifications during the regular course of business as these tank cars come in for requalification or general repairs.

B. Survey Assumptions

Increased production can be achieved by three avenues: 1) the investment and expansion of existing facilities; 2) securement and bringing on-line of a “brownfield facility” (i.e. one that has existing structures that can be modified for tank car programs and existing rail service); and 3) a “greenfield facility” with no infrastructure and no existing rail service.

For an existing facility, most likely the operator will create a shop process within a current shop focused on modifications. This requires an additional mechanical facility, added paint and lining capabilities and expanded cleaning operations. Additional storage track may also be required to accommodate the increased flow of tank cars through the facility. This type of expansion requires an approximate 7 month lead time and can entail a $25-30 million dollar investment assuming that the current 11 gauge jacket is prescribed.

A “brownfield facility” requires additional months of site research, including assurances that the site has no environmental liability issues, followed by approximately 12 months of facility reconfiguration, permitting, and significant investment in property and equipment. A “greenfield facility” also requires a site search, extensive facility engineering, permitting and a minimum of 12 months of facility construction. Investment for either a “brownfield” or “greenfield” facility will be large and dependent on real estate costs, rail access costs (switches/track), storage track costs and facility investment. Both options require a facility with cleaning, mechanical, and paint and lining capacity configured for high production modification rates to have a significant impact on the overall capacity of the maintenance and repair network. Environmental and construction permitting will also require substantial lead time. Screening, training and supervision for a significant influx of new employees will be an additional challenge.

Assuming an operator chooses to move forward with one of the three options and accompanying capital expenditures described above, the facility would ultimately need cleaning, mechanical, and paint and lining capacity configured for high production modification rates. For example, the application of jackets at a high production rate will require equipment similar to that used in new tank car manufacturing. This would allow jacket panels to be prepared and sub-assembled rather than applying the panels directly to the tank car one panel at a time. Jacket-assembly equipment has a twenty-week lead time and requires an additional four weeks for installation and training.

If the jacket thickness exceeds the normal 11 gage, then traditional methods for jacket application would not be applicable. Changing material supply from coiled steel to thicker plates will require additional preparation and handling equipment. An operator must know the required jacket thickness in order to make an investment in the appropriate equipment. Additionally, existing

building structures and overhead cranes may not be able to support a heavier jacket assembly. Should building structure changes be required, this will further increase the cost and time needed to make a facility ready for the anticipated modification program. Regardless of whether performance standards or prescribed standards are ultimately required, appropriate engineering procedures, drawings and material requirements will need to be developed prior to start of modifications.

Given these realities, the RSI-CTC survey did not include additional capacity from greenfield facilities due to the challenges of having a facility that will be ready in time perform the Tier I modifications, which will likely be required with the earliest deadlines: October 1, 2017 and October 1, 2018. The RSI-CTC members did include anticipated capacity that would be available through adjustments to existing facilities and through investment in brownfield facilities. Our recommended timeline accounts for some degree of additional capacity that will be achieved by maximizing efficiencies identified as the modification program progresses. Regardless, a three-fold increase in shop capacity cannot be achieved. This is what would be required to meet the proposed deadlines in the NPRM.

We hope this information clarifies some of the topics discussed in the December 2, 2014 meeting. We look forward to continuing to work with PHMSA and FRA and are eager to lend our expertise in order to assist, as both agencies proceed with this rulemaking and work to harmonize the final regulations with those that will be issued in Canada. Please contact me directly if you have any questions about the foregoing.

Sincerely,

Thomas D. Simpson
President

cc: Sarah E. Feinberg, Chief of Staff, Office of the Secretary, U.S.DOT
Vanessa Sutherland, Chief Counsel, PHMSA
Magdy El-Sibaie, Associate Administrator, PHMSA
Melissa Porter, Chief Counsel, FRA
Robert C. Lauby, Associate Administrator, FRA

Attachments: Attachment A – RSI-CTC Maintenance and Repair Shop Capacity Survey (Blank)
Attachment B – List of AAR-certified Maintenance and Repair Shops

RSI-CTC Letter to PHMSA and FRA
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Attachment A

RSI-CTC HM-251 Maintenance and Repair Shop Capacity Survey

General Questions:

How many AAR-certified tank car facilities are owned by your company _____.

