ASSOCIATION OF AMERICAN RAILROADS

Tank Car Committee
Main Session
Docket and Agenda

April 18-19, 2018
Atlanta, GA

MEETING SCHEDULE

Wednesday April 18, 2018 Tank Car Committee The Whitney, Buckhead, GA	
2:00pm – 3:30am	Government Regulatory Update
3:30am – 5:00pm	AAR M-1002 Standards
Thursday April 19, 2018 Tank Car Committee The Whitney, Buckhead, GA	
8:00am – 11:00am	AAR M-1002 Standards/Standing Updates
11:00am – 12:00pm	Tank Car Research Program

ASSOCIATION OF AMERICAN RAILROADS

AAR TANK CAR COMMITTEE MEMBERS

Railroad:	**Affiliation**
Andy Ash (Chair)	Railway Association of Canada
Jim Kozey (Vice-Chair)	Canadian Pacific Railway
Ryan Miller	Kansas City Southern Railroad
John Birkmann	Union Pacific Railroad
Jorge Gallardo	Ferrocarril Mexicano (FXE)
Chris Machenberg	CSX Transportation
Anthony Ippolito	Canadian National Railway
Bruce Siebold	BNSF Railway Company
Alvaro Almaguer	Kansas City Southern de México, S.A. de C.V.
David Schoendorfer	Hazmat Committee Liaison (Norfolk Southern Railway)
Paul Williams	Norfolk Southern Railway
Allen Richter	Consolidated Rail Corporation
JR Gelnar	ASLRRA
Non-Railroad Shippers:	
Kevin Flahive	The Fertilizer Institute (Koch Fertilizer)
N. Scott Murray	ACC (ExxonMobil Chemical Company)
Robyn Kinsley	The Chlorine Institute
Mike Richardson	U.S. Clay Producers Traffic Association
Kirk Warner	American Petroleum Institute (Consultant)
Craig Jorgenson	The Sulphur Institute
Kelly Davis	The Ethanol Shippers
Non-Railroad Tank Car Builders:	
A.D. McKisic	Trinity Industries
Tony Sisto	GATX Rail Corporation
Joe Perez	UTLX
AAR:	
Ken Dorsey	Association of American Railroads

AGENDA

Docket	Subject	Discussant	Notes	Pg.
Safety Briefing, Anti-Trust, Introductions		Dorsey		
Government Regulation Update				
T59.1	Government Regulations	FRA/TC/ PHMSA/ NTSB	PHMSA Update Provided	7
AAR M-1002 Standards				
T1.1.4	Procedures for Securing Approval	Forister		26
T5.32	Review Tank Car Requirements in the AAR Office and Field Manual	Siebold		29
T31.2.1	Define Requirements for Heat Resistant Gaskets	Rader	Final CPC Forthcoming	30
T50.34.2	Consider Requirements for Installation of Surge Suppression Devices	Kinsley	Final CPC Forthcoming	31
T50.57	Operational Effects on Safety Relief Device Performance	Schultz	Update Provided	32
T59.2.1	Appendix R Review to Address TCID Requirements	Shultz	Update Provided	34
T59.2.2	TCID Template Review	Shultz	Update Provided	36
T60.17	Review of Volume Determination for Tank Cars	Hopper	Update Provided including updated TF list	38
T80.2.4	Welding Task Force Proposals	Untermeyer	Update Provided with TF Proposal provided with meeting material	40
T87.6.1	Proposed Pressure Relief Valve Requirements for Ethanol and Crude Oil Tank Cars	Sisto		48
T87.8	Develop Standards for Flammable Liquid Tank Cars (DOT-117)	Dorsey		53
T88.1-93	Evaluation and use of Nondestructive Evaluation Techniques	Ronzani	Update Provided including updated TF member list.	55

Docket	Subject	Discussant	Notes	Pg.
			Updated TF Proposal provided with meeting material	
T90.39	Rupture Disc Tolerance Requirements	McKisic	Update Provided	57
T91.2.4	Review Core Elements of Appendix B	Warner		59
T92.18	Review Stencil Placement Requirements for Tank Cars	Rader	Comment CPC Forthcoming	61
T93.20	Review Appendix D for Compliance with Current 49 CFR 180 Inspection Requirements	Loman		62
T95.26	Appendix M Material Review	Loman		64
T95.28	Manway Standard Hardware and Material Requirements	Rader/ McCracken	Update Provided including updated TF List. Also Seeking TCC Approval of New TF Chair and New TF Charge	66
T100.9.3	Retention Interval of Radiographic Film	Hopper	Update Provided including updated TF list	69
T148	Review Appendix P of M-1002 (Tank Car Committee Procedures)	Forister		72
Standing Updates				
T1.3	Quality Assurance Committee Activities	Forister		73
T5.31	Review Tank Car Elements in UMLER	Siebold		75
T15.1	AAR Circular Letters/MA & EW	Dorsey		78
T15.9	Equipment Engineering Committee Update	Saxton	Update Provided	80
T55	Service Trials	Dorsey		84

Docket	Subject	Discussant	Notes	Pg.
T79.3.1	Designation DOT130AW for New Car Class	Dorsey		85
T79.3.2	Consider New DOT113A90W Specification	Dorsey		86
T79.36	Locomotive Fuel Tender Initiative	Dorsey		87
T79.37	Recommendations for Revisions of 49 CFR Part 179 and 180	McKisic	Update Provided	89
T79.40	Review of the DOT113 Specification	Dorsey		92
T80.4	AAR Hazardous Materials Committee Liaison	Schoendorfer		93
T80.12	North American N.A.R. Program	Machenberg	Update Provided	94
T88.2-96	Tank Car NDE Project	Gonzalez	RFD move under docket T59	96
T95.7.4	Consider new steels and modifications to current steel specifications for tank car tanks	Hybinette	Final CPC Forthcoming	97
T100.22	Asset Health Strategic Initiative for Valves and Fittings	Clayton	TF Charge Added Update Provided	99
T146.1	Notification of Tank Car Committee Meeting Schedule	Dorsey	FYI Docket	102
T147	Tank Car Committee Structure and Procedures	Dorsey		103
Tank Car Research Program				
T59	Tank Car Research Program	RSI-AAR/ FRA/TC	FRA, TC, and RSI-AAR Updates Provided	105

Government Regulation Update

DOCKET T59.1

Government Regulations

On March 28, 2018 AAR received the following update from L. Majors (PHMSA):

HM- 219A Petitions Rule. Includes the Extension of TIH to a full 50-year life is expected to be published under final rule. This rule is still under review with OST/OMB.

HM-215O International Harmonization Rule. It is currently under development. NPRM is expected to be published by September.

HM-233G Special Permits Conversion Rule. The special permits being considered for incorporation into the 49 CFR are being review. NPRM is expected to be published by September.

HM-219C Petitions Rule. The following petitions are being considered in the NPRM: P-1646 Phase out of non-normalized TIH tank cars and P-1691 Interim TIH tank cars will be final TIH specification. NPRM is expected to be published by September.

Notice of Update Thermal Protection Systems is under senior management review. The notice will add four systems currently not on the list and will seek revisions to older systems.

At the January 2018 meeting, Mark Maday and Randy Keltz (FRA), Leonard Majors (PHMSA), and Stephane Garneau (TC) provided reports. Here are the reports provided to the AAR:

FRA

R. Keltz provided a detailed report which was forwarded to the AAR and sent the TCC members via email during the meeting.

FRA Staffing

Ron Batory – Administrator
Awaiting Senate confirmation
Currently "In-house" as Sr. Advisor

One Time Movement Approvals

2017 OTMA Counts (Jan 1 – Dec. 31)
OTMA 1 = 486
OTMA 2 = 110
OTMA 3 = 9,017
TOTAL = 9,613
Some are still miss-applying for OTMA 3, if found, privileges will be revoked.
"Gaming the system"-???

TC Facility & Owner Audit Activities
Tank Car Facilities
2017 Audits (Jan 1 – Dec. 31)
52 Facility audits by TC QA Specialist.
~37 Facilities need inspected, New(er) never audited by FRA QA Team.
Major Findings

- • Deviating from car owners QMP and shop QA procedures.
- • Training - function specific.
- • Owners not providing and/or facility not obtaining all applicable information (e.g. drawings, COCs)

Rule of Engagement = Violations

Tank Car Owners
2017 Audits (Jan 1 – Dec. 31)
13 Owners audits by TC Engineers/QA Specialist
Major Findings

- • A few large companies have no program in place to analyze their data
- • Small owners have such high visibility of their fleets that they are generally not an issue.
- • 3rd party fleet managers are doing a decent job.

RWD(s)
FRA RWD Notice No. 1 – 3/13/2015
McKenzie Valve – Still monitoring.
FRA RWD Notice No. 2016-01 – 11-18-2016 (REVISED)
ID and inspection of ARI/ACF built tank cars w/ cast sump/skid, outlet saddle welds.
RWD summary shows; (7 owner did not complete 100%)
ARI-built cars have a 47.97% defect rate
ACF-built cars have a 17.97% defect rate

Tank Car Issues
Midland 720/721 angle valves.
Some valves self-actuate open once closed.
Working w/ AAR on corrective measures.
ARI top nozzle welds.
~3k tank cars identified may be suspect of having welds that have discontinuities.
Working w/ AAR on corrective measures.
ARI "W" pad welds.
Cars at time of manufacture have poor workmanship.
Not completely welded.
Mis-aligned pad placement.
Tank Car = HAZMAT Packaging
173.24 Packaging

171.8 Definitions
Packaging means a receptacle and any other components or materials necessary for the receptacle to perform its containment function in conformance with the minimum packing requirements of this subchapter.
For radioactive materials packaging, see §173.403 of this subchapter.

Other Projects
Investigation of UTLX 11353
Loaded Sulfuric acid, split in ½
Birmingham, AL
FRA HAZMAT Seminar
Houston, TX August 21st through 23rd 2018
George R Brown Convention Center
Government Performance and Results Act (GPRA) Goals
FRA HM Division – NAR Reduction, w/ Secretary of DOT
FRA – AAR meeting regarding concerns w/ functionality of the Tank Car Committee
Development of MOU
FRA Expectations
What does the AAR TCC and Industry want FRA to report on during TCCM?

Transport Canada:
There has been an organizational change affecting the position titles of all management officials.

CONTACT: STÉPHANE GARNEAU, 613-991-3151 stephane.garneau@tc.gc.ca

ISSUE	SUMMARY	REGULATORY REFERENCE
Shipping Name	• Shipping Name can now include word SOLUTION or MIXTURE *SOR/2017-137* • Shipping Name can now include word WASTE or DÉCHET *SOR/2017-253*	• s. 1.3(2)(d)(iv) • s. 1.3(2)(d)(v)
Stencil Marking Height	• AA stencil marking height for tank cars now in the regulations (should be harmonized with US) *SOR/2017-253* • TIH stencil marking height for tank cars now in the regulations (should be harmonized with US) *SOR/2017-137*	• s. 4.18.2(b)(i) • s. 4.23(b)(i)

Tank Cars for Flammable Liquids	• Regulations have been updated in accordance with PD38 (phase-out continues) *SOR/2017-137*	• s. 5.14.1 onward
Special Permit Reciprocity	• Special Permits are accepted for shipments into / through Canada as long as they appear on the shipping document *SOR/2017-137* • Special Permits prevail if conflict with certain parts of the regulations *SOR/2017-137*	• s. 10.1(3) • s. 10.1(4)
Marine Pollutants	• List of marine pollutants has been harmonized with IMDG	• Schedule 3
TDG by Rail Security Regulations	• Proposed regulations about "Security Sensitive Dangerous Goods" have been published in CG I as of June 24, 2017 • RIAS available online for reference	http://www.gazette.gc.ca/rp-pr/p1/2017/2017-06-24/html/reg3-eng.html
TP14877	• TP14877 should be published on our website by the Spring • **NEW DEVELOPMENT:** TP14877 will be getting its own regulatory amendment that is scheduled to be in CG I by the Fall 2018 *SOR/2018-XXX*	

Additional Updates:
Transport Inspectors are finding the same issues in Canada of tank car facilities as the FRA.

PHMSA

1. HM-215(O)Harmonization rule
2. HM-UKN Special permit conversion rule (draft stage)
3. HM-219c Petitions rule (deregulatory petition is being drafted) this includes P-1646 and P-1691

P1636 Extension of TIH to a full 50-year life is expected to be published under final rule HM-219a in the near future

PHMSA hopes by April 2018 to publish a Thermal Protection System notice. There will be four new systems added to the list and other company names already in the list to be updated. PHMSA will be asking for specific data parameters from the current companies on the list. Federal Register Notice. Senior PHMSA leadership is interested in the new TCC docket on the review of the DOT113 specification.

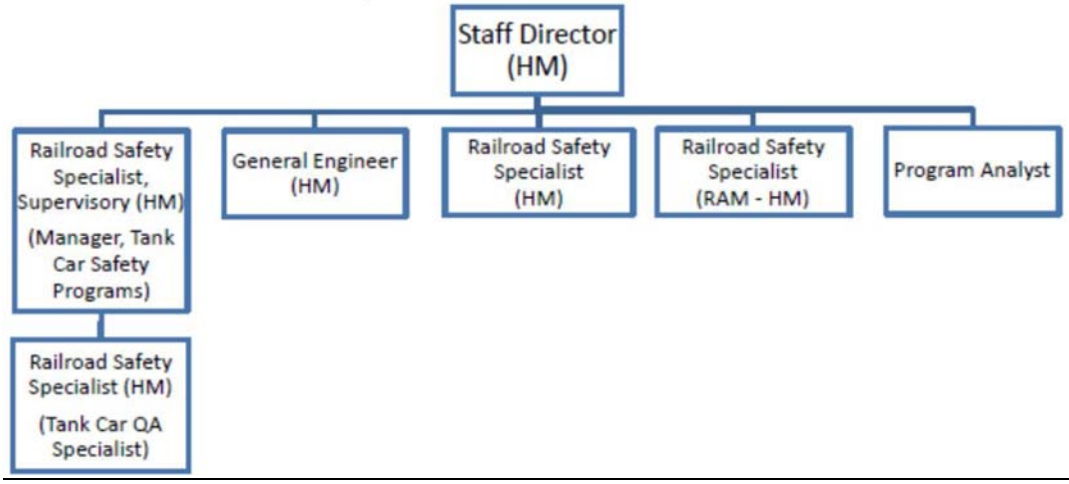
At the October 2017 meeting, Mark Maday and Randy Keltz (FRA), Leonard Majors (PHMSA), Paul Stancil (NTSB), and Shaun Singh (TC) provided reports. Here are the highlights:

FRA

R. Keltz provided a detailed report and asked the report to be provided to the entire industry. AAR posted the complete report on the AAR website during the meeting and provided the link for everyone to download the FRA update. Below is what was provided in the FRA report:

FRA Staffing

Hazmat HQ Division is fully staffed.



One Time Movement Approvals

2017 OTMA Counts (Jan 1 - Sept. 30) - Total OTMAs = 6237
OTMA 1 = 464
OTMA 2 = 98
OTMA 3 = 5,675

Mechanical vs. Hazmat

Hazmat Division only processes OTMAs for the tank, associated components and stub sills.
Some are still mis-applying for OTMA 3, if found, privileges will be revoked.

E System

E-OTMA is operational. All of industry is encouraged to use the system and report and bugs or problems to RSISspSupport@dot.gov

We have received few complaints due to functionality from industry. User error and web browser type are two common issues.

Training Issues

Persons filling out the OTMA application are not properly identifying the tank car component when filling out the OTMA application narrative.

Lack of the required general tank car knowledge in describing the nonconformance.

Several instances when the Grantee's logistics company is filling out the OTMA application who have no training and or have never seen HMG-127.

Key Information to provide

Photos of the affected area(s) of nonconformance.

Tank car shop reports, tank car owner documents, drawings, COC, etc. (if applicable).

Demonstration as to the car being safe for transportation to shop.

Explain what you have done to make the move safe for transportation.
(E.g. Pressure blown down, plug inserted in place of defective part, etc.)

Remember, all parties listed in the application have responsibilities, not just the grantee!

Quality Assurance Team Activities

2017 Audits (Jan 1 – Sept. 30)

38 Facility audits by QA Team.
~35 Facilities need inspected, New(er) never audited by FRA QA Team.

Major Findings

Deviating from car owners QMP and shop QA procedures.
Training - function specific.
Owners not providing all applicable information (e.g. drawings, COCs)
{This is required by 180.517(a) / Protection under 180.513(b)}

QA Team is currently working with AAR when gross noncompliance is found during AAR audit.

FRA is handling enforcement actions to correct.

Other Investigations

(1) Pending case referred to OIG for investigation.
(3) Open investigations with OIG for criminal activity.

(1) case has been referred to DOJ for prosecution.

RWD(s)

FRA RWD Notice No. 1 – 3/13/2015

McKenzie Valve – Still monitoring.

FRA RWD Notice No. 2016-01 – 11-18-2016 (REVISED)

Identification and inspection of ARI/ACF built tank cars w/ cast sump/skid and outlet saddle welds.

Tank Car Issues

Midland 720/721 angle valves.

Some valves self-actuate open once closed.
Working w/ AAR on corrective measures.

ARI top nozzle welds.

~3k tank cars identified may be suspect of having welds that have discontinuities.
Working w/ AAR on corrective measures.

Tank car and component manufacturing.

Manufacturing of tank car tanks and components (e.g. valves, manway covers) covered by the HMR, are all considered functions of a tank car facility and require an approved QAP by the AAR (179.7).

(Position vetted w/ FRA RRS, RCC & PHMSA)

Who can perform tank car maintenance = Attachment A

E.g. tank car jackets and repairs.

Other Projects

2018 National Safety Program Plan (NSPP)

Shipper loading process.

Audit shipper loading locations to ensure compliance with outage calculations, proper use of computerized loading equipment and verify reference temperatures relative to tank car designs.

Tank car specification compliance.

Review tank cars "as found" condition during field inspections and compare against COC, original drawings and approved modifications/conversions (R1s).

Training audits or RRs.

Audit RRs for compliance with HMR training requirements.

Manway cover project

Looking at in-service performance of MW covers, eyebolts, etc. (SYSTEM)

FRA Expectations

Compliance w/ HMR
- AAR TCC
  - Approvals of designs
  - Tank car facility QAP approvals
- Tank Car and TC Component manufacturers
  - Proper design w/ approvals
  - Cars/Components manufactured following all process and procedures
- HM Shippers
  - Proper use of tank cars
- Car Owners
  - QMP that meets the requirements
  - Collect and analyze data to set appropriate qualification intervals
  - Provide required documents to shippers and tank car facilities
- Tank Car Repair Facilities
  - QAP that meets the HMR and AAR requirements
  - Adhere to QAP, procedures, HMR and AAR requirements

Federal Railroad Administration
Tank Car Safety Initiatives
Attachment A
Tank Car Maintenance (Repair) and Qualification

Maintenance, repair, and qualification of tank cars, including their components covered in 49 CFR 179 Subpart A, Subpart B, Subpart C, Subpart D and Subpart F, must be performed by a tank car facility as specified by 49 CFR 180.501(a) and as defined in 49 CFR 179.2(10). Specifically, as required by 49 CFR 180.513(b), the tank car facility that performs maintenance, repair, and qualification of tank cars must first obtain the equipment (tank car, service equipment and coating/lining) owner's permission and perform those functions in accordance with the owner's qualification and maintenance program (QMP) and report the maintenance and repair of nonconforming conditions to the equipment owner. The nonconforming information is then utilized by the owner to develop appropriate qualification intervals. Additionally, the tank car facility must have an AAR approved quality assurance program (QAP) as required by 49 CFR 179.7. The QAP is intended to ensure that the facility performs maintenance, repairs, and qualifications in accordance with the Hazardous Materials Regulations (HMR), AAR standards, and the equipment owner's QMP.

When nonconforming conditions are repaired by other than tank car facilities without an AAR approved QAP, the repair is not in accordance with the equipment owner's QMP and nonconformities do not get reported to the equipment owner. Equipment owners are therefore unaware of the nonconformity and cannot consider such defects in their data analysis when establishing effective qualification intervals. Without effective qualification intervals there is

no way to ensure the original design level of reliability and safety of the tank car, meaning in-service failures will potentially occur before the next qualification is due.

Additionally, the HMR contain the specification design requirements for tank cars and their components at 49 CFR 179 Subpart A, Subpart B, Subpart C, Subpart D and Subpart F. Tank cars meeting these design specifications must meet a quantified design level of reliability and safety. Under normal conditions incidental to transportation they should remain railworthy between qualification events. Accordingly, a tank car that is not in strict conformance with the approved design does not have a demonstrated design level of reliability and safety, and is no longer approved to transport hazardous materials.

Summary:

All maintenance, repairs, and qualifications of a specification tank car, and its associated components covered by the HMR and of an approved design, must be performed by a tank car facility with an AAR approved QAP utilizing the equipment owner's QMP.

Exceptions:

Some tank car components may be maintained by other than tank car facilities. (e.g. shippers, railroads) As such, the following components are commonly used during the operations of tank cars and maintenance/repair of these components does not need to be performed by a certified tank car facility and do not require

qualification when performed as a maintenance activity by those entities.

- Coupler replacement
  - (Replacement of couplers must be made in accordance with AAR Field Manual Rules)
- Markings/Stencils – Other than the qualification markings required by 49 CFR 180.515 and specification markings.
  - (All markings/stencils must be made in accordance with the AAR Specifications for Tank Cars, Appendix C)
- Hinged and bolted manway cover gasket replacement
  - (Gasket must be the correct size as specified by the original or alternative approved design and compatible with the lading)
- Fill port cover gasket replacement
  - (Gasket must be the correct size as specified by the original or alternative approved design and compatible with the lading)
- Bottom outlet cap gasket replacement
  - (Gasket must be the correct size as specified by the original or alternative approved design and compatible with the lading)
- Quick disconnect dust cap gasket replacement

- (When used as secondary closures. Gasket must be the correct size as specified by the original or alternative approved design and compatible with the lading)

- Gage device cap O-ring replacement
  - (O-ring must be the correct size as specified by the original or alternative approved design and compatible with the lading)
- Thermometer well cap O-ring replacement
  - (O-ring must be the correct size as specified by the original or alternative approved design and compatible with the lading)
- Rupture disk replacement
  - (Disk must be the correct size and pressure rating as specified by the original or alternative approved design, compatible with the lading.)
- Emergency response repairs.
  - (Emergency response repairs are considered to be temporary and do not conform the tank car to the HMR, but are necessary to abate a safety issue. Unless the emergency response repair is one of the five service equipment related exceptions listed above, then the repair requires follow-up permanent repairs and qualification once the tank car is unloaded and prior to its return to service, unless performed by a certified tank car facility. Additionally, tank cars with these repairs require an OTMA prior to continuing in transportation. Refer to FRA's Hazardous Materials Guidance document HMG-127 for instructions on how to procure an OTMA.)

Transport Canada:
S. Singh reported on the following:

- International Harmonization Update to the TDG Regulations: re-iterate the update given in July 2017 plus
  - the "inhalation hazard" stenciling requirement is better harmonized with DOT and AAR
  - Special Provision 23 listing of TIH commodities has been modified slightly
- The withdrawn sour crude proposal is being re-worked; however there will be no change to tank car selection
- Publishing of 2017 edition of TP14877 will be end of year or early next year; incorporation of 2017 edition into TDG Regulations still expected January 2019
- RSI equivalency certificate to issued soon to address fiberglass insulation for 117R
  - Details to be in upcoming EC SR 11961: jacketed CPC-1232 with original fiberglass insulation system
- TDG Security regulations published in Canada Gazette I (NPRM): http://canadagazette.gc.ca/rp-pr/p1/2017/2017-06-24/html/reg3-eng.php

PHMSA
L. Majors – New administrator Howard "Skip" Elliott.

No official definition put out on refined petroleum products. L. Majors will seek management direction on what process needs to be followed to address this lack of definition. No rule makings are anticipated in the near future.

Status of Petitions:

P1636 Extension of TIH to a full 50-year life is expected to be published under final rule HM-219a early first quarter 2018.

P1673 DOT 130, DOT113, acceptance letter sent to AAR and under regulatory review.

P1678 Shippers petition on to amend 49 CFR Part 107 and 49 CFR Part 179 relating to tank car standards is under review by Office of the Secretary (OST)

P1691 AAR Petition, submitted on behalf of the ATCCRP Industry Partners, to make the interim TIH tank car the final car, was reviewed by all offices in PHMSA and is now be circulated within DOT management going through economic review

P1692 AAR six-year legacy non-normalized phase out petition is under economic impact review and under legal department review

P1694 LNG (methane) transportation by tank car, risk assessment and safety considerations are under review and under economic impact review.

P1705 Vinegar Institute petition for an exemption food grade vinegar not be classified as a hazardous substance is under technical review.

Thermal protection system was last published in 1993 and since then three additional request has been submitted since then. PHMSA is not going to issue individual letters but PHMSA will issue in the federal register an updated list of approve systems. Future efforts is to publish the information on the PHMSA website.

NTSB

Paul Stancil provided a detail presentation on current open investigations.

TSB of Canada

Donald Ross provided a detailed report on 7 rail investigations related to operation issues not tank car related.

At the July 2017 meeting, Mark Maday and Randy Keltz (FRA), Leonard Majors (PHMSA), and Shaun Singh (TC) provided reports. Here are the highlights:

FRA

R. Keltz provided a detailed report. Here are the highlights:

FRA Staffing:

HM HQ division is fully staffed. FRA is starting to hire for field positions

One Time Movement Approvals (OTMA)

E-OTMA is 100% operational. All of industry is encouraged to use the system and report any bugs or problems to RSISspSupport@dot.gov

OTMA YTD 2017:
OTMA 1 = 262
OTMA 2 = 53
OTMA 4 = 4240

Quality Assurance Team
Audits (Since April. 2016 TCCM) = 15 Facility audits by QA Team. 23 new or never audited facilities need inspected

Major Findings – (due to focus)

- Deviating from car owners QMP and shop QA procedures.
- Training, Function specific.
- Owners not providing drawings.

QA Team approach - working with AAR when gross noncompliance is found during AAR audit.

Four (4) complainants from tank car facilities since Oct. 2016. (2 open, 2 being investigated)

Other Investigations - (4) Open investigations with OIG for criminal activity. (1) case has been referred to DOJ for prosecution.

Tank Car Issues: There are Midland A720 angle valves opening in service after closing the valve. A service bulleting was sent to AAR and AAR issued a CPC to industry. True root cause is still not been identified and Midland continues to work with this issue.

2017 focused audits:

- Shipper Focused Audits (8 performed YTD) – emphasis on package preparation of service equipment. How shippers develop and utilize closure instructions.
- Performed Tank Car Repair Facility Audits (14 performed YTD) – focus on qualification and maintenance of tank car service equipment. How facilities get the qualification and maintenance information from the equipment owner and how the facility performs to these functions.
- Owner Audits (5 performed YTD) – focused audits on qualification and maintenance of tank car service equipment. How equipment owners collect and analyze data to set proper qualification intervals.
- Manway Cover Project – looking at in-service performance of manway covers, eye bolts, and assembly items to determine failure modes

RWD
FRA RWD Notice No. 1 – 3/13/2015 [McKenzie Valve – Still monitoring.]
FRA RWD Notice No. 2016-01 – 11-18-2016 (REVISED) [Identification and inspection of ARI/ACF built tank cars w/ cast sump/skid and outlet saddle welds.]

M. Maday (FRA) reported on the following:

1st Item: No intent of action, but FRA would like the TCC to consider open discussion about a base tank car design for hazardous materials transportation. Natural attrition concept consideration.

2nd Item: Review of the DOT 113 tank car specification. FRA would like an open discussion about energy products being moved in DOT 113.

Action Item: AAR tank car committee agreed to open a docket at the October 2017 TCC to review the DOT113 tank car specifications. TF charge to be derived by FRA and AAR staff so that the right industry stakeholders are involved.

Transport Canada:
S. Singh – TC plans to slow down the regulatory initiatives. International harmonization has been published and effective which includes the PD 38 and clarification on UN1268. The Canadian regulations updates is expected to go to gazette I in January 2018 which will include TP14877 and likely will not be enforced until 2019.

Due to regulatory interpretation of thermal protection system requirements fiber glass insulation does not meet the requirements of the TC standards. TC will work with RSI on an equivalency certificate on this subject.

Per the International Harmonization update, FRA Special Permit to operate the tank car until the first destination point in Canada is allowed without an equivalency certificate. However, after first destination point tank car needs to adhere to Canadian regulations or shipper must apply for an equivalency certificate.

TC is withdrawing their effort for defining sour crude oil in the regulations.

PHMSA
No official definition put out on refined petroleum products. L. Majors will seek management direction on what process needs to be followed to address this lack of definition. No rule makings are anticipated in the near future.

Status of Petitions:
P1636- Extension of TIH to a full 50 year life is expected to be published under final rule HM-219a soon.
P1673 DOT 130, 113, acceptance letter sent to AAR
P1678 Shippers petition on to amend 49 CFR Part 107 and 49 CFR Part 179 relating to tank car standards is under review by Office of the Secretary (OST)
P1691 AAR Petition, submitted on behalf of the ATCCRP Industry Partners, to make the interim TIH tank car the final car, was reviewed by all offices in PHMSA and is now be circulated within DOT management
P1692 AAR six-year legacy non-normalized phase out petition is under review with OST
P1694 LNG transportation by tank car, risk assessment and safety considerations are under review.
P1705 Vinegar Institute petition for an exemption food grade vinegar not be classified as a hazardous substance is under technical review.

FRA, TC, PHMSA, and NSTB representatives will provide a at meeting report.

At the April 2017 meeting, Mark Maday and Randy Keltz (FRA), Leonard Majors (PHMSA), Shaun Singh (TC), Manuel Kotchounian (TSBC) and Paul Stancil (NTSB) provided reports. Here are the highlights:

FRA

M. Maday is the new FRA Hazmat Staff Director. Here are the highlights from Mark's update:

Staffing:

1. FRA is at full staff except for the FRA Administrator position. Appointment to be made this year.
2. FRA would like to have the FRA using a once voice team concept so that the same information being driven by the Washington, DC office is also what is being provided by the FRA regional officers.
3. Randy Keltz is the responsible person at FRA on all Tank Car related issues.

HM-RSAC:

The recommendations from the HM-RSAC includes Parts 107, 171, 172, 173, 174, and certain parts of 179 (simulated pool fire testing) and 180 (definitions) will be considered at the next full RSAC committee. If this passes RSAC then it will go out to industry as a rulemaking. Three outstanding issues remain: buffer car, coupling speed regulations, and Part 179 rewrite. Part 179 and 180 rewrite is tasked to the TCC.

OTMA:

1. FRA has moved to an electronic submission process recently however the system had crashed shortly after deployment. FRA is reengineering the system and going through beta testing currently. FRA will notify industry once it is up and running, in the meantime FRA is accepting the paper process.
2. In 2016 there were a total of 9250 OTMA's. FRA audit team is finding that cars are going to shops with defects with and without OTMA's.
3. In 2017 to date: 134 OTMA1's, 42 OTMA2's, 2379 – OTMA3's. (45 request involved clean and purged tank cars)

Randy Keltz reported the following:

FRA QA Audit Efforts:

1. 24 QA audits have been performed since January 2017 TCC meeting. There are 23 new facility's going to be audited in the next few months. The two major findings are function specific training and deviating from car owner written instructions, federal regulations, and AAR standards. Every facility was found to have a compliance issue.

2. Randy reminded the industry of the federal regulations that must be adhered to by tank car facilities that repair, alter, convert, and modify tank cars. Randy read specifically 180.513(a) and 180.513(b). He stressed that each certified facility must adhere to the federal regulations, AAR standards, and car owner instructions. Also stressed it is the car owners responsibility to provide certified facility car owner instructions and the facility must not use, copy, distribute, forward or provide to another person the owners confidential and

proprietary instructions, procedures, manuals, and records without the owner's permission.

3. Four facilities have filed formal complaints on car owners not providing work instructions to perform work on their cars.

4. FRA has sent several recommendations to the OIG. They have accepted 4 FRA recommendations on facility's not complying with the regulations. The DOJ has one of them they are processing through the process.

5. FRA has seen tank car components and tank car service equipment being manufactured by non-certified facilities. FRA is working with AAR to resolve this non-compliance.

6. Shippers, Loading Racks, and Emergency Responders have been found maintaining tank cars. Randy reminded the industry that if industry performs maintenance on tank cars they are required to obtain tank car facility certification with the AAR.

7. Shippers, Tank Car Owners, and Facilities are the focus of FRA audits this year for compliance with the federal regulations. Tank Car Owner audits will start soon with emphasis placed on whether or not tank car owners are providing the required information to tank car facilities and if they are receiving back from the facility all the work performed on the car by the facility.

Transport Canada

Shaun Singh reference the updates provided in the docket from January 2017 meeting. Here are the highlights:

1. TP14877 final draft has been made available to the industry for public comment. Comments are due May 1, 2017. Expecting to have publish in Part I Gazete by end of this calendar year (NPRM). The following items are addressed in this final draft:
    a. TIH cars – I cars will be the new standard. TC has removed the 20-year life on these cars.
    b. There is a phase out program identified on non-normalized tank cars. The effective date will be 2 years from the publication date of the final issued standard.
    c. Flammable liquid tank car standards will be consolidated into the next version, right now they are spread out in the TDG, protective directives, and TP-14877.
    d. TC117 regulations will be incorporated into the standard.
    e. There will be clarification on the phase out requirements for non-crude UN1268 and non-ethanol UN1993.
    f. Further harmonization will occur on temporary certification process (OTMA1 FRA equivalent) within the TDG Act), written notifications (OTMA2 FRA equivalent) within the TC standard, and low safety risk approvals (OTMA3 FRA equivalent).
    g. Introducing a new minimum tank car plate material thickness for pressure car material ASTM 516 steel will be 5/8".

2. International Harmonization - comments were due in January. Expecting this update to get into part II of Canadian Gazette this summer. In this rule, Canada will allow FRA OTMA or FRA Special Permit to operate the car until the first destination point in Canada without an

equivalency certificate, however after first destination point car would need to adhere to Canadian regulations. Align the domestic requirements for classification, placarding, labeling, packing specification with what the UN and DOT requirements. Improve the harmonization of placard and stenciling requirements for TIH products to match that of DOT requirements. Classification criteria for assigning UN3494 with a subsidiary hazard class of 6.1.

3. Comment period is closed on the training requirements. TDG may be moving away from a training based requirement in part 6 to a competency requirement.

4. Part 7 ERAP in pre-consultation period, closes on May 1, 2017. Consultation document is available online.

5. ARI RWD on Bottom Outlet Sumps – Will continue to follow the developments.

6. TC received a petition from RSI requesting fiber glass be considered thermal protection since if it meets the requirements. Interpretation on this petition is coming very soon.

7. Facility Inspections – more resources have been applied. A total of 8 Canada registered tank car facilities were audited from April 2016 – March 2017. The agency plans to perform 11 from April 2017 – March 2018 (25% of the registered facilities in Canada). Every facility audited was found to have an issue in compliance.

Sectretaria De Communicaciones Y Transport (SCT)
Francisco Merchant of SCT gave a presentation on the latest developments from Mexico Hazardous Materials Regulations at it relates to rail transportation. Title of Presentation: Agency for the Regulation of Rail Transport. The TCC agreed to have AAR post this presentation on the AAR website under Tank Car Committee document library.

PHMSA
HM-219A – in final rule stage, extend the life of the I specification tank car
HM-251C – volatility of crude oil, comment period extended 60 days
Petition 1678 – Shipper Petition on setting tank car specifications, response coming soon
Petition 1691 – AAR Petition, submitted on behalf of the ATCCRP Industry Partners, to make the interim TIH tank car the final car, still under review
Petition 1692 – AAR six-year legacy non-normalized phase out petition, still under review

NTSB
5 Open Investigation. He described each investigation in detail.

Canadian Transportation Safety Board
Four Rail Specific Issues are ongoing and are available online. No hazmat specific issues right now. Published 8 reports since last update.

At the January 2017 meeting, Randy Keltz (FRA), Leonard Majors (PHMSA), and Shuan Singh (TC) provided reports. Here are the highlights:

FRA

One Time Movement Approvals (OTMA)

The electronic OTMA (eOTMA) system is down with no timeline of when it will be back up and running. In the interim the old paper process is being used. Estimated number of OTMA's in 2016 was 9250. Roughly 50% of all noncompliant tank cars are moving under an OTMA. FRA plans to analyze the data in depth, but initial results shows a majority of the OTMA's are service equipment related.

FRA Audit of AAR Audit:

FRA plans to provide AAR with the two draft audit reports regarding the tank car service equipment approval process and tank car design approval process.

FRA QA Team Audit:

Since October 2016, 25 facility audits were performed with the majority of the findings being deviations from the tank car owner qualification instructions.

Tank Car Issues:

1. Shipper inspections continue for 2017, carry over from 2016. FRA continues to find shippers maintaining and/or repairing tank cars without proper facility certification. FRA stated that there is a lack of function specific training per 49 CFR. Under HM-RSAC there is proposed regulatory text language related to shippers having proper closure instructions.
2. A major concern by the FRA is that tank car components are being manufactured by non-certified facilities specifically manway covers. FRA is working with AAR to get this resolved.
3. Railworthiness Directives (RWD) – FRA continues to monitor the RWD on McKenzie valves. The RWD on ARI bottom outlet sump was revised in November 2016 to change the initial focus on the 15% of the highest mileage tank cars.
4. OIG audit reports of FRA are in draft phase.

Qualification and Maintenance of Service Equipment

In 2017, FRA is going to audit shippers, tank car owners, and tank car repair facilities on how they are qualifying service equipment, how that information is being passed to tank car owners, and how the tank car owner use the information to evaluate their qualification procedures.

Staff:

New Staff Director – On January 9, 2017 Mark Maday became the new FRA Hazmat Staff Director.

HM-RSAC

R. Keltz stated that the TCC has been assigned to evaluate Part 179 and Part 180 of 49 CFR. FRA stated that the HM-RSAC would like to see a proposal presented by the October 2017 TCC meeting. Key focus should reside on the arrangement of the regulations, the definitions (ensuring the alignment with M-1002, integrate active interpretations, DOT103 and DOT104 specification tank cars, and move section 179.500 into part 178. Randy provided AAR the initial track changes version the FRA put together on both Parts.

Transport Canada

Protective Direction 38 become effective November 1, 2016. This directive applies to 111 tank cars in both residue and loaded cars.

Tank Car Standard TP14877 – The last technical committee meeting was held in December 2016. The final draft was distributed to committee members which will soon be followed by a release to the industry. Since the October 2016 meeting language has been changed related to the phase out of non-normalized tank cars, looking at a 2-year phase out instead of a 1 year.

Flammable liquid tank car rules are commodity based originally using UN numbers. The next edition of TP14877 will have UN1268 applicable to crude oil and UN1993 applicable to only ethanol with both having an aggressive timeline. For pressure car ASTM 516 steel will increase shell thickness to 21/32".

The international harmonization language proposed in Gazette 1 60-day comment period 1/25/2017. Some of the changes include Canada allowing tank cars used under DOT special permits and OTMAs until the first Canadian destination.

In pre-consultation is the "Canadian Update" to align classification, labeling, and marking requirements in the UN recommendations and DOT regulations. The pre-consultation ends February 22, 2017. There is an added consultation on the proposal of sour crude UN3494. The concentration threshold limits of H2S will determine when UN3494 is used instead of UN1267.

TC is looking ways to improve training requirements. Comments are welcome until February 28, 2017.

Transport Canada continues to follow the developments of the FRA railworthiness directive on the ARI bottom outlet sumps.

TC has under consideration the RSI petition on the use of fiberglass as a thermal protection systems.

CPC-1232 that do not have the bottom outlet built before July 2015, Transport Canada has provided an equivalency certificate for tank cars that do not have the handle despite what is required by the regulations.

PHMSA

On January 18, 2017 HM-251D Advance Notice Proposed Rulemaking (ANPRM) was issued regarding Volatility of Unrefined Petroleum Products and Class 3 Materials. Comments are due March 20, 2017 which likely will be extended due to the regulatory freeze.

On January 19, 2017 HM-263 ANPRM was issued regarding FAST Act Requirements for Real-Time Train Consist Information by Rail. Comments are due April 19, 2017.

HM-219A – Final rule has been drafted. This will address the extended service life of the TIH

car. Pending waiting direction from new administration.

Petitions
P1646 – petition on non-normalized steel has been accepted
P1673 – petition on DOT130 and DOT113 was accepted
P1678 – petition from shippers on delegated authority of the TCC. This is still under review, response is being developed. Legal FRA and PHMSA are reviewing the petition.
P1691 – petition on interim tank car becoming the new TIH tank car. Still under technical review
P1692 – petition on the phase out of the non-normalized cars and non-HM-246 compliant tank cars are still under review.

Points of Contact

Name	Company	Name	Company
Garneau/Singh	Transport Canada	Majors	PHMSA
Keltz	Federal Railroad Administration	Stancil	NTSB

Purpose of Docket: For Government to provide updates on regulations related tank cars

AAR M-1002 Standards

DOCKET T1.1.4
Procedures for Securing Approval

At the January 2018 meeting, AAR discussed the AAR strawman development with the input from the FRA. Next step is to hold a TF teleconference to go over the procedures for securing approval.

At the January 2018 private docket meeting, The TCC agreed that the M-1002 standard needs to be revised to take into account any change to the valve that involves how it performs requires a new approval. This goes directly into what the T1.1.4 TF is trying to resolve with acceptance criteria and what is exactly approved under service equipment.

At the October 2017 meeting, TF to get together and discuss the strawman. COD

At the July 2017 meeting, AAR reported the following:

AAR plans to set up a conference call with the TF in August 2017. The existing charge covers the following but for traceability from the private TCC docket to this docket the following TF charges were approved by the TCC during the April 2017 private session:

- Develop acceptance criteria for non-metallic bottom outlet caps
- Develop acceptance criteria for pneumatic service equipment handles
- Already in the existing charge but for traceability purposes establish/clarify the acceptance criteria of manway covers
- In the development of the acceptance criteria ensure specific standard language is developed to specifically state that any change to the vale that involves a change in performance requires AAR approval.

Update for July 2017:

AAR plans to set up a conference call with the TF in August 2017. The existing charge covers the following but for traceability from the private TCC docket to this docket the following TF charges were approved by the TCC during the April 2017 private session:

- Develop acceptance criteria for non-metallic bottom outlet caps
- Develop acceptance criteria for pneumatic service equipment handles
- Already in the existing charge but for traceability purposes establish/clarify the acceptance criteria of manway covers
- In the development of the acceptance criteria ensure specific standard language is developed to specifically state that any change to the vale that involves a change in performance requires AAR approval.

At the April 2017 meeting, M. Forister reported the following:

Current State: AAR staff has developed a Strawman Matrix which identifies the following information: Device Type, Definition of Device, Service Equipment Category (Safety Relief, Closure, Fitting, Valve, Assembly, and Instrument), Does it require AAR approval, Designed to Meet AAR Standard or National Recognized Standard, Does the Service Equipment require C4, C5, and/or C6. General Observations made during the development of the Strawman Matrix:

1. Acceptance Criteria used for the approval process = What is the intent of approval (Performance in transportation, performance at loading/unloading facility, and/or performance in fire/accident scenario)
2. Assemblies and Instruments - How does AAR and FRA want to handle these potential new categories of service equipment
3. Focus made on Primary Closures only
4. What items are approved under safety relief, valve, assembly, and instruments (e.g. gaskets, body, springs, fasteners, handle, etc.…)
5. Metallic and Nonmetallic needs to be addressed
6. How do we address Closures, Fittings, Safety Relief, and Valves not specifically listed? (e.g. spool, adapters, angle valve, etc.…)

AAR has completed its work with FRA to ensure this matrix is vetted properly with the existing regulations. The TF will review the Strawman Matrix and a recommendation for consideration by the TCC will be developed by the TF.

Staff Note: Randy Keltz will be added to the TF.

Update for April 2017:

Current State: AAR staff has developed a Strawman Matrix which identifies the following information: Device Type, Definition of Device, Service Equipment Category (Safety Relief, Closure, Fitting, Valve, Assembly, and Instrument), Does it require AAR approval, Designed to Meet AAR Standard or National Recognized Standard, Does the Service Equipment require C4, C5, and/or C6.

General Observations made during the development of the Strawman Matrix:

1. Acceptance Criteria used for the approval process = What is the intent of approval (Performance in transportation, performance at loading/unloading facility, and/or performance in fire/accident scenario)
2. Assemblies and Instruments - How does AAR and FRA want to handle these potential new categories of service equipment
3. Focus made on Primary Closures only
4. What items are approved under safety relief, valve, assembly, and instruments (e.g. gaskets, body, springs, fasteners, handle, etc.…)
5. Metallic and Nonmetallic needs to be addressed
6. How do we address Closures, Fittings, Safety Relief, and Valves not specifically listed? (e.g. spool, adapters, angle valve, etc.…)

AAR is working with FRA to ensure this matrix is vetted properly with the existing regulations. Once complete the TF will review the Strawman Matrix and a recommendation for consideration by the TCC will be created.

At the January 2017 meeting, AAR is performing a gap analysis on chapter 1 regarding the approval of service equipment. The plan is to put together a single table in chapter 1 of M-1002 to indicate in column 1 the type of service equipment, column 2 the type of approval required, and in column 3 whether or not the item needs to be from and maintained by a certified tank car facility. COD

Task Force:

Name	Company	Name	Company
Forister (Discussant)	Association of American Railroads	Morgan	GBW Railcar Services
Becherer	Transquip	Muellner	Fort Vale Engineering
Clugg	Salco Products	Walker	Federal Railroad Administration
Foley	Metso Automation USA	Nunez	Kelso Technologies
Gambow	Kelso Technologies	Prince	Flowserve Corporation
Gentile	Engineered Controls	Prunty	McKenzie Valve & Machining
Hoang	Midland Manufacturing	Rader	Greenbrier Management Services
Loman	AllTranstek	Sisto	GATX Rail Corporation
McAbery	Metal Goods Manufacturing	Keltz	Federal Railroad Administration

TF Charge:

Number	TF Charge
1.	Develop criteria for approval of all items of service equipment.

DOCKET T5.32

Review Tank Car Requirements in AAR Office & Field Manual

At the January 2018 meeting, COD

At the October 2017 meeting, B. Siebold reported that the TF plans to continue their work on the TF charge with emphasis on Rule 80 and Rule 81. COD

At the July 2017 meeting, B. Siebold reported this effort continues to be worked on by the TF. COD

At the April 2017 meeting, B.Siebold reported that the current charges are satisfactory and the TF is open to reviewing any other known tank car issues or conflicts within the Field / Office manuals. The TF will develop new verbiage for the following Rules as well as the TF Chair Rader's previously developed work:

- Rule 81.D.2 on welding within 12" of tank to align with Chapter 1 and Appendix B discussions.
- Rule 80 on stenciling of tank cars to address "YR" versus "YEAR" conflict (input from T92.18).

Update for April 2017: B. Siebold and AAR staff developed the three TF charges below.
At the January 2017 meeting, B. Siebold is the new chair.

Action Item: Bruce will work with AAR staff on the development of the TF charge.

Task Force:

Name	Company	Name	Company
Siebold (Chair)	BNSF Railway Company	Morgan	GBW Railcar Services
Alderson	AllTranstek	Perez	Union Tank Car Company
Forister	Association of American Railroads	Warwick	The Greenbrier Companies
Leiby	Quality Transportation Services	Smith	The Andersons Rail Group
Loman	AllTranstek		

TF Charge:

Number	TF Charge
1.	Review January 2014 decision to change Rule 88.
2.	Review Rule 81.
3.	Review any other section within AAR Field Manual related to tank cars.

DOCKET T31.2.1

Defining Requirements on Heat Resistant Gaskets

At the January 2018 meeting, AAR needs to publish a CPC with the action taken from July 2017.

At the October 2017 meeting, AAR needs to publish a CPC with the action taken from July 2017.

At the July 2017 meeting, J. Rader discussed the TF proposal.

Action Taken: A motion was made, seconded, and passed on AAR issuing a CPC for comment for Appendix J of M-1002 as follows:
The task force recommends amending the Association of American Railroads, *Manual of Standards and Recommended Practices*, Section C, Part III, M-1002, Specifications for Tank Cars, Appendix J, by adding a new paragraph as follows.

> *3.8.1.7 In addition to the criteria in 3.8.1.1, each tank car used for the transportation of anhydrous ammonia, or any material that meets the criteria for Division 2.1 or 2.3, should not have elastomeric gaskets at the bolted joint (e.g., a joint between a valve, a fitting, or a tank).*

At the April 2017 meeting, J. Rader reviewed the TF proposal with the committee.
Action Taken: A motion was made to move the proposal forward to the executive committee for consideration, seconded, and passed. The TCC will consider at the July 2017 TCC meeting.

At the January 2017 meeting, COD
On January 9, 2017 TF chair provided the same report to AAR as identified below on 9/29/2016.

Task Force:

Name	Company	Name	Company
Rader (Chair)	Greenbrier Management Services	Jorgenson	The Sulphur Institute
McKisic	Trinity	Monger	Koch Industries
Frew	VSP Technologies	Perez	Union Tank Car Company
Lingenfelder	Gasket Resources	Richardson	U.S. Clay Producers Traffic Association
Keltz	Federal Railroad Administration	Schneider	Chicago Wilcox Manufacturing
Kinsley	Chlorine Institute	Warner	American Petroleum Institute
Croson	Transquip	Grubert	Gasket Resources

TF Charge:

Number	TF Charge
1.	The task force will research the regulatory history of 49 CFR 173.314 (b)(5), with respect to the use of high-temperature gaskets for tank cars in compressed gas service, and recommend changes to the federal regulations to help provide clarity.

DOCKET T50.34.2

Consider Requirements for Installation of Surge Suppression Devices

At the January 2018 meeting, K. Dorsey reported that a final CPC needs to be issued.

At the October 2017 meeting, K. Dorsey reported that a final CPC needs to be issued.

At the July 2017 meeting, K. Dorsey reported on the CPC-1326. Comments were outside the scope of the proposed changes in CPC-1326 so AAR will move forward with a final CPC.

On 5/5/2017 AAR issued CPC-1326 - Solicitation of Comments on Proposed Revision to MSRP Section C Part III, M-1002, Specifications for Tank Cars, Appendix A and Appendix M. Comments still under review at the AAR.

Action Item: AAR will publish shortly the final CPC on this subject.

On 5/5/2017 AAR issued CPC-1326 - Solicitation of Comments on Proposed Revision to MSRP Section C Part III, M-1002, Specifications for Tank Cars, Appendix A and Appendix M. Comments still under review at the AAR.

At the April 2017 meeting, AAR needs to issue a CPC. COD

At the January 2017 meeting, AAR needs to issue a CPC. COD

AAR Action Item: Issue CPC.

Task Force:

Name	Company	Name	Company
Kinsley (Chair)	Chlorine Institute	Jorgenson	The Sulphur Institute
Murray	ExxonMobil Chemical		

TF Charge:

Number	TF Charge
1.	Develop performance-based criteria to determine if a commodity should not require a surge suppression device.

DOCKET T50.57

Operational Effects on Safety Relief Device Performance

On March 28, 2018 AAR received the following update from the TF chair:
Analysis of data collected by the task force on in-service failures has been inconclusive. FRA has an ongoing project to study the environmental effects of ladings (crude oil and ethanol) upon these safety relief valves. Task force is awaiting outcome of this testing to take further action.

At the January 2018 meeting, COD.

At the October 2017 meeting, P. Raj from FRA gave a detailed presentation on the FRA testing of pressure relief valves. COD

At the July 2017 meeting, FRA reported that their environmental testing of pressure relief valves continues. COD

July 2017 Update:
AAR received the following update on 7/7/2017 from TF Chair:
FRA conducted environmental testing of pressure relief valves that were provided by task force members is ongoing.

At the April 2017 meeting, J. Perez reported on the update provided to AAR on 4/4/2017

AAR received the following update on 4/4/2017 from TF Chair:

FRA project for environmental testing of pressure relief valves is ongoing.

At the January 2017 meeting, COD.

AAR received the following report from TF Chair January 6, 2017:

Environmental testing of pressure relief valves conducted by FRA and Texas A&M is still in progress. Valve failures have been identified but car owners are still working to generate the true population of these pressure relief valves to allow for better analysis of in service valve failures.

Please update the task force register to remove Dave Girard and replace with Lynnette Cozzolino (still Girard Equipment)

Task Force:

Name	Company	Name	Company
Schultz (Chair)	Union Tank Car Company	Kazakewich	RegO Products/Engineered Controls
Girard	Girard Equipment	Lacroix	Kelso Technologies
Gonzalez	Federal Railroad Administration	Loman	AllTranstek
Harm	Girard Equipment	Raj	Federal Railroad Administration

Herbel	Trinity Industries	Sisto	GATX Rail Corporation
Hoang	Midland Manufacturing	Thompson	Sims Professional Engineers
Johnson	McKenzie Valve & Machining		

TF Charge:

Number	TF Charge
1.	Collect, analyze and review data of field failures and determine commonalities. Review AAR current design requirements of Appendix A. Review current AAR design and testing requirements of safety valves in relation to recent in service failures, with a focus on vibration and harmonics effects from the operating service environment.
2.	Investigate the distortion of 165psi pressure relief valve to determine if the valves are defective. If they are found defective recommend the action needed to be taken.

DOCKET T59.2.1

Appendix R Review to Address TCID Requirements

On March 28, 2018 AAR received the following update from the TF chair:
Draft of "shop floor users' manual" is completed. This is a work instruction that is aimed at repair shop personnel who must document TCID items on the shop floor without access to the electronic TCID system. Explanations of all fields and examples of each report type are included in this manual. This draft will be taken to the full task force for review and revision

At the January 2018 meeting, K. Dorsey will be the represent AAR on the development of TCID at Railinc.

At the October 2017 meeting, M. Forister reported that the online TCID is being transferred from Sims Professional Engineers to Railinc in 2018. AAR stated that each car owner will be charged for the development and maintenance of this effort through Railinc fee structures on a per car basis.

At the July 2017 meeting, on June 27, 2017 AAR staff met with J. Rader and J. Schultz to work on the rewrite of Appendix R related to the TCID requirements. It was identified in that meeting that definitions need to be clarified and the mapping of the requirements of when a 4-2 is required for alternations and conversions and when is it appropriate to report a TCID record. The goal of this effort is to provide a proposal to the TCC that clarifies the intent and applicability of the TCID record. COD

July 2017 Update:
AAR received the following update on 7/7/2017 from TF Chair:
A subgroup of this task force met to develop a TCID user's manual that is targeted at shop floor employees completing TCID paperwork. Instructions for completion of the default TCID form were developed; a full draft of the user manual is complete. Another subgroup met to continue the rewrite of M-1002 Appendix R to incorporate TCID and remove references to Form R-1, R-2, and SS-3. Much of the Appendix R language was developed which would be the replacement for the R-1 and R-2 language. Work remains to the Chapter 1 material that needs to be created for TCID. Roadblocks exist to completion, most notably the relationship of TCID and Form 4-2 and when each can be used and their restrictions.

At the April 2017 meeting, the AAR received the following update on 4/4/2017 from TF Chair:

Task force work is focused on finalization the TCID user manual. Recommendations for updates to relevant sections of M-1002 that relate to TCID including the Appendix R rewrite will be targeted for October 2017.

TCC member asked if the TF would consider revising Appendix R paragraph 3.3 regarding the change in commodity requiring on an R-1. The TF reminded the TCC that if this were to be made a petition to DOT on 49 CFR §173.31 would need to occur.

April 2017 Update:
AAR received the following update on 4/4/2017 from TF Chair:

Task force work is focused on finalization the TCID user manual. Recommendations for updates to relevant sections of M-1002 that relate to TCID including the Appendix R rewrite will be targeted for October

At the January 2017 meeting, J. Byrne stated that the RSI-AAR Safety project is considering moving the TCID system over to Railinc in order to integrate with the Umler data stored at Railinc. Investigation is underway for the migration of this database to Railinc. Add J. Byrne to TF.

AAR received the following report from TF Chair January 6, 2017:

The task force will meet during the first quarter in order to finalize the TCID user's manual and progress the updates of M-1002 that relate to TCID including the Appendix R rewrite.

Task Force:

Name	Company	Name	Company
Shultz (Chair)	UTLX	Morgan	GBW Railcar Services
Edmonds	ExxonMobil Chemical	Schultz	Union Tank Car Company
Jachim	Rescar Companies	Sisto	GATX Rail Corporation
Johnson	AllTranstek	Student	Gunnison, LLC
Loman	AllTranstek		

TF Charge:

Number	TF Charge
1.	Review Appendix R to determine if there is a need to update, revise, or remove paragraphs or references to the SS-1, SS-3, R-1, and R-2 forms with respect to TCID.

DOCKET T59.2.2

TCID Template Review

On March 28, 2018 AAR received the following update from the TF chair:
NOI-8 took effect on March 18 and incorporated the ability to report multiple compartment cars into TCID. NOI-9 has been published and will take effect on April 7. This notice corrected multiple stub sill templates and the items recorded on them. NOI-10 was not able to be published before the transition of the database to Railinc was initiated and is currently on hold until after the transition.

At the January 2018 meeting, Simms engineering recently sent TCID users an update on TCID Templates. COD

At the October 2017 meeting, during the meeting it was it was reported that the stencil class field in TCID needs to be addressed to accurately address the operating condition of the tank. AAR staff has been working with the TF chairman on this issue. COD.

At the July 2017 meeting, TCC agreed on the following additional TF charge: to develop a process in Chapter 1 for when TCID templates are required to be submitted. One method to consider is to require the template to be submitted when the design is submitted to the EEC for approval.

July 2017 Update:
AAR received the following update on 7/7/2017 from TF Chair:
Face to face meeting was held at UTC in June. Proposed changes to TCID were delivered to the task force based off of user identified issues and changes to remedy each issue raised were approved by the task force. Items agreed upon at this meeting are being drafted into a change notice that will be released by Sims. Once this notice is published, industry will have 90 days to implement the new format.

At the April 2017 meeting, TF plans to get back together in May to discuss next efforts regarding weld location codes and issues that have been raised by users.

The AAR staff will work with Jon Hannafious (EEC) as part of the application process to include a template on new stub sill designs

AAR received the following update on 4/4/2017 from TF Chair:

The major changes aligning with M-1002 Appendix R were implemented in October. Current task force work is focused on issues that have been raised by users.

At the January 2017 meeting, K. Dorsey referenced the report provided by the TF chair on January 6, 2017. The TCC would like to see if AAR can coordinate with the EEC to see if the template can be included in the stub sill application approval process. The TCC needs clarity from the EEC that if an approved stub sill is modified what would trigger it to receive its own design approval.

AAR received the following report from TF Chair January 6, 2017:

The changes to the Shell/Sill matrix including the update to "How Repaired" codes to properly align with the current M-1002 Appendix R was implemented in October. The task force will be reconvened in order to address gaps in the reporting for multiple compartment cars and allowable failure codes to specific components in the dependency matrix.

Task Force:

Name	Company	Name	Company
Shultz (Chair)	UTLX	Mozingo	Trinity Industries
Batchelor	National Steel Car Limited	Perez	Union Tank Car Company
Clayton	GATX Rail Corporation	Sandheinrich	American Railcar Industries
Dalske	American Railcar Industries	Saxton	Greenbrier/Gunderson
Edmonds	ExxonMobil Chemical	Sisto	GATX Rail Corporation
Johnson	AllTranstek	Strouse	Federal Railroad Administration
Moloodi	National Steel Car Limited		

TF Charge:

Number	TF Charge
1.	Review and approve changes to the TCID underframe templates and provide engineering support to Sims Professional Engineers with respect to TCID logic.

DOCKET T60.17

Review of Volume Determination for Tank Cars

On March 20, 2018 AAR received the following update from the TF chair:

March 14, 2018
The working group met at the 2018 Spring Committee on Petroleum Measurement Standards meeting in Dallas, TX to discuss ballot results and review negative comments. A meeting will be held in the April/May timeframe to continue work on the current ballot draft.

November 1, 2017
Ballot Summary Released: 145 comments, 2 negative votes
API-COLM member Roy Meyer volunteered to lead the comment resolution for STD 2554.

October 13, 2017
Closing date for ballot of the proposal for API MPMS STD 2554, *Standard Method for Calibration of Tank Cars.*

Updated Task Force List:

Name	Company	Name	Company
Hopper (Chair)	The Greenbrier Companies	Jones	American Petroleum Institute
Alderson	AllTranstek	Matzo	Trinity industries
Batchelor	National Steel Car Limited	Meyer	Exxon Mobil
Carlson	Measurement Strategies	Philley	Exxon Mobil
Edgel	Union Tank Car Company	Warner	American Petroleum Institute
Sixkiller	The Greenbrier Companies		

At the January 2018 meeting, it was reported that API is moving forward with their proposal.

Action Item: Jim Rader agreed to contact Sara Hopper to see if the TCC comments were received in the API proposed standard.

At the October 2017 meeting, S. Hopper stated that API is addressing comments provided to this TF. API continues to work on the API standard. On 9/25/2017 AAR published CPC-1329 "Ballot for Revised Standard for the Measurement of the Volume of a Tank Car".

Gary Alderson was asked to be added to the TF list because he has been a TF member for years. Editorial change by AAR.

Ken Campbell will be replaced by Dean Matzo for Trinity.

Greg Saxton has submitted a comment to API to include another type of gaging to the list of approved methods to determine the volume of a tank car.

On 9/25/2017 AAR published CPC-1329 "Ballot for Revised Standard for the Measurement of the Volume of a Tank Car".

At the July 2017 meeting, K. Warner reported that the final document is in the hands of API master editor. Once complete S. Hopper will work with AAR staff to get the comments out to the TCC industry for input. COD

At the April 2017 meeting, S. Hopper stated the final document is in the hands of API master editor. Once complete she will work with AAR staff to get the comments out to the TCC industry for input. COD

At the January 2017 meeting, K. Warner discussed the update provided by TF chair on January 6, 2017.

AAR received the following report from TF Chair January 6, 2017:

The volunteer group for API Std 2554 has been broken up into three task groups made up of members from both API and the AAR. Each task group completed the revision of one of the three procedures included in the standard: Water Gauge, Water Metering and Strapping. Gauge Table procedures will also be addressed in this standard.

On 1/2/2017 the API confirmed the assignment of master editor Edwin D Carlson of Measurement Strategies Group LLC to assemble the procedures into one document and edit the content into API's editorial format. Once this daft is complete, it will be circulated back to the members of the work group for a review prior to final ballot. Upon completion of the work group review, the document will be balloted to the API Committee on Liquid Measurement and then circulated to AAR for comment.

Task Force:

Name	Company	Name	Company
S. Hopper (Chair)	The Greenbrier Company	Jones	American Petroleum Institute
Alderson	AllTranstek	Matzo	Trinity Industries
Batchelor	National Steel Car Limited	Meyer	Exxon Mobil
Carlson	Measurement Strategies	Philley	Exxon Mobil
Edgel	Union Tank Car Company	Warner	American Petroleum Institute
Sixkiller	The Greenbrier Companies		

TF Charge:

Number	TF Charge
1.	Determine if the current M-1002 requirements for determining the volume of a tank need to be modified or expanded.

DOCKET T80.2.4

Welding Task Force Proposals

On March 21, 2018 AAR receive the following update from the TF chair:

A comprehensive review of changes to Appendices R and W was presented to TCC members on February 22, 2018. Subsequent to that review, Appendices R and W were revised to address TCC comments and concerns. Those changes were incorporated and submitted to Ken Dorsey for review and distribution to TCC members.

At the January 2018 meeting, K. Dorsey discussed that the AAR would like to setup a teleconference between the TF chair and the executive committee with the goal of going over, in detail, the current TF proposals.

Action Taken: TCC agreed to have AAR set up a teleconference between the TF chair and TCC executive members.

Action Item: AAR will set up a teleconference and discuss with the TF chair previous approved action items.

At the October 2017 meeting, M. Untermeyer discussed the information in the background provided to AAR on 10/2/2017.

Action Taken: a motion was made, seconded, and passed to move the proposals discussed in the background to the executive committee for January 2018 TCC meeting.

On 10/2/2017 the AAR received the following from TF Chair Mike Untermeyer:

The task force has addressed TCC comments on our proposed changes to Appendices R and W. Our comments and associated proposals are shown below. I have also attached a summary of task force charges and a list of additional definitions for inclusion in Chapter 1. The task force agrees that additional time may be required to cover the comprehensive changes to R and W, and we request that additional time be allocated at some point during the upcoming meetings in Dallas.

Comment: K. Dorsey reported that there are concerns with local post weld heat treatment process of satellite locations with no specified requirements of the facility in Appendix W or R of M-1002 to ensure this is being appropriate performed and is under controlled conditions.

Proposal:

R19.3.2.4.1 A written local postweld heat treatment procedure is required. ***The procedure shall, as a minimum, cover safe use of equipment, equipment calibration, thermocouple, heating pad and insulation placement, process monitoring requirements, and AAR temperature limits.***

R19.3.2.5.2 The training program shall, as a minimum, cover the following areas: safe use of equipment, equipment calibration, thermocouple/insulation placement, ***process***

monitoring requirements as described in the LPWHT procedure and AAR temperature limits.

Justification: Remote monitoring of LPWHT shall be addressed in the LPWHT procedure. Training of LPWHT personnel shall include process monitoring requirements.

Comment: Welding requirements on Nozzles is still not defined in Appendix W.

TF Comment: Requirements for pipe (nozzle) welding procedure and performance qualification and acceptance criteria are all addressed in the existing proposal.

Comment: Appendix R paragraph 22.0 "Repairs to Fire-Damaged Tank Car Tanks" needs to be reviewed because local post weld heat treatment if not properly controlled can have the same effects on the tank car tank materials as fire damage.

Proposals:

R11.2.1 If the sharpest radius formed by dents is at least four times the plate thickness, such dents or buckles may be removed by pressing or jacking to restore original contour to within the limits specified in Appendix W, paragraph 13.5. Excessive heating of the metal shall be avoided. For carbon steel, the maximum temperature is 1250 °F (677 °C). ***If the temperature exceeds 1250 °F (677 °C), the affected area shall be repaired by insert or the mechanical properties (tensile strength and notch toughness, if required) shall be verified by test coupon.***

R24.1.3.2 During the heating and cooling periods, there shall be no greater variation in temperature than 250 °F (139 °C) throughout the heated ***band (HB***) area of the tank, nor shall any portion exceed 1250 °F (677 °C). ***If the recorded LPWHT temperature exceeds 1250 °F (677 °C), the affected area shall be repaired by insert or the mechanical properties (tensile strength and notch toughness, if required) shall be verified by test coupon***

R24.1.3.3 During the holding period, there shall be no greater difference than ±50 °F (±28 °C) throughout the heated area of the tank. During the holding period, the minimum temperature throughout the heated ***band (HB)*** area shall be not less than 1100 °F (593 °C) or greater than 1250 °F (677 °C). ***If the recorded LPWHT temperature exceeds 1250 °F (677 °C), the affected area shall be repaired by insert or the mechanical properties (tensile strength and notch toughness, if required) shall be verified by test coupon***

Comment: Repair of cracks and corrosion needs to be revised, specifically the amount of allowed to be repaired.

TF Comment: As indicated in our current proposal, the task force agrees that repair by insert or weld buildup should be the car owner's decision, with no imposed limitation on the area that may be repaired by weld buildup. What if the corrosion/affected area is on the tank bottom? Should draft sills, bolsters and bottom reinforcing pads have to be removed and reapplied because we require repair by insert? The task force believes that requirement would do more harm than good.

Comment: Hardness readings on pressure car: Requirements in R and W with respect to hardness readings of welded repairs on tank car tanks that are not "through-wall" needs to be reviewed by the TF

Task Force Comments and Proposal: **As indicated in our current proposal, the task force agrees that production hardness testing of welds should be required only for AHF cars. There is no empirical data to support that production hardness testing of welds on standard pressure tanks is a value-added practice. The task force proposal requires microhardness testing of CW (center of weld) and HAZ (heat-affected zone) for welding procedure qualification instead. If our proposal is approved, then hardness testing would only be required for AHF cars, and the following revision is presented for consideration:**

R4.1.2.1 (bullet point 4)• At each test location, the hardness of the base metal on each side of the weld, the heat- affected zones immediately adjacent to the toes of the weld, and three readings across the face of the weld deposit itself must be tested and recorded separately on both sides of the plate. Each hardness test location must be spaced 3 in. apart for a repair insert up to 12 ft in circumference. For a repair insert larger than 12 ft in circumference, hardness test locations must be spaced 6 in. apart. ***When tank repairs are made from one side only, and subsequently covered by attachment fillet welds, hardness readings of the fillet weld metal and tank attachment heat-affected zone may be substituted, provided the same welding procedure specification is used for both tank weld repair and fillet weld application.***

Justification: Clarification for hardness testing of AHF tank partial penetration groove welds that are subsequently covered by fillet welds is necessary.

On 10/2/2017 the AAR received the following from TF Chair Mike Untermeyer:

The task force has addressed TCC comments on our proposed changes to Appendices R and W. Our comments and associated proposals are shown below. I have also attached a summary of task force charges and a list of additional definitions for inclusion in Chapter 1. The task force agrees that additional time may be required to cover the comprehensive changes to R and W, and we request that additional time be allocated at some point during the upcoming meetings in Dallas.

Comment: K. Dorsey reported that there are concerns with local post weld heat treatment process of satellite locations with no specified requirements of the facility in Appendix W or R of M-1002 to ensure this is being appropriate performed and is under controlled conditions.

Proposal:

R19.3.2.4.1 A written local postweld heat treatment procedure is required. ***The procedure shall, as a minimum, cover safe use of equipment, equipment calibration, thermocouple, heating pad and insulation placement, process monitoring requirements, and AAR temperature limits.***

R19.3.2.5.2 The training program shall, as a minimum, cover the following areas: safe use of equipment, equipment calibration, thermocouple/insulation placement, ***process monitoring requirements as described in the LPWHT procedure*** and AAR temperature limits.

Justification: Remote monitoring of LPWHT shall be addressed in the LPWHT procedure. Training of LPWHT personnel shall include process monitoring requirements.

Comment: Welding requirements on Nozzles is still not defined in Appendix W.

TF Comment: Requirements for pipe (nozzle) welding procedure and performance qualification and acceptance criteria are all addressed in the existing proposal.

Comment: Appendix R paragraph 22.0 "Repairs to Fire-Damaged Tank Car Tanks" needs to be reviewed because local post weld heat treatment if not properly controlled can have the same effects on the tank car tank materials as fire damage.

Proposals:

R11.2.1 If the sharpest radius formed by dents is at least four times the plate thickness, such dents or buckles may be removed by pressing or jacking to restore original contour to within the limits specified in Appendix W, paragraph 13.5. Excessive heating of the metal shall be avoided. For carbon steel, the maximum temperature is 1250 °F (677 °C). ***If the temperature exceeds 1250 °F (677 °C), the affected area shall be repaired by insert or the mechanical properties (tensile strength and notch toughness, if required) shall be verified by test coupon.***

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R24.1.3.3 During the holding period, there shall be no greater difference than ±50 °F (±28 °C) throughout the heated area of the tank. During the holding period, the minimum temperature throughout the heated ***band (HB)*** area shall be not less than 1100 °F (593 °C) or greater than 1250 °F (677 °C). ***If the recorded LPWHT temperature exceeds 1250 °F (677 °C), the affected area shall be repaired by insert or the mechanical properties (tensile strength and notch toughness, if required) shall be verified by test coupon***

Comment: Repair of cracks and corrosion needs to be revised, specifically the amount of allowed to be repaired.

TF Comment: As indicated in our current proposal, the task force agrees that repair by insert or weld buildup should be the car owner's decision, with no imposed limitation on the area that may be repaired by weld buildup. What if the corrosion/affected area is on the tank bottom? Should draft sills, bolsters and bottom reinforcing pads have to be removed and reapplied because we require repair by insert? The task force believes that requirement would do more harm than good.

Comment: Hardness readings on pressure car: Requirements in R and W with respect to hardness readings of welded repairs on tank car tanks that are not "through-wall" needs to be reviewed by the TF

Task Force Comments and Proposal: **As indicated in our current proposal, the task force agrees that production hardness testing of welds should be required only for AHF cars. There is no empirical data to support that production hardness testing of welds on standard pressure tanks is a value-added practice. The task force proposal requires microhardness testing of CW (center of weld) and HAZ (heat-affected zone) for welding procedure qualification instead. If our proposal is approved, then hardness testing would only be required for AHF cars, and the following revision is presented for consideration:**

R4.1.2.1 (bullet point 4)• At each test location, the hardness of the base metal on each side of the weld, the heat- affected zones immediately adjacent to the toes of the weld, and three readings across the face of the weld deposit itself must be tested and recorded separately on both sides of the plate. Each hardness test location must be spaced 3 in. apart for a repair insert up to 12 ft in circumference. For a repair insert larger than 12 ft in circumference, hardness test locations must be spaced 6 in. apart. ***When tank repairs are made from one side only, and subsequently covered by attachment fillet welds, hardness readings of the fillet weld metal and tank attachment heat-affected zone may be substituted, provided the same welding procedure specification is used for both tank weld repair and fillet weld application.***

Justification: Clarification for hardness testing of AHF tank partial penetration groove welds that are subsequently covered by fillet welds is necessary.

At the July 2017 meeting, K. Dorsey reported that there are concerns with local post weld heat treatment process of satellite locations with no specified requirements of the facility in Appendix W or R of M-1002 to ensure this is being appropriate performed and is under controlled conditions. Welding requirements on Nozzles is still not defined in Appendix W. Appendix R paragraph 22.0 "Repairs to Fire-Damaged Tank Car Tanks" needs to be reviewed because local post weld heat treatment if not properly controlled can have the same effects on the tank car tank materials as fire damage. Repair of cracks and corrosion needs to be revised, specifically the amount of area allowed to be repaired. AAR has input from both FRA and NTSB on recent weld build-up and PWHT issues.

Action Item: TCC approved to have the TF create a matrix of TF charges to understand the proper direction of the TF.

TCC Comment to the TF:

1. Hardness readings on pressure car: Requirements in R and W with respect to hardness readings of welded repairs on tank car tanks that are not "through-wall" needs to be reviewed by the TF. BNSF - There are currently hardness requirements in Appendix R for repairs to AHF cars (4.1) and pressure cars (8.0); as well as production butt welds on pressure cars in Appendix W, 8.3. Why is this still a production requirement when weld procedures are qualified? Should hardness be considered an essential variable?

2. BNSF – repairs to and welding of the tank car tank is a core technical subject to this committee. When this TF and Appendix R TF present their proposals at the April and October TCC meetings, the industry needs to clearly understand the changes being proposed. The TF should consider a presentation style delivery (potentially line by line review) of a proposal so that everyone in the audience is clear on intent and applicability, as well as foster open discussions

At the April 2017 meeting, M. Untermeyer went over the proposal provided in the docket. Comments to be sent to TF chair and AAR staff (Ken and Matt)

B.Siebold (BNSF) – asked that the TF proposal consider moving Appendix R stub sill information to Appendix D (maintenance) instead of Chapter 2 (typically new car requirements). AAR staff agreed with this placement. In addition to "tank car tank components", the TF recognizes that many other definitions in Appendix R & W will require harmonization with Appendix B, and the T79.37 efforts on Parts 179 & 180 re-write. B.Siebold reinforced the TCC direction for the TF to develop Appendix R requirements for remote monitoring of LWPHT activities

The AAR received the following update from the TF Chair on 4/3/2017:

Here are the highlights of our changes to Appendix W:

1.) Procedure and performance qualification data for pipe welding has been added. Section 15 will be deleted as all essential variable data has been tabled (same as ASME IX and most AWS "D" publications and AWS B2.1).
2.) Inspection criteria (visual and volumetric) for nozzle-to-shell welds and components has been added. Sections W10 and W18 have been revised accordingly.
3.) The "scope" statement has been changed. The term "tank car tank components" has been included.
4.) Section W1.5 has been added to address concerns about minimum required weld sizes and lengths (statement from Clause 5 of AWS D1.1 was used as reference.)
5.) The term "rejectable discontinuity" will replace various terms (unacceptable defect, imperfection, injurious defect) that are currently used.
6.) Figures and requirements for microhardness testing (procedure qualification) and figures for pipe welding (procedure and performance qualification) have been added. Specific numbers for these figures are TBD. Microhardness testing of CW (center of weld) and HAZ (heat-affected zone) for welding procedure qualification are proposed in lieu of production hardness testing (except for AHF tanks).
7.) Minimum requirements for information on a WPS have been added.
8.) Flash welding has been included as another approved welding process.
9.) Allowances for other welding processes has been included. Information must be submitted To TCC for approval.
10.) Statements for measuring weld reinforcement between dissimilar thicknesses have been added (ASME B31.1 and B31.3 were used as reference).
11.) The approval and use of qualified welding procedures between certified facilities has been addressed.

Here are highlights of changes to Appendix R:

1.) Scope statements have been changed using the term "tank car tank components".
2.) Stub sill repair information will be moved from Appendix R to proposed location in Chapter 2.
3.) The term "rejectable discontinuity" will replace other terms, just as we are doing in Appendix W.
4.) Production hardness testing of weld seams will be eliminated (except for AHF tanks). Weld procedure microhardness requirements for CW and HAZ are proposed in lieu of production hardness testing. Paragraph 8.0 will be deleted.
5.) Requirements for AHF tank repair have been clarified.
6.) More information for crack repair has been included.
7.) LPWHT requirements (paragraph 19) have been revised. Induction heating has been added as an approved method.
8.) Paragraph R24 has been revised to reflect the addition of nozzles and flanges.
9.) References to D4.0 have been added for hydrostatic testing.

A proposed table for material P Number/M-Number and Group Number classification will be added to Appendix M as a secondary part of this proposal. Appendix M task force involvement is required. Also, additional proposed definitions have been created for inclusion in Chapter 1.

At the January 2017 meeting, TF plans to have a formal proposal by the April 2017 TCC meeting.

Task Force:

Name	Company	Name	Company
Untermeyer (Chair)	AllTranstek	Morgan	GBW Railcar Services
Clayton	GATX Rail Corporation	Norman	Union Tank Car Company
Forister	Association of American Railroads	Pasqua	Salco Products
Gallant	American Railcar Industries	Sampath	Chart Industries
Hale	American Railcar Industries	Siebold	BNSF Railway Company
Herbel	TrinityRail	Smook	Midwest Railcar
Hopper	Watco Companies	Strouse	Federal Railroad Administration
Johnson	Trinity Industries	Tait	AllTranstek
MacGillivray	National Steel Car Limited	Walker	Federal Railroad Administration
McCullough	AllTranstek	Willaredt	Midwest Railcar

TF Charge:

Number	TF Charge
1.	Consider changes in Appendix W requirements.

DOCKET T87.6.1

Proposed Pressure Relief Valve Requirements for Ethanol & Crude Oil Tank Cars

At the January 2018 meeting, the TCC discussed the TF proposal.

Action Taken 1: TCC request that the TF chair provide an executive summary of the technical results of the AFFTAC runs to the TCC members ASAP.

Action Taken 2: TCC made edits to the TF proposal as shown below. Motion made, seconded, and passed to introduce the revised executive committee proposal during the April 2018 TCC meeting and then move to the executive committee for disposition.

Proposed rule updates:

2.7.3 Pressure Relief Devices for DOT111 Class cars in flammable liquid service

Class 111 tank cars used to transport packing Group I and II material with the proper shipping names "petroleum crude oil," "alcohols, n.o.s.," and "ethanol and gasoline mixture" must be equipped with reclosing pressure relief devices. Upon approval of Pipeline and Hazardous Safety Administration (PHMSA), non-reclosing device can be used where the applicant demonstrates that a non-reclosing device is required and affords an equivalent level of safety.

2.7.3.1 Pressure Relief Devices for DOT117 Class cars in flammable liquid service

DOT117 class tank cars in Class 3 Flammable Liquid service converted or constructed after July 1, 2018 must be equipped with a reclosing pressure relief device having a nominal start-to-discharge (STD) of 75 psig. ~~with a reclosing pressure relief device sized in accordance with M-1002 Appendix A and must meet the thermal protection requirements of 49 CFR 179.18(b). The following exception for conversion to DOT117R, is when a DOT111 tank car is equipped with only fiberglass as a thermal protection system it must have a design intended to hold the fiberglass securely in place to prevent sagging and resists voids. Otherwise, the pressure relief device is limited to 75 psig start- to- discharge (STD).~~

At the October 2017 meeting, T. Sisto reported on the proposal in the docket sent to AAR on 10/4/2017. M. Maday (FRA) clarified during this docket that the FRA has not universally accepted fiberglass as an approved thermal protection system. Each owner must perform a thermal analysis per 49 CFR 179.18.

Action Taken: a motion was made, seconded, and passed to move to the TF proposal as written to the executive committee for consideration at the January 2018 TCC meeting.

AAR Staff Note: How can we progress this proposal for DOT111 tank cars only equipped with fiberglass as a thermal protection system if the FRA hasn't universally accepted it as such? Shouldn't this be a DOT117P?

On 10/4/2017 AAR received the following proposal from TF chair Tony Sisto:

As per the action item from the July TCC meeting to clarify the last sentence, the following is revised wording for docket T87.6.1. to clarify the PRD requirement. A ballot was circulated to the TF members and to date only one vote against this version was logged. Reaching a consensus has been difficult mainly because previous drafts were vague in stating why a 75psi STD PRD should be required other than a theoretical basis.

The FRA acceptance of fiberglass as a thermal protection system on DOT111 legacy and CPC-1232 tank cars had given many readers the impression that all fiberglass and PRD configurations meet this TPS acceptance criteria but that is not the case. The FRA acceptance of FG as a TPS was largely based on the AFFTAC analysis data provided by RSI. In the report RA-16-01 the 5 AFFTAC model results for "DFG" deteriorated fiberglass were run using only a 75 STD PRD.

The proposed rule 2.7.3.1 presented here utilizes the AFFTAC model data as the basis for when a tank car should require a 75psi STD PRD. The rule intent allows a car owner to retrofit to DOT117R using a 165 STD PRD if they can demonstrate their FG is not deteriorated and their car design utilizes a method intended to hold the fiberglass in position to reduce voids and provide better thermal resistance. Otherwise, the tank car can only be retrofitted to DOT117R using a PRD rated at 75 STD as used in the AFFTAC model.

Although a full consensus was not obtained this proposal received a positive response by the majority. Provided there are no major concerns, a motion will be made to move to the TCC for approval and adoption.

Proposed rule updates:

2.7.3 Pressure Relief Devices for DOT111 Class cars in flammable liquid service

Class 111 tank cars used to transport packing Group I and II material with the proper shipping names "petroleum crude oil," "alcohols, n.o.s.," and "ethanol and gasoline mixture" must be equipped with reclosing pressure relief devices. Upon approval of Pipeline and Hazardous Safety Administration (PHMSA), non-reclosing device can be used where the applicant demonstrates that a non-reclosing device is required and affords an equivalent level of safety.

2.7.3.1 Pressure Relief Devices for DOT117 Class cars in flammable liquid service

DOT117 class tank cars in Class 3 Flammable Liquid service must be equipped with a reclosing pressure relief device sized in accordance with M-1002 Appendix A and must meet the thermal protection requirements of 49 CFR 179.18(b). The following exception for conversion to DOT117R, is when a DOT111 tank car is equipped with only fiberglass as a thermal protection system it must have a design intended to hold the fiberglass securely in place to prevent sagging and resists voids. Otherwise, the pressure relief device is limited to 75 psig start- to- discharge (STD).

At the July 2017 meeting, T. Sisto discussed the proposal provided in the docket. The intent was to address retrofit activities of jacketed CPC-1232 cars with fiberglass insulation only. Additionally, Chapter 2 2.7 language should be reviewed by AAR staff due to the implementation of federal regulations for the DOT117 class tank car and the transportation of the

products mentioned in 2.7 of Chapter 2. The intent of continued applicability of CPC-1232 technical requirements was discussed (see approved motion in docket T87.8).

Action Item: A motion made but withdrawn based on comments of the second sentence intent is not clear. Needs to be revised by the TF.

> **2.7.3.2 DOT 117 Tank Cars must be equipped with a reclosing pressure relief device sized in accordance with M-1002 Appendix A and must meet the requirements of 49 CFR 179.18. For DOT 117R tank cars not meeting the requirements of 49 CFR 179.18, the reclosing pressure relief device nominal start to discharge (STD) pressure shall be 75 psig.**

July 2017 Update:

AAR received the following update on 7/6/2017 from TF Chair:

In April 2017, a draft of a new proposed rule 2.7.3.2 was issued to the task group for review and vote. This rule addresses the requirements for PRD STD on DOT117 cars in class 3 flammable service. The response was not a full consensus with only 11 out of 29 members providing a response. The large size of the task group has now made meetings and consensus almost impossible at this point.

The following is the results of the poll issued. I motion to move one of these drafts to Tank Car Executive Committee for review and approval:

Version 2 draft issued on April 10th, 2017 via Survey Monkey was reviewed by the TF and the majority of respondents (10) accepted this draft wording. Section 2.7.3.2 was created based on comments from TF seeking a new section for DOT117 flammable cars:

> **2.7.3.2 DOT117 Tank Cars must be equipped with a reclosing pressure relief device sized in accordance with M-1002 Appendix A and must meet the requirements of 49 CFR 179.18. For tank cars not meeting the requirements of 49 CFR 179.18, the reclosing pressure relief device nominal start to discharge (STD) pressure shall be 75 psig.**

Version 5-23-17 - This draft reflects comments by (1) one TF member who was concerned about the performance of fiberglass in a pool fire and its acceptance by Transport Canada. This version makes a thermal blanket a requirement:

> **2.7.3.2 Class 117 tank cars must be equipped with a reclosing pressure relief device sized in accordance with M-1002 Appendix A and must meet the requirements of 49 CFR 179.18. If a tank car meets the requirements of 49 CFR 179.18 but is not equipped with a thermal blanket it can be converted to a 117 class only if the reclosing pressure relief device nominal start to discharge (STD) pressure is 75 psig.**

TF comments resulting in the 5-23-17 version

- TF : Add revision to require a thermal blanket since TC has still not approved FG as TPS.

- *TC and railroads may be more apt to accept FG as TPS on cars if we keep PRD at a 75 psi STD.*
- *Older FG may not perform as well under intense temps and a 75psi STD will improve safety. This is due to FG binder make-up, inability to stay intact and in position around tank shell.*

- TF: FRA accepted FG as TPS why do we need to set PRD STD to 75psi?
  - *179.18 has not been revised to date to include FRA acceptance of FG as TPS.*
  - *Nor has TC adopted the FRA position to date they are leaning toward equivalency.*
  - *As a matter of safety the lower back pressure provided by a 75 STD PRD may result in a longer tank survival time and if a release occurs it will be at a lower pressure with less energy*
  - *To replace a PRD seems more practical than scrapping a car and provides some added safety*

TF general questions on pressure cars used in Class 3 flammable service

- TF: Add revision to rule to address how will pressure cars be treated? Many shippers use 105,112 & 120 cars to ship class 3 flammables with PRD of 220-280psi STD.
  - *Can a pressure car stay as stenciled if it meets the 117 class spec and 179.242 & 243?*
    - *105,112,120 class cars have tank thickness equal or exceeding 117 class thk of 9/16"*
    - *TPS - 105 & 120 built with, 112 cars must have TPS blanket / jacket applied if not built with, otherwise it would need a 75 psi STD PRD applied*
    - *TFP - all pressure cars have 3/4" bonnet walls and strength meeting 117 class requirements*
    - *BOV handle - only 120 class cars allowed to have a BOV which would need to meet 117 spec.*

At the April 2017 meeting, T. Sisto stated that the TF is continuing the review of proposal with plans to have it ready by the July 2017 TCC meeting.

At the January 2017 meeting, T. Sisto reported on this docket. S. Murray asked if this is to apply to new cars only or is it to also include the existing fleet. The intent of the TF was to go forward. What is the justification for all flammable liquids and not just keep it to ethanol and crude oil?

Action Item: K. Dorsey will work with the TF Chair on the applicability and phased in approach language.

Remove Lee Nelson from TF and add Anthony Ippolito.

Task Force:

Name	Company	Name	Company
Sisto (Chair)	GATX Rail Corporation	Ippolito	Canadian National Railway
Bolds	Bolds & Associates	Nunez	Kelso Technologies
Dorsey	Association of American Railroads	Perez	Union Tank Car Company
Gambow	Kelso Technologies	Rader	Watco Companies
Heidkamp	GATX Rail Corporation	Reckker	American Railcar Industries
Herbel	Trinity Industries	Strouse	Federal Railroad Administration
Johnson	McKenzie Valve	Treichel	RSI-AAR
Loman	AllTranstek	Welch	SMBC Rail Services
Machenburg	CSX Transportation	Woodall	AllTranstek
McKisic	Trinity Industries		

TF Charge:

Number	TF Charge
1.	Proposed Pressure Relief Valve Requirements for Ethanol and Crude Oil Tank Cars.

DOCKET T87.8

Develop Standards for Flammable Liquid Tank Cars (DOT-117)

At the January 2018 meeting, AAR needs to perform action item 1 and 2 as stated in the minutes from the July 2017 meeting. B. Fronczak presented the current fleet make up of DOT-111 and DOT-117 tank cars shipping petroleum crude oil, ethanol, and all other flammable liquids. Two action items:

Action Item 1: AAR will need to create a website to host this presentation and other TCC meeting material and public publications.

Action Item 2: A motion made, seconded, and passed to have AAR staff update Chapter 2 paragraph 2.7 to reflect the final rulemaking HM-251 and final rulemaking HM-251C. Federal regulations have been implemented and paragraph 2.7 has been overcome by these final rulemakings.

At the October 2017 meeting, AAR needs to perform action item 1 and 2 as stated in the minutes from the July 2017 meeting. Here are the two action items.

Action Item 1: AAR will need to create a website to host this presentation and other TCC meeting material and public publications.

Action Item 2: A motion made, seconded, and passed to have AAR staff update Chapter 2 paragraph 2.7 to reflect the final rulemaking HM-251 and final rulemaking HM-251C. Federal regulations have been implemented and paragraph 2.7 has been overcome by these final rulemakings.

At the July 2017 meeting, B. Fronczak presented the current fleet make up of DOT-111 and DOT-117 tank cars shipping petroleum crude oil, ethanol, and all other flammable liquids. Tank Car Committee would like this information posted on the AAR website for public viewing.

Action Item 1: AAR will need to create a website to host this presentation and other TCC meeting material and public publications.

Action Item 2: A motion made, seconded, and passed to have AAR staff update Chapter 2 paragraph 2.7 to reflect the final rulemaking HM-251 and final rulemaking HM-251C. Federal regulations have been implemented and paragraph 2.7 has been overcome by these final rulemakings.

At the April 2017 meeting, B. Fronczak presented the current fleet make up of DOT-111 and DOT-117 tank cars shipping petroleum crude oil, ethanol, and all other flammable liquids. Tank Car Committee would like this information posted on the AAR website for public viewing.

Action Item: AAR will need to create a website to host this presentation and other TCC meeting material and public publications.

At the January 2017 meeting, K. Dorsey reported the need to define legacy jacketed cars without thermal blankets. There is an FRA interpretation that indicates that it does not require a thermal blanket if it can withstand a 100-minute pool fire. TC currently doesn't have a specified approval process. TC relies on the delegated approval process of tank car design of the AAR. FRA wanted to make it clear that they don't have a parse approval granting process, they have a list of products that have passed the prescribed test in 49 CFR. This is the only open topic on this docket remaining.

Task Force:

Name	Company	Name	Company
Dorsey	Association of American Railroads		

TF Charge:

Number	TF Charge
1.	Develop Standards for Flammable Liquid Tank Cars (DOT-117).

DOCKET T88.1-93

Evaluation and Use of Nondestructive Evaluation Techniques

On March 21, 2018 AAR received the following update from the TF chair:

Updated TF list and updated revised TF proposal (see attachment provided with the meeting material)

At the January 2018 meeting, K. Dorsey discussed that the AAR would like to setup a teleconference between the TF chair and the executive committee with the goal of going over, in detail, the current TF proposals.

Action Taken: TCC agreed to have AAR set up a teleconference between the TF chair and TCC executive members.

Action Item: AAR will set up a teleconference.

At the October 2017 meeting, D. Ronzani presented the latest TF proposal. D. Ronzani agreed to send the AAR the editorial corrected proposal with changes to the TF.

Action Item: a motion was made, seconded, and passed to move proposal to the executive committee for consideration. The TCC will consider the proposal at the January 2018 TCC meeting.

On 10/1/2017 AAR received the latest proposal from the TF covering hydrostatic testing, NDT LIII requirements, Automated Ultrasonic Testing (AUT), and Electromagnetic Testing from TF chair Dave Ronzani. See proposal attachments that were sent out with agenda.

At the July 2017 meeting, FRA asked that the TF work on new language within Appendix T on a best practice method for determining the probability of detection with emphasis that the NDT process selected must achieve the acceptance criteria defined by the POD. COD

Action Taken: AAR TCC agreed to add the following new TF charge: Establish a best practice to determine the Probability of Detection (POD) (this would result in a recommended practice)

At the April 2017 meeting, COD

TF has asked that AAR hold release of CPC pending discussion on “checked” versus “inspected” (FRA).

At the January 2017 meeting, COD pending direction from the TF.

Task Force:

Name	Company	Name	Company
Ronzani (Chair)	AllTranstek	Morgan	GBW Railcar Services
Alderson	AllTranstek	Pasqua	Salco Products
Allbritten	Salco Products	Richards	Midwest Railcar Repair
Cole	American Railcar Industries	Riggs	Union Tank Car Company
Churchwell	ARI	Smith	American Railcar Industries
Dinell	AllTranstek	Smith	Transco
Edgel	Union Tank Car Company	Standish	Rescar Companies
Gallant	Midwest Railcar Corporation	Strouse	Federal Railroad Administration
Gamblin	Greenbrier Management Services	Tait	AllTranstek
Hopper	Greenbrier Management Services	Trevett	GBW Railcar Services
Huber	Union Tank Car Company	Walker	Federal Railroad Administration
Johnson	GATX Corporation	Walters	NDT LIII
Lehmann	Quality Testing Services, Inc.	Welander	Trinity Rail
McCullough	AllTranstek	Woloszyk	Salco Products
Meeker	Union Tank Car Company		

TF Charge:

Number	TF Charge
1.	Address NDT issues for all methods, excluding AE.
2.	Establish a best practice to determine the Probability of Detection (POD) (this would result in a recommended practice) [Charge added to TF at the July 2017 TCC meeting]

DOCKET T90.39
Rupture Disc Tolerance Requirements

On March 28, 2018 AAR received the following update from the TF chair:

At the January 2018 meeting the TCC agreed to add a new TF charge to draft new language for rupture disc tolerance requirements considering the existing federal regulations, AAR standards, and ASME standards. TF participation will be solicited during the April TCC meetings.

At the January 2018 meeting, the gap analysis has been performed. The TCC discussed the next steps.

Action Taken: TCC agreed to add a new TF charge to draft new M-1002 language for rupture disc tolerance requirements that matches ASME +/- 5%. Additionally, TF to consider alignment of the proposal with existing federal regulations.

(Staff note: K. Dorsey will represent AAR for this activity.)

At the October 2017 meeting, AD. McKisic discussed the gap analysis on tolerance of rupture disc requirements of AAR M-1002 and ASME. Assumption was to also look at 179 requirements also. Here is AD's efforts:

I reviewed AAR M-1002, 49 CFR 179, ASME Section VIII Part I, and ASME Section XII and submit the following results:

Specification	Paragraph	Tolerance	Note
M-1002	Appendix A 4.2.2	+0% to -15%	All pressure ranges, assumed to be based on marked burst pressure
49 CFR	179.15(f)(4)	+0% to -15%	All pressure ranges, based on marked burst pressure
ASME Section VIII, Part 1	UG 127(a)(1)	±2 psi	For marked burst pressure ≤40 psi, at specified temperature
ASME Section VIII, Part 1	UG 127(a)(1)	±5%	For marked burst pressure >40 psi, at specified temperature
ASME Section XII	TR-300	±2 psi	For marked burst pressure ≤40 psi, at specified temperature
ASME Section XII	TR-300	±5%	For marked burst pressure >40 psi, at specified temperature

As shown in the above table, the specified tolerances in AAR M-1002 and 49 CFR Part 179 are the same, but are different than those specified by either ASME Section. It should also be noted that ASME requires a specified temperature for a marked burst pressure whereas neither M-1002 nor 179.15 require a rated temperature.

Because tank car rupture disks are above 40 psi, the applicable ASME tolerance would be ±5%. Therefore, since ASME requires a tighter tolerance than currently required by tank cars, ASME qualified rupture disks could be substituted by using a disk with a rated burst pressure between 89.5% and 95.2% of the M-1002 specified burst pressure.

The TCC recognized the gap analysis has been completed. There is a separate issue that the TCC has to considered on combination devices. Consider any modifications to 49 CFR 179.15 under the TCC docket efforts T79.37.

Action Item: TCC needs to determine the TF next charge at the January 2018 TCC meeting.

At the July 2017 Executive TCC session the following was discussed and decided:

Tolerances of rupture disc requirement differ between AAR M-1002 and ASME.

Action Taken: A motion was made, seconded and passed to have AD McKisic perform a gap analysis on the tolerance of rupture disc requirement of AAR M-1002 and ASME and report back to the TCC by the October 2017 TCC meeting the outcome.

Task Force:

Name	Company	Name	Company
McKisic (Chair)	Trinity		

TF Charge:

Number	TF Charge
1.	Perform a gap analysis on the tolerance of rupture disc requirement of AAR M-1002 and ASME

DOCKET T91.2.4

Review Core Elements of Appendix B

At the January 2018 meeting, the TF proposal, once AAR's law department completes their review, is expected to be released four weeks prior to April 2018 TCC meeting.

At the October 2017 meeting, K. Warner reported that the Appendix B draft has been approved by the TF and under review by AAR law department. The plan is to have the Appendix B proposed during the main session at the April 2018 TCC meeting and considered for approval by the executive committee for issuance of a CPC for comment.

Staff Note: Remove Nagy AAR from TF, Paul Draper replaced with RG Ashton, Tom DeLafosse company update from Watco Companies to Salco Products.

At the July 2017 meeting, AAR continues to work on the Strawman for Appendix B and keeps the TF chair informed of the progress. Major observations during this effort is the absolute need to clarify definitions which directly impact the scope of Appendix B and for that matter all chapters and appendices of the M-1002 standard. The online application system continues to be worked on by AAR staff. AAR is in the final stages of user guide development. Once complete will engage with the industry stakeholders on user acceptance testing. This online system development is within the existing M-1003 already developed system and is in parallel effort of the rewrite of Appendix B. Almost every single AAR M-1002 Standard TCC docket currently being worked on impacts the efforts of Appendix B strawman. The largest impact on this effort is T1.1.4 and T79.37.

Jacket Weld Repairs – FRA considers this as maintenance to a tank car and thus requires an AAR certified facility to perform weld repairs to tank car jackets. AAR currently, does not have an activity code or repair level capability for weld repairs on jacket. Therefore, the only activity code that can be offered to the industry by the AAR in the interim of the new developments of Appendix B of M-1002 is to certify facilities to B24. WPS and PQR would have to be developed and approved for welds to tank car jacket material. This task force will consider either adding a repair level capability of RL0 or RLJ as well as a potential new associated activity code.

Current Status:

AAR continues to work on the Strawman for Appendix B and keeps the TF chair informed of the progress. Major observations during this effort is the absolute need to clarify definitions which directly impact the scope of Appendix B and for that matter all chapters and appendices of the M-1002 standard. The online application system continues to be worked on by AAR staff. AAR is in the final stages of user guide development. Once complete will engage with the industry stakeholders on user acceptance testing. This online system development is within the existing M-1003 already developed system and is in parallel effort of the rewrite of Appendix B. Almost every single AAR M-1002 Standard TCC docket impacts the efforts of Appendix B strawman.

At the April 2017 meeting. M. Forister reported on the following:

The AAR is currently working on the Strawman for Appendix B based on TF input. Another major influence on this effort is pending resolution on other chapters and appendices within M-1002 as well as the current TF work on 49 CFR Part 179 & 180. The goal is to work in parallel with these efforts to ensure definitions and scope of work align. The other work ongoing at the same time is the development and testing of a new online application and certification system regarding M-1002 facility requirements. AAR is working with the existing online M-1003 application system to develop the requirements for M-1002 integration. Work on the online system will continue in May 2017.

April 2017 Current Status:
The AAR is currently working on the Strawman for Appendix B based on TF input. Another major influence on this effort is pending resolution on other chapters and appendices within M-1002 as well as the current TF work on 49 CFR Part 179 & 180. The goal is to work in parallel with these efforts to ensure definitions and scope of work align. The other work on going at the same time is the development and testing of a new online application and certification system for M-1002. AAR is working with the existing online M-1003 application system to develop the requirements for M-1002 integration. Work on the online system will continue starting in May 2017.

At the January 2017 meeting, AAR reported that the integrated online application and certification processing system phase I is 95% complete and phase II is underway. The efforts under T1.1.4 and the rewrite of Part 179 and Part 180 have to be performed in parallel with the this effort in order to properly identify terms, requirements, and expectations.

Task Force:

Name	Company	Name	Company
Warner (Chair)	American Petroleum Institute	McKinley	GATX Rail Corporation
Bui	GATX Rail Corporation	Morgan	GBW Railcar Services
DeLafosse	Salco	Riggs	Union Tank Car Company
RG Ashton	AAR Bureau of Explosives	Siebold	BNSF Railway Company
Forister	Association of American Railroads	Standish	Rescar Companies
Keltz	Federal Railroad Administration	Dudar	AllTranstech
Lawler	Trinity Industries		

TF Charge:

Number	TF Charge
1.	Review Core Elements of Appendix B.
2.	Consider Adding Activity Code to Appendix B for Stub Sill Inspections.

DOCKET T92.18

Review Stencil Placement Requirements for Tank Cars

At the January 2018 meeting, comment CPC needs to be issued by AAR.

At the October 2017 meeting, comment CPC needs to be issued by AAR.

At the July 2017 meeting, AAR plans to issue a comment CPC by the October 2017 TCC meeting. AAR will make sure to work with J. Rader on the most current drawings to include in the AAR CPC. AAR needs to ensure that Appendix E paragraph 9.1.2.8 references Appendix C on bottom outlet stencil requirement.

Marking of Tank Cars – FRA considers the qualification and DOT specification mark to be performed by an AAR certified facility. However, AAR does not have an activity code specifically for marking the qualification and DOT specification on tank cars. T91.2.4 task force to consider specification language in rewrite of Appendix B as appropriate.

Action Item: AAR to issue a CPC for comment, prior to October 2017 TCC meeting.

At the April 2017 meeting, AAR will issue a CPC with the drawing that includes the bottom outlet stencil.

At the January 2017 meeting, AAR waiting for final drawing that includes the stencil for the bottom outlet and then a CPC will be issued by AAR.

Task Force:

Name	Company	Name	Company
Rader (Chair)	Greenbrier Management Services	Ronzani	AllTranstek
Martin	DuPont	Sech	Wells Fargo Rail
Morgan	GBW Railcar Services	Thomas	Greenbrier/Gunderson
Richardson	U.S. Clay Producers Traffic Association		

TF Charge:

Number	TF Charge
1.	Review the stencil placement and height from top of rail with respect to the call-out letters Y, Z, N, O, and P in Fig. C.2 of the AAR MSRP Specifications for Tank Cars, Appendix C.

DOCKET T93.20

Review Appendix D for Compliance with Current 49 CFR Part 180 Inspection Requirements

At the January 2018 meeting, AAR asked if the TCC wanted to temporarily suspend this TF work pending the efforts of docket T79.37 or move forward with the current TF charge.

Action Taken: a motion was made, seconded, and passed to have Matt Forister and Larry Loman to continue to work on the Strawman (not to be delayed by Docket T79.37 efforts) focused around the TF charge and then present the strawman to the TF for review.

At the October 2017 meeting, TF strawman has been placed on temporary suspense pending the start-up meetings and direction on T79.37.

At the July 2017 meeting, AAR reported that this effort is ongoing with L. Loman and M. Forister developing a strawman with direct observation of the activity of T79.37. The T79.37 efforts to rewrite part 180 will directly impacts the re-write of Appendix D. COD.

At the April 2017 meeting, L. Loman and M. Forister are reviewing existing regulations on HM-216B to bring Appendix D up to speed. Add Ray Morgan GBW to TF.

The strawman effort will include moving stub sill requirements from Appendix R (see update from T80.2.4)

Current Status: At the January 2017 meeting, T5.30 TF was RFD. It was agreed to have this TF handle AAR inspection intervals. AAR staff and L. Loman have been working via teleconference/webcast on a Strawman on Appendix D. The goal is to have this work parallel the definitions and scope of work the TCC TF working on 49 CFR part 179 & 180.

It was asked during the meeting by a TCC member why only AAR staff and one member of industry was working on this strawman. AAR stated that the development of the strawman is to take the existing regulations and update Appendix D. This doesn't need a TF to do. The changes to Appendix D will be discussed as a TF once the strawman has incorporated the current regulations from final rulemaking HM-216B.

April 2017 Current Status: At the January 2017 meeting, T5.30 TF was RFD. It was agreed to have this TF handle AAR inspection intervals. AAR staff and L. Loman have been working via teleconference/webcast on a Strawman on Appendix D. The goal is to have this work parallel the definitions and scope of work the TCC TF working on 49 CFR part 179 & 180.

At the January 2017 meeting, AAR is working with the TF chair on a strawman that aligns with parallel effort of the rewrite ongoing with Part 180 of 49 CFR.

Task Force:

Name	Company	Name	Company

Loman (Chair)	AllTranstek	Pankiewicz	Midland Manufacturing
Alexy	Federal Railroad Administration	Richardson	U.S. Clay Producers Traffic Association
Borowski	Salco Products	Ronzani	AllTranstek
Clayton	GATX Rail Corporation	Sandheinrich	American Railcar Industries
Edmonds	ExxonMobil Chemical	Schultz	Union Tank Car Company
Forister	Association of American Railroads	Standish	Rescar Companies
Herbel	Trinity Industries	Verhey	Trinity Industries
Humphrey	McKenzie Valve & Machining	Warner	American Petroleum Institute
Jachim	Rescar Companies	Welch	SMBC Rail Services
Muller	American Railcar Industries		

TF Charge:

Number	TF Charge
1.	To re-write Appendix D to reflect final rulemaking HM-216B which changed 49 CFR Part 180

DOCKET T95.26

Appendix M Material Review

At the January 2018 meeting, AAR staff and L. Loman plan to work on this effort once the Strawman is complete with Appendix D.

Action Item: AAR to issue finalized CPC based on comment CPC-1326.

As a reminder during the January 2017 meeting, the TCC agreed upon the following three TF charges:

1. Clarification needed on Table M.10 Approved materials for tanks fabricated by welding regarding P-value
2. Evaluate the need for a table for listing approved material for tank car jackets
3. Evaluate the materials approved for service equipment

At the October 2017 meeting, L. Loman discussed the need develop the TF charge so that efforts can begin on this docket.

Action Item: The TF needs to coordinate with TF dockets T91.2.4, T80.2.4, T5.31, and T59.2.1. A TF charge should be derived based on the coordination with the aforementioned TF efforts.

At the July 2017 meeting, K. Dorsey discussed CPC-1326. Comments on this CPC were unrelated to the proposed language. AAR plans to issue a final CPC. AAR staff will develop all the TF charges and then ask L. Loman to start the TF efforts.

Action Item: AAR to issue finalized CPC based on comment CPC-1326.

At the April 2017 meeting, L. Loman and M. Forister will begin the TF efforts once complete with Appendix D of M-1002.

Current Status:
AAR staff and L. Loman plan to work on this effort once the Strawman is complete with Appendix D.
At the January 2017 meeting, the TCC agreed upon the following three TF charges:

4. Clarification needed on Table M.10 Approved materials for tanks fabricated by welding regarding P-value
5. Evaluate the need for a table for listing approved material for tank car jackets
6. Evaluate the materials approved for service equipment

Task Force:

Name	Company	Name	Company
Loman (Chair)	AllTranstek	Nunez	Kelso Technologies
Clugg	Salco Products	Prince	Flowserve Corporation

Foley	Metso Automation USA	Purser	Apollo Valves
Hybinette	Watco Companies	Sisto	GATX Rail Corporation
Johnson	Chart Industries	Strouse	Federal Railroad Administration
Kazakewich	RegO Products	Untermeyer	Union Tank Car Company
McKisic	Trinity Industries	Woloszyk	Salco Products

TF Charge:

Number	TF Charge
1.	To Be Determined

DOCKET T95.28
Manway Standard Hardware and Material Requirements

On March 19, 2018 AAR received the following update from Brian McCracken (Greenbrier):

New TF list provided.

February 23rd 2018 Meeting Minute Notes
Manway Standard Hardware & Material Requirements:

TF met on February 23rd 2018 via teleconference.
The following topics were discussed:

1) *Agreement on confirmation of Brian McCracken as the new TF chair*
2) *Agreement to new mission and charges (see below)*
3) *Discussed the need for Appendix M to have a listing of approved material / grade specification for manway eyebolt assemblies.*
4) *TF concluded at the end of the meeting to formulate a matrix consisting of grade specifications currently used for manway eyebolt assemblies. Matrix will be reviewed and discussed during the next call.*

Mission:
Review the Association of American Railroads, *Manual of Standards and Recommended Practices*, Section C, Part III, Specifications for Tank Cars, with respect to eyebolt assembly material and grade requirements and to recommend changes to improve maintainability of the assembly by reducing variation in each design that may lead to improper repairs, reduced safety, and non-accident related releases of product.
Charge:

a) Review the Association of American Railroads, *Manual of Standards and Recommended Practices*, Section C, Part III, Specifications for Tank Cars, Appendix M with respect to material grade requirements for the eyebolt assembly (*i.e.*, eyebolt, eyebolt nut stop, washer, nut, and hinge pin).
b) Review the Association of American Railroads, *Manual of Standards and Recommended Practices*, Section C, Part III, Specifications for Tank Cars, Appendix D with respect to eyebolt assemblies and what to inspect, how to inspect, what is acceptable, and how to repair unacceptable conditions. The task force should consider the performance of repairs, using materials identified in Appendix M, that outside of federal hazmat training, does not require AAR tank car facility certification or AAR design approval (Form AAR 4-2) for repairs to the assembly that use Appendix M materials.
c) Consider a standard safety eyebolt assembly for new tank car construction, to include a drawing of the safety eyebolt assembly in the Association of American Railroads, *Manual of Standards and Recommended Practices*, Section C, Part III, Specifications for Tank Cars, Appendix E. A standard eyebolt design will reduce variation in inspection and repair and provide a standard safety feature for plant operating personnel.

Matrix: Common Eyebolt Assembly Material Grades

Safety Eyebolt Feature (collar, wedge, Pin)	Number of Manway Eyebolts	Eyebolt Diameter	Eyebolt Grade	Washer Grade	Washer Thickness	Nut Style (i.e. hexnut, square nut)	Nut Grade	Hinge Pin Material	Hinge Pin Grade	Hinge Pin Type (Clevis or Welded Washer

At the January 2018 meeting, COD.

At the October 2017 meeting, the following individuals requested to be added to the TF:

Name	Company	Name	Company
Dalske	ARI	Mercure	Appalachian Tank Car Services, LLC
Reckker	ARI	Schneider	Chicago-Wilcox Mfg. Co.
Blanton	The Andersons	Hurley	Occidental Chemical Corp.
Loman	Alltranstek	Chilton	UTLX
Zozzaro	Wells Fargo	Lingenfelder	Gasket Resources Inc.

AAR staff was reminded during this meeting that back at the April 2017 TCC meeting the committee agreed to open a docket as stated below:

J. Rader requested that a new docket be created to review the requirements of the design, maintenance, and repair of a "standardized" hinged and bolted manway. The scope would cover standard hardware and material specification, and not operations. M-1002 appendices potentially affected by this work would be B, D, and M. FRA stated that proper closing instructions on manways are being considered under HM-RSAC efforts. C. Machenberg had asked why a root cause analysis is not being performed today on each manway leak.

TF: J. Rader (chair), AD McKisic, M. Richardson, K. Warner, K. Dorsey, A. Konrad, M. Forister
NOTE: Adam Konrad (FRA) and Matt Forister (AAR) will be added to the TF.

TF Charge: to determine if a standard hardware material specification needs to be written in M-1002 regarding the design, maintenance, and repair of hinged and bolted manways, not to include operations.

Task Force:

Name	Company	Name	Company
Blanton	The Andersons	Rader	Greenbrier
Chilton	UTLX	Reckker	ARI
Dalske	ARI	Richardson	Clay Producers
Dorsey	AAR	Schneider	Chicago-Wilcox
Forister	AAR	Warner	API
Hurley	Oxy	Zozzaro	Wells Fargo
Konrad	FRA	Frew	VSP
Lingenfelder	Gasket Resources	Sinko	Eastman
Loman	AllTranstek	Wyeler	Eastman
McCracken	Greenbrier	Miller	Greenbrier
McKisic	Trinity	Woloszyk	Salco
Mercure	Appalachian Tank Car Services		

TF Charge:

Number	TF Charge
1.	To determine if a standard hardware material specification needs to be written in M-1002 regarding the design, maintenance, and repair of hinged and bolted manways, not to include operations.

DOCKET T100.9.3
Retention Interval of Radiographic Film

On March 19, 2018 AAR received FRA's position from L. Strouse on this docket:
He will provide an update at the meeting.

On March 20, 2018 AAR received the following update from the TF chair:

Current Requirement per AAR MSRP C-III, Chapter 1, Section 1.6 "Document Retention":

Table 1.19 Documents retained by car owner	
Radiographs and radiographic reports or UT reports	10 years

Table 1.20 Documents retained by certified and registered tank car facility	
Results of radiographic examinations (radiographs may be retained or discarded)	5 years

History:

This is the third iteration of a TF with a similar charge dating back to 2006.

T100.9.1 and T100.9.2 proposed that radiographs and radiographic reports be retained by the car owner for 5 years and registered tank car facilities retain radiographic reports for 5 years.

The docket report from October 2010 records the following:

"At the October 2009 meeting, it was reported that the TF met recently. 49 CFR §180.517 does not apply to the radiograph but does apply to the reader sheet. The radiograph will be kept for 5 years. In Appendix R 19.1.5 has the requirement for 5 year retention. Appendix Y Figure Y6 item number 2 also requires 5 year retention. Appendix Y needs to include the reader sheet. TF will review Appendix R and Y and recommend any necessary changes. A proposal is expected at the April 2010 TCC meeting."

Present:

According to Alderson and Verhey, who participated in T100.9.2, the statement "…*49 CFR §180.517 does not apply to the radiograph but does apply to the reader sheet* (i.e., the inspection and test report). *The radiograph will be kept for 5 years"* was from an interpretation by FRA Council (the federal regulations incorporate by reference Appendices R and W of the 2000 edition of the AAR Specifications for Tank Cars. Appendix R, for repairs, requires retention of the radiograph for 5-years. There is no federal or AAR retention time for new car construction). Strouse, who was also on the TF, has requested a record of said interpretation.

The TF has discussed required intervals, storage conditions for radiographs, related expenses and whether or not there is value in the retention of radiographs as evidence to verify RT examinations.

On March 16th, a proposal was made to align the interval for the retention of radiographic reports for both car owners and registered tank car facilities to 10 years.

On March 19th a counter proposal was made to decrease the retention period for radiographs by car owners to 5 years and align the interval for the retention of radiographic reports for both car owners and registered tank car facilities to 10 years. The counter proposal also includes verbiage for record retention for digital radiography and Phased Array UT in order to update to current NDT technology.

The TF plans to meet in early April to discuss the counter proposal. If consensus cannot be reached by the majority of the group, a *White Paper* will be prepared and submitted to FRA Council for clarification of the record retention requirements contained in 49 CFR §180.517 (b).

Updated Task Force List:

Name	**Company**	**Name**	**Company**
Hopper (Chair)	The Greenbrier Companies	Konrad	Federal Railroad Administration
Alderson	AllTranstek	Strouse	Federal Railroad Administration
Churchwell	American Railcar Industries	Verhey	Trinity Industries

At the January 2018 meeting, COD

At the October 2017 meeting, Sara Hopper will be the TF chairman instead of Jim Rader. COD

Staff Note: Alderson (Alltranstek) and Verhey (Trinity) was added to TF during the meeting.

AAR Note to TF Chair: There was a TCC docket on this subject in the past under T100.9.2

At the July 2017 Executive TCC session the following was discussed and decided:

Radiograph Retention – ownership of radiographs and storage periods.

Action Taken: A motion was made, seconded and passed with BNSF opposed to open a TCC docket for the review the Chapter 1 record retention of radiographs.

Jim Rader will be the TF chair and Adam Konrad (FRA) and Larry Strouse (FRA) will be added to the TF.

Task Force:

Name	Company	Name	Company
Hopper (Chair)	The Greenbrier Companies	Konrad	Federal Railroad Administration
Strouse	Federal Railroad Administration	Alderson	Alltranstek
Verhey	Trinity Industries	Churchwell	American Railcar Industries

TF Charge:

Number	TF Charge
1.	Review Chapter 1 record retention of radiographs

DOCKET T148
Review Appendix P of M-1002 (Tank Car Committee Procedures)

At the January 2018 meeting, AAR reported that the action item approved during the January 2017 TCC still needs to be accomplished (see below):

Action Item: The TCC supported the AAR in the administrative process of handling TF recommendation to change the AAR M-1002 standard. AAR will put together guidance for the industry on the format that should be submitted by TF chairs to AAR on recommendations to change or add language to the AAR M-1002 standard.

At the October 2017 meeting, COD pending resolution of the shipper petition.

At the July 2017 meeting, any future work is pending the resolution of the shipper petition to the PHMSA, which was reported at this meeting to be under review at the Office of Secretary. COD

At the April 2017 meeting, any future work is pending the resolution of the shipper petition to the PHMSA. COD

At the January 2017 meeting,

Action Taken:

- A motion was made, seconded, and passed to adopt the revised TCC charter as written with the single editorial change to add the ethanol shipper association seat.
- A motion was made, seconded, and passed to approve Kelly Davis for the ethanol shipper association seat.
- The TCC supported the AAR in the administrative process of handling TF recommendation to change the AAR M-1002 standard. AAR will put together guidance for the industry on the format that should be submitted by TF chairs to AAR on recommendations to change or add language to the AAR M-1002 standard.

Point of Contact:

Name	Company
Forister	Association of American Railroads

Purpose of Docket: To share information only – this is an Executive Committee docket.

Standing Updates

DOCKET T1.3
Quality Assurance Committee Activities

At the January 2018 meeting, M. Forister reported that the QAC 2018 conference was scheduled for the third week in January in Fort Worth, TX. COD.

At the October 2017 meeting, M. Forister reported on the updates provided in July 2017.

At the July 2017 meeting, AAR QA and TCC staff has identified through tank car facility audit reports that root cause analysis and corrective action is a potential issue. AAR currently offers to the industry a root cause analysis course. Some tank car facilities have actual taken the course. AAR is considering putting AAR auditors through the course.

M. Forister and D. Guillen are working the QAC and the TCC on establishing a single process for audit reporting and response times by facilities within that process. M. Forister is awaiting a response from the QAC.

The QAC recently issued AAR circular letter C-12927 implementing revisions to Section J, Appendix A, activity group preference list. The QAC implemented Activity Code in column 1 and Activity Description in Column 2. They also removed editorial errors in the table, specifically related to tank cars A22 was inadvertently requiring M-1002 and that has never been a tank car activity requiring M-1002 certification so they remove that reference in Appendix A

At the April 2017 meeting, AAR provided the report below.

During the meeting, an AAR Tank Car Committee member asked by a show of hands how many in attendance at the meeting believe that it is necessary to have two separate certification programs (M-1002 and M-1003) to accomplish the QA program certification program requirements of the 49 CFR 179.7? No one in the audience raised their hands. The purpose of receiving this response is to ensure the efforts ongoing under docket T91.2.4 to streamline the M-1002 requirements into the M-1003 QA certification process is supported and should continue. Message was clear by no show of hands to the question that the TF efforts make sense to the industry to move forward with one QA system that encompasses the evaluation of the necessary technical demonstrations during the onsite audit.

April 2017 Current Status:
On 11/7/2016 AAR published AAR Circular Letter C-12731 Implementing the new version of AAR MSRP Section J Specifications of Quality Assurance (M-1003). The QAC implemented the change from commodity code to activity code based on the TCC recommendation to align the activities performed that require facility certification. The 2017 QA Conference was held January

31 – February 3. AAR gave a presentation on behalf of the TCC at the AAR QA Conference regarding the efforts under T91.2.4 and spoke about the importance of aligning the M-1002 and M-1003 certifications programs.

At the January 2017 meeting, AAR reported that the QA committee recently issued a new version of M-1003. In the revision the QAC adopted "activity codes" based on the TCC T91.2.4 TF request and removed "commodity code". QA committee is aware that the TCC will provide comments on M-1003 once the T91.2.4 TF completes the recommendation for M-1002 tank car facility certification. It was mentioned by a TCC member that TSWC is overseeing the progress of the changes to M-1003. The 2017 QA conference is being held the week of January 30th.

The QA committee recently issued a current version of M-1003. They adopted "activity codes" based on the TCC T91.2.4 TF request and removed "commodity code". QA committee is aware that the TCC will provide comments on M-1003 once the T91.2.4 TF completes the recommendation for M-1002 tank car facility certification.

Task Force:

Name	Company	Name	Company
Forister	AAR		

TF Charge:

Number	TF Charge
1.	Report on QA Activities

DOCKET T5.31

Review of Tank Car Elements in UMLER

At the January 2018 meeting, B. Siebold reported that the DOT117 phase III proposal as approved by TCC in July has been vetted through the DQTF and the main UC. Expected implementation in 2Q18. Next the TF will tackle Executive Docket T5.34 on Training Cars followed by Charge #1.

AAR staff was reminded to issue a CPC as agreed by TF:
Action Item: The TCC agreed to have AAR develop a notification circular letter to the tank car owners reminding them of the interchange requirement to update their Umler records in accordance with the Umler data specification manual. Consider language that encourages / requires updates at time of next qualification for any elements with an entry of "1997UNK" or "Z - Unknown, built prior to 7/1/1997".

At the October 2017 meeting, B. Siebold reported that the Umler committee was asked to implement, at the next regularly scheduled update cycle for Umler, the T5.31 Phase 3 DOT117 Final Recommendation to UC 9-19-17. Final approved recommendation was provided with the agenda. Estimate timeframe for Umler to implement the Phase 3 DO117 final recommendation by the TCC is first quarter 2018.

Next Steps:

1. Now that the TF has completed the DOT117 edits the TF will resume the TF charges assigned.
2. TF needs AAR to complete the July 2017 action item. For reference here is the July 2017 TCC action item:

Action Item: The TCC agreed to have AAR develop a notification circular letter to the tank car owners reminding them of the interchange requirement to update their Umler records in accordance with the Umler data specification manual. Consider language that encourages / requires updates at time of next qualification for any elements with an entry of "1997UNK" or "Z - Unknown, built prior to 7/1/1997".

On 10/4/017 TF chair Bruce Siebold on behalf of the T5.31 task force and the Tank Car Committee sent the Umler Committee the final recommendation on the DOT117 class tank car. The Umler committee was asked to implement at the next regularly scheduled update cycle for Umler. See attached TCC T5.31 Phase 3 DOT117 Final Recommendation to UC 9-19-17 document that was provided with the agenda.

At the July 2017 meeting, B. Siebold discussed the current state of events related to phase III of the DOT117 related elements. FRA has taken no exception of RSI proposal on fiberglass being a thermal protection blanket type. However, TC has concern with the RSI proposal and requires an Equivalency Certificate. Therefore, the TF will implement the original Phase III proposal without fiberglass insulation included as an authorized thermal protection blanket in Umler.

Position of the T5.31 task force is that Umler elements and validation rules can only be written to support current regulations and AAR MSRPs.

TF chair commented that there are DOT117 designs approved by AAR with 9 mph rollover protection for top fittings and as the Umler validation rules are currently written, this might cause conflicts in Umler. The T5.31 chair will work directly with K.Dorsey on this.

Action Item: The TCC agreed to have AAR develop a notification circular letter to the tank car owners reminding them of the interchange requirement to update their Umler records in accordance with the Umler data specification manual. Consider language that encourages / requires updates at time of next qualification for any elements with an entry of "1997UNK" or "Z - Unknown, built prior to 7/1/1997".

At the April 2017 meeting, B. Siebold stated that the TF last met face-to-face March 28 – March 30, 2017 to discuss the Phase III DOT117 recommendations. The goal was to finalize the proposal for consideration by this meeting. Please find attached the TF proposal for the Phase III DOT117. B. Siebold reminded the industry that these changes are simply to align with the FAST Act, Final Rulemaking HM-251 and HM-251C. The TF continues to discuss the alignment of Tank Car Umler field elements/permissible values and the field elements/permissible values of the AAR Form 4-2.

J. Sbragai during the meeting pointed out that the matrix need to be slightly modified to take into account that not all DOT117R tank cars will have a 0.5" thermal protection blanket. J. Rader and J. Sbragia agreed to provide AAR staff and the TF chairman a proposed modification to the matrix. Once complete AAR will send out a ballot to the TCC for final approval. Then the recommendation will be sent to the Umler committee for handling.

Action Item: Once proposal is modified per Rader / Sbragia input on thermal protection, AAR will send out a ballot to the TCC for final approval. Then the recommendation will be sent to the Umler committee for handling.

April 2017 Current Status:
The TF last met face-to-face March 28 – March 30, 2017 to discuss the Phase III DOT117 recommendations. The goal was to finalize the proposal for consideration by the April 2017 TCC meeting. Please find attached the TF proposal for the Phase III DOT117 Umler changes to align with the FAST Act, Final Rulemaking HM-251 and HM-251C. During this face-to-face meeting the TF also discuss the alignment of Tank Car Umler field elements/permissible values and the field elements/permissible values of the AAR Form 4-2.

At the January 2017 meeting, B. Siebold stated that the TF met January 5, 2017 to discuss the phase III changes to DOT117 elements to address the Fast Act and final rulemaking HM-251C. Action items are assigned to TF members. The TF has scheduled a face-to-face meeting for March 28-30, 2017 to review the tank car elements of the Umler data specification manual. The TF received TCC directional approval during this meeting regarding the attachment for DOT117 phase III. The TF plans to seek TCC approval on the DOT117 phase II at the April TCC meeting.

The TF met January 5, 2017 to discuss the phase III changes to DOT117 elements to address the Fast Act and final rulemaking HM-251C. Action items are assigned to TF members. The TF has scheduled a face-to-face meeting for March 28-30, 2017 to review the tank car elements of the Umler data specification manual. The TF will seek TCC directional approval at this meeting regarding the attachment for DOT117 phase III and the plan is to seek TCC approval by April 2017 meeting.

Task Force:

Name	Company	Name	Company
Siebold (Chair)	BNSF Railway Company	Perez	Union Tank Car Company
Barkan	University of Illinois	Rawson	Railinc
Blanton	The Andersons Rail Group	Reece	Railinc
Boklewski	GATX Rail Corporation	Sbragia	GATX Rail Corporation
Ecker	Trinity Industries	Schultz	Union Tank Car Company
Edmonds	ExxonMobil Chemical	Strouse	Federal Railroad Administration
Forister	Association of American Railroads	Student	Gunnison, LLC
Fredbeck	Wells Fargo Rail	Tuma	Union Pacific Railroad
Herbel	Trinity Industries	Treichel	RSI-AAR
Kerber	BNSF Railway Company	Williams	Norfolk Southern Railway
Paine	CIT Rail		

TF Charge:

Number	TF Charge
1.	Review data elements in UMLER, determine which should be mandatory and which should remain optional.
2.	Determine which elements to remain proprietary field to the car owner.
3.	Perform gap analysis between what is on the 4-2 and what is in UMLER, and determine if certain information should be added, changed, or modified.
4.	Redirect any existing efforts when any emergency changes need to be addressed.

DOCKET T15.1

AAR Circular Letters/MA & EW

At the January 2018 meeting, AAR discussed the latest AAR circular letters and the need to issue those agreed upon by the TCC.

At the October 2017 meeting, AAR mentioned the following CPC's:

CPC	Circular Subject	Publication Date
CPC-1330	Recommended Railroad Operating Practices for Transportation of Hazardous Materials	10/6/2017
CPC-1329	Ballot for a Revised Standard for the Measurement of the Volume of a Tank Car	9/25/2017
CPC-1328	Information Circular, Clarification on Appendix E Office Manual QA Fee Structure	9/15/2017

October 2017 Update:

CPC	Circular Subject	Publication Date
CPC-1330	Recommended Railroad Operating Practices for Transportation of Hazardous Materials	10/6/2017
CPC-1329	Ballot for a Revised Standard for the Measurement of the Volume of a Tank Car	9/25/2017
CPC-1328	Information Circular, Clarification on Appendix E Office Manual QA Fee Structure	9/15/2017

At the July 2017 meeting, AAR reported on the following:

CPC/C	Circular Subject	Publication Date

CPC-1326	Solicitation of Comments on Proposed Revision to MSRP Section C Part III, M-1002, Specifications for Tank Cars, Appendix A and Appendix M	5/5/2017
CPC-1327	Operating Instructions for Midland A-720, A-721 and A-724 Valves	5/15/2017
C-12927	Implementation of Revisions to MSRP Section J, Specification for Quality Assurance, Appendix A, Activity (products or services) Group Reference List.	7/18/2017

July 2017 Update:

CPC	Circular Subject	Publication Date
CPC-1327	Operating Instructions for Midland A-720, A-721 and A-724 Valves	5/15/2017
CPC-1326	Solicitation of Comments on Proposed Revision to MSRP Section C Part III, M-1002, Specifications for Tank Cars, Appendix A and Appendix M	5/5/2017

At the April 2017 meeting, K. Dorsey reported on the latest CPC's issued:

The AAR has issued the latest CPC's:

- CPC-1324 was issued on February 3, 2017 – Solicitation of Comments on Proposed Revisions to MSRP Section C Part III, M-1002, Specifications for Tank Cars, Chapter 2
- CPC-1325 was issued on April 4, 2017 – Final Action, Revisions to MSRP Section C Part III, M-1002, Specifications for Tank Cars, Chapter 2

At the January 2017 meeting, K. Dorsey reported that MA-0168 was issued on certain tank cars with inspection requirements on side bracket structure.

Task Force: N/A
Purpose of Docket: Update the Committee on recent AAR circular letters related to tank cars.
Responsibility for Report: AAR

Ken will discuss the recent AAR circular letters published by AAR related to tank cars at the meeting.

DOCKET T15.9

Equipment Engineering Committee Update

On March 21, 2018 AAR received the following update from TF chair:

1. Reminder that per Rule 90 of the Field Manual; effective June 1, 2018 tank cars not equipped with long travel constant contact side bearing are prohibited.
2. On February 27, AAR submitted a waiver extension request to the FRA. That submission includes a schedule stating that the industry will implement the comparator panel reflectorization process within 6 months of FRA acceptance. We have not been able to move forward yet, as we do not have formal acceptance.
   - AAR has not heard back since the submission. However, AAR has an understanding with the FRA that the regulation will not be enforced, and we will be given an extension that allows us to begin implementing the new process.
   - EEC will be submitting its most recent edits to Rule 66, to ARB, in anticipation that we will be up and running on July 1.

At the January 2018 meeting, G. Saxton reported the following:

1. On March 31, 2018 the FRA waiver expires on reflective material application on tank cars.
2. 4-port receiver for automated single car testing devices were required Jan. 1, 2018 on new builds, however EEC is considering extending to May 1, 2018.

Action Taken: TCC agreed to have EEC issue an MA stating the compliance requirements of long travel constant contact side bearing by June 1, 2018.

At the October 2017 meeting, G. Saxton provided an update on this docket. The EEC is considering issuing an MA on the 32,000 tank cars. Here are the details of his report:

On 9/21/2017 AAR received the following notice from EEC AAR/TTCI liaison Jon Hannafious:

We have 35,328 tank cars (32,960 + 2,368) remaining to equip with Long Travel Constant Contact Side Bearings by June 1, 2018.

The breakdown in Umler is:

Side Bearing	Count
LC	379,166
SC	2,368
(blank)	32,960

Grand Total	**414,494**

Given the large number remaining, I agree it would help to put the 35,000 cars on an Maintenance Advisory.

1. Reminder that per Rule 90 of the Field Manual that effective June 1, 2018 tank cars not equipped long travel constant contact side bearings are prohibited.
2. FRA has extended the ten-year car reflector replacement date by 9 months. It is now set to expire in September. The AAR has authorized direct contact between EEC and FRA. Having an approved reflector requalification system up and running by the end of September seems very difficult to me. I think it may come a bit later.
3. EEC is working on a rule that will require all builders to have design engineering support. Some builders buy or contract a design, but don't have engineering support to deal with issues during production.
4. 4-port receiver for automated single car testing devices will be required Jan. 1, 2018 on new builds.

On 9/21/2017 AAR received the following notice from EEC AAR/TTCI liaison Jon Hannafious:

We have 35,328 tank cars (32,960 + 2,368) remaining to equip with Long Travel Constant Contact Side Bearings by June 1, 2018.

The breakdown in Umler is:

Side Bearing	Count
LC	379,166
SC	2,368
(blank)	32,960
Grand Total	**414,494**

Given the large number remaining, I agree it would help to put the 35,000 cars on an Maintenance Advisory. Does everyone agree? We can decide when to switch to an Early Warning as we go.

At the July 2017 meeting, G. Saxton provided the following.

These are the four issues I have from EEC for TCC:

1. Reminder that per Rule 90 of the Field Manual that effective June 1, 2018 tank cars not equipped long travel constant contact side bearings are prohibited.

2. FRA has extended the ten-year car reflector replacement date by 9 months. It is now set to expire in September. The AAR has authorized direct contact between EEC and FRA. Having an approved reflector requalification system up and running by the end of September seems very difficult to me. I think it may come a bit later.
3. EEC is working on a rule that will require all builders to have design engineering support. Some builders buy or contract a design, but don't have engineering support to deal with issues during production.
4. 4-port receiver for automated single car testing devices will be required Jan. 1, 2018 on new builds.

July 2017 Update:
AAR received the following update on 7/6/2017 from TF Chair:
These are the four issues I have from EEC for TCC:
1. Reminder that per Rule 90 of the Field Manual that effective June 1, 2018 tank cars not equipped long travel constant contact side bearings are prohibited.
2. FRA has extended the ten year car reflector replacement date by 9 months. It is now set to expire in September. The AAR has authorized direct contact between EEC and FRA. Having an approved reflector requalification system up and running by the end of September seems very difficult to me. I think it may come a bit later.
3. EEC is working on a rule that will require all builders to have design engineering support. Some builders buy or contract a design, but don't have engineering support to deal with issues during production.
4. 4-port receiver for automated single car testing devices will be required Jan. 1, 2018 on new builds.

At the April 2017 meeting, G. Saxton reviewed the information provided in the docket from April 1, 2017.

Current Status: At the January 2017 meeting, the tracking of application of reflective material and constant contact side bearings to tanks are going to be reported under this docket moving forward. T60.10.1 has been RFD.

AAR Receive the following update from TF Chair on April 1, 2017:

These are the four issues I have from EEC for TCC:

1. Reminder that per Rule 90 of the Field Manual that effective June 1, 2018 tank cars not equipped long travel constant contact side bearings are prohibited.
2. FRA has extended the ten year car reflector replacement date by 9 months. This was done to give the AAR time to develop a performance spec and provide training time instead of replacing the reflector based on age. Expect to have a more recent update for the Atlanta meeting.
3. EEC is working on a rule that will require all builders to have design engineering support. Some builders buy or contract a design, but don't have engineering support to deal with issues during production.

4. 4-port receiver for automated single car testing devices will be required Jan. 1, 2018 on new builds.

At the January 2017 meeting, G. Saxton reported on the two items provided below.

One January 3, 2017 the following report was provided by TF chairman.
These are the two issues I have from EEC for TCC:

1. Reminder that per Rule 90 of the Field Manual that effective June 1, 2018 tank cars not equipped long travel constant contact side bearings are prohibited.
2. FRA has extended the ten year car reflector replacement date by 9 months. This was done to give the AAR time to develop a performance spec and provide training time instead of replacing the reflector based on age. Generally the plan is for the reflectors to be requalified or replaced as necessary when the car is getting its single car brake test.

One January 3, 2017 the following report was provided by TF chairman.
These are the two issues I have from EEC for TCC:

3. Reminder that per Rule 90 of the Field Manual that effective June 1, 2018 tank cars not equipped long travel constant contact side bearings are prohibited.
4. FRA has extended the ten year car reflector replacement date by 9 months. This was done to give the AAR time to develop a performance spec and provide training time instead of replacing the reflector based on age. Generally the plan is for the reflectors to be requalified or replaced as necessary when the car is getting its single car brake test.

Task Force:

Name	Company
Saxton (Chair)	Greenbrier/Gunderson

TF Charge:

Number	TF Charge
1.	TCC to receive updates on EEC issues

DOCKET T55

Service Trials

At the January 2018 meeting, AAR continues to work on ST reports with proponents.

October 2017 update: AAR has received feedback from TCC members on this TF and is still reviewing the feedback related to TF charge items. COD

October 2017 update: AAR has received feedback from TCC members on this TF and is still reviewing the feedback related to TF charge items.

At the July 2017 meeting, AAR discuss the current state of service trials. After lengthy discussion, the TCC agreed that a TF should be created to review the service trial process and reporting ownership.

Action Item:

The following preliminary TF charges were discussed:

1. Review the Service Trial process in Chapter 1
2. Consider requiring registration of cars in UMLER having installed equipment operating under a Service Trial.
3. Consider coordination of service equipment service trials with CEPM activities.

At the April 2017 meeting, M. Forister reported that the AAR will be removing Service Trial approval to those proponents that do not comply with Chapter 1 of M-1002 requirements. Update to the TCC will be given by AAR by the October 2017 meeting.

At the January 2017 meeting, AAR continues to progress the list of proponent on service as directed by the TCC. COD

DOCKET T79.3.1

Designation DOT130AW for New Car Class

At the January 2018 meeting, COD pending resolution with PHMSA.

At the October 2017 meeting, COD pending resolution with PHMSA.

At the July 2017 meeting, COD pending resolution with PHMSA.

At the April 2017 meeting, PHMSA stated that a response is coming soon.

At the January 2017 meeting, K. Dorsey reported that PHMSA has accepted AAR's petition.

Task Force:

Name	Company	Name	Company
Dorsey (Chair)	Association of American Railroads	Loman	AllTranstek
Alexy	Federal Railroad Administration	Majors	PHMSA
DeLacerda	Union Tank Car Company	McKisic	Trinity Industries
Gagnon	Consultant	Reiner	Chlorine Institute
Ghazal-Tokko	Union Tank Car Company	Sandheinrich	American Railcar Industries

TF Charge:

Number	TF Charge
1.	Develop specification for a tank car class in general that also covers the tank car manufactured under DOT-SP15036.

DOCKET T79.3.2

Consider New DOT113A90W Specifications

At the January 2018 meeting, COD pending resolution with PHMSA.

At the October 2017 meeting, COD pending resolution with PHMSA.

At the July 2017 meeting, COD pending resolution with PHMSA.

At the April 2017 meeting, PHMSA stated that a response is coming soon.

At the January 2017 meeting, K. Dorsey reported that PHMSA has accepted AAR's petition.

Task Force:

Name	Company
Dorsey (Chair)	Association of American Railroads

TF Charge:

Number	TF Charge
1.	Develop changes to the regulations to include tank cars authorized by special permits DOT-SP11803 and 15131.

DOCKET T79.36

Locomotive Fuel Tender Initiative

At the January 2018 meeting, B. Siebold reminded AAR staff to change docket title to locomotive fuel tender initiative from LNG tender initiative. Compress natural gas (CNG) is the next fuel type being considered under this initiative. COD

Action Item: AAR staff to change docket title to locomotive fuel tender initiative.

At the October 2017 meeting, B. Siebold asked AAR staff to change docket title to locomotive fuel tender initiative from LNG tender initiative.

- Next steps:
  - CNG fuel tanks (document is structured to easily accept)
  - Appendix G – Wiring and Electrical Hardware
  - Appendix J – Inspection and Maintenance worked with FRA develop
  - Appendix M – tender health status protocols
  - Safety appliances and Tender Fill Cable – still pending additional work.

FRA R&D plans to perform physical test at TTCI on an M-1004 designed fuel tender third quarter 2018. See T59

At the July 2017 meeting, B. Siebold provided the following high-level summary of events:

- Second circular (C-12904) was issued on the main specification M-1004 on June 10th.
- NGFT TAG conducted a town hall meeting in DFW area the last week of June to review comments / resolutions with all interested parties / proponents.
- Significant updates include:
  - Fueling is to Locomotive / Filling is to a tender
  - For LNG, a cryogenic pump is no longer specified as the primary fuel delivery mode.
  - The tender must be designed to operate in a fuel delivery mode that supports the lowest possible tank pressure given the state of the fuel.
  - Less prescriptive on location of a bottom penetration to the inner tank.
- Implementation circular for M-1004 and 3 standards (2 hoses / TC-21 cable) is expected out next week. This is a living document just like any other AAR specification or standard.
- All of this work will be housed in a new MSRP volume – Section T – Interoperable Fuel Tenders
- Next steps:
  - Lots of interest in CNG fuel tanks (document is structured to easily accept)
  - Appendix G – Wiring and Electrical Hardware

- Appendix J – Inspection and Maintenance worked with FRA develop
- Appendix M – tender health status protocols
- Safety appliances and Tender Fill Cable – still pending additional work.

At the April 2017 meeting, Transport Canada is going to treat the LNG tender as a tank car and it will require a temporary certificate to operate in Canada. Comments still being addressed from AAR Circular C-12766.

New specification M-1004 and 5 accompanying standards was issued for comment under C-12766 through the end of January. Almost 400 comments received from industry and are currently under review. Once resolution of comments is complete, a town hall meeting is likely to be scheduled for 2Q17. The TC regulator advised that Canada does not view tender as a locomotive appurtenance and therefore a tender must move under TDG regulations with an Equivalency Certificate.

April 2017 Current Status:

Several comments were submitted on C-12766 and are being reviewed and addressed accordingly.

At the January 2017 meeting, B. Siebold reported that on December 19, 2016 the AAR issued the C-12766 – solicitation for comment - Proposed new Specification M-1004, Fuel Tenders for Natural Gas and Other Alternate Fuels.

AAR filed a petition with PHMSA on the commercial transportation of LNG by tank cars.

On December 19, 2016 the AAR issued the following:
C-12766 – SOLICITATION FOR COMMENTS – Proposed new Specification M-1004, FUEL TENDERS FOR NATURAL GAS AND OTHER ALTERNATE FUELS

Task Force:

Name	Company	Name	Company
Dorsey (Chair)	Association of American Railroads	Siebold	BNSF Railway

TF Charge:

Number	TF Charge
N/A	Information Only

DOCKET T79.37

Recommendations for Revisions of 49 CFR Part 179 and 180

The first TF face-to-face was held April 3-4, 2018. During that meeting is was agreed to by the TF to hold a second face-to-face meeting June 19-20.

At the January 2018 meeting, AD McKisic stated that the TF met via teleconference on January 4, 2018. AD reported that the minutes are forthcoming to the TF members. AD stated that the efforts of this TF are being divided into two phases. Phase I focus on rearrangement and clarification of Part 179 and Part 180. Phase II focus on regulation modification. The first face-to-face meeting will be scheduled soon via a doodle poll for availability.

AAR, with the support of FRA and the TCC, stated the definitions are the most important structure behind this effort.

Editorial Change: TF Charter was modified to include part 180. See below:

Previous Charge: Review language in Part 179 for completeness, determine which parts of 173 to remove and place in 179.

Revised Charge: Review language in Part 179 <u>and Part 180</u> for completeness, determine which parts of 173 to remove and place in 179.

Amy Hamilton (Trinity) was asked to be added to the TF during the January 2018 TCC meeting.

At the October 2017 meeting, AD McKisic released to the TF on October 13, 2017 the strawman for first review. AD stated in the email and at the meeting the following:

Part 179 (AD McKisic is leading this effort within the TF)

1. Correct known errors and remove obsolete requirements
    a. Improve organization of content
    b. Consolidate common requirements
2. Use consistent structure across sections
3. Focus on design requirements for tank car packaging
4. Relocate content not related to design requirements
5. Align with Transport Canada and other recognized standards

Part 180 (John Byrne is leading this effort within the TF)

1. Correct known errors and remove obsolete requirements
2. Incorporate Quality requirements from existing 179.7
3. Introduce concept of ‘fitness for service’
4. Update and expand Definitions
5. Updates for clarity and scope

AAR Staff Note: The following will be added to the TF: Steve Geneva (TMC), Sarah Brewer will replace Olszewski (Unifrax), Chris Blanton (The Andersons), Bruce Fleming (Olin)

At the July 2017 meeting, AD McKisic reported that the RSI members are working on a strawman to present to the 40+ member task force. RSI members plan to meet on August 26, 2017 followed a few weeks later with a TF meeting. Expectation is a proposal by the October TCC meeting. Editorially, the name of this docket needs to be revised to read: "Recommendations for Revisions of 49 CFR Part 179 and 180".

Action Taken: TCC approved the TF Chair: AD McKisic

July 2017 Update:
AAR Staff Note: During the April 2014 TCC under docket T92.14.1 the TCC agreed to the efforts of the TF to this docket. Those efforts are to consider permanent marking for AAR class cars. At the April 2017 TCC 44 industry people requested to be added to the TF. The TCC needs