Please list the names of your shops, their locations, and the number of employees at each shop.

How many of the above numbered facilities are currently permitted to clean: ethanol___ crude oil___.

Tier Specific Questions:

Tier I – Modification package for legacy non-jacketed (NJ) DOT-111 crude oil and ethanol cars. This includes a steel jacket, full height head shields, improved top fittings protection, ½" thermal protection blanket, up-graded trucks (if necessary), a new pressure relief valve (PRV) and bottom outlet valve (BOV) handle modification. Designs of PRV and BOV modification based on future regulatory requirements.

Tier II – Modification package for other Class 3, packing group I and II cars. This includes full height head shields, improved top fittings protection, up-graded trucks (if necessary), a new pressure relief device, and bottom outlet valve handle modification. Designs of PRV and BOV modification based on future regulatory requirements. Note: Tier II is equivalent to the jacketed legacy cars in crude oil and ethanol service with the application of full height head shields and thermal protection with the new PRV and enhanced BOV handle design. Also upgraded trucks (if necessary).

Tier III – Pressure relief valve and bottom outlet valve modification for all remaining cars. This includes cleaning of the tank, a new pressure relief device and bottom outlet valve handle modification. Designs of PRV and BOV modification based on future regulatory requirements.

Tier I:

How many of your shops will be capable of performing this modification including cleaning of the cars _____.

How many cars will your shops be capable of handling each month _____. Identify limiting factors to the indicated processing capability-skilled labor, material availability, overhead cranes, cleaning, stress relief.

Tier II:

How many of your shops will be capable of performing this modification including cleaning of the cars ____.

How many cars will your shops be capable be of handling each month_____. Identify limiting factors to the indicated processing capability- skilled labor, blast and paint, overhead cranes, cleaning, stress relief.

Tier III:
Assume cars in this tier will require cleaning. Average cost to clean the cars_____.
How many of your shops will perform this modification _____.
How many cars will your shops be capable of handling each month, including mini-shops and mobile units____.

Please identify limiting factors to the indicated processing capability (e.g. cleaning, valve supply, labor).

Are you aware of other non-RSI shops that could perform the Tier I and Tier II modification? If so, please list them below. We are asking for names of the shops to determine outside shop capability and avoid duplication of these shops in our shop count.

Names provided: Eagle Repair, Watco, Rescar, Frit Railcar, Midwest Railcar, Caltrax

RSI-CTC Letter to PHMSA and FRA
Re: Follow Up from the December 2 Meeting
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Attachment B

Table 7: Association of American Railroads Listing of Active Certified Class A, B, C and D Tank Car Facilities

ADM
Cedar Rapids, IA
Alabama Railcar Service, Inc.
Ozark, AL
Alpha Technical Services Corporation
Pasadena, TX
American Railcar Industries
Bude, MS
La Porte, TX
Longview, TX
Marmaduke, AR
North Kansas City, MO
Tennille, GA
Archer Daniels Midland Railcar Repair
Decatur, IL
ARI Fleet Services of Canada, Inc.
Sarnia, ON
Bayou Railcar Services, Inc.
Holden, LA
BRC Rail Car Service Company
Elk Mills, MD
Lynchburg, VA
BW Services
Angleton, TX
Washington, IN
Westlake, LA
CAD Industries, Ltd.
Lachine, QC
CALTRAX, Inc.
Calgary, AB
Chart Industries, Inc.
New Prague, MN
Columbiana Boiler Company LLC
Columbiana, OH
Cryogenic Vessel Alternatives
Mont Belvieu, TX
Crystal Car Line Div.
Bedford Park, IL
Dana Railcare
Wilmington, DE
Eagle Railcar Repair
Elkhart, TX
Eagle Railcar Services-Roscoe, Inc.
Roscoe, TX
Economy Coating Systems, Inc.
Camanche, IA
Equipos Ferroviarios Del Norte, S.A. de C.V.
Gomez Palacio, Durango, Mexico
Equipos Ferroviarios Del Sureste, S.A. de C.V.
La Granja, Veracruz, Mexico
Frit Car Inc.
Brewton, AL
Bridgeton, NC
GATX
Waycross, GA
GATX Corporation
Colton, CA
Donaldsonville, LA
Freeport, TX
Galena Park, TX
Macon, GA
GATX Corporation
Terre Haute, IN
GATX Rail Canada Corp.
Corunna, ON
Montreal, QC
Moose Jaw, SK
GATX Rail Canada Corporation
Red Deer, AB
GATX Rail Corporation
East Chicago, IN
Hearne, TX
Kansas City, KS
Plantersville, TX
GE Equipment Services - Rail Services
Omaha, NE
Regina, SK
Sayre, PA
Texarkana, AR
Waterloo, IA
GreenBrier Rail Services
Atchison, KS
Kansas City, MO
Greenbrier Rail Services - Finley
Kennewick, WA
Gunderson
Frontera, COAH C.P. , Mexico
Hammond Machine
Hammond, IN
Hayes Manufacturing Company
Pineville, LA
Kelso Technology (USA) Inc.
Bonham, TX
McKenzie Valve and Machining LLC
McKenzie, TN
Midwest Railcar Repair, Inc.
Brandon, SD
On-Track Properties, Incorporated
Montgomery, TX

Association of American Railroads
Listing of Active Certified Class A, B, C and D Tank Car Facilities (Continued)

Procor Limited
Blackfalds, AB
Edmonton, AB
Fort Saskatchewan, AB
North Vancouver, BC
Oakville, ON
Pincher Creek, AB
Regina, SK
Sarnia, ON
Trail, BC

Progress Rail Services
Amarillo, TX

Rail Services Inc.
Calvert City, KY

Rescar
Gordon, GA

Rescar Companies
Channelview, TX
Dubois, PA
Kingsport, TN
Longview, TX
Longview, TX
Savanna, IL

Rescar, Inc
Orange, TX

Safety Railway Service
Houston, TX
Victoria, TX

Safety Railway Service, L.P.
Belle Chasse, LA

Safety Railway Service, LP
Knox, IN

Seaboard Railcar Repair and Cleaning
Hugo, OK

Talleres de Equipo Rodante del Bajío, S.A. (TERBSA)
Irapuato, Guanajuato, Mexico

Tank Lining of Paris, Inc
Paris, TN

Texana Tank Car & Manufacturing, Inc.
Nash, TX

TMC Engineering Services
Houston, TX

Transco Railway Products Inc.
Miles City, MT

Transco Railway Products, Inc.
Sioux City, IA

Trinity Industries de Mexico, S de RL de CV
Huehuetoca, Edo. de Mexico

Trinity Rail Car, Inc.
Longview, TX

Trinity Rail de Mexico
CD. Castanos, Coahuila, Mexico
Frontera, Coahuila Mexico

Trinity Rail Sabinas
Sabinas, Coah, Mexico

Trinity Tank Car
Fort Worth, TX

Trinity Tank Car Repair, Inc.
Saginaw, TX

Trinity Tank Car, Inc.
Longview, TX
Longview, TX
Longview, TX
Longview, TX
Oklahoma City, OK
Saginaw, TX
Tulsa, OK

Union Tank Car Company
Altoona, PA
Catlettsburg, KY
Cleveland, TX
Columbus, MS
El Dorado, KS
Evanston, WY
Galena Park, TX
Marion, OH
Mounds, IL
Muscatine, IA
Valdosta, GA
Ville Platte, LA

UTLX Carotanques Servicios, S.A. de C.V.
Celaya, Guanajuato, Mexico

UTLX Manufacturing
Alexandria, LA
Houston, TX

Watco
Fitzgerald, GA

Watco Mechanical Services
Hockley, TX
Hollidaysburg, PA
Houston, TX
Junction City, KS
Neodesha, KS
Omaha, NE
Scottsville, TX
Zwolle, LA

WW Metal Products, Inc.
Texarkana, TX

Source: "Tank Car Committee Certified Tank Car Facilities (Classes A, B, C, D) and Registered Tank Car Facilities (Classes F, G, L)." Table B2. Association of American Railroads, Casualty Prevention Circular. June 14, 2013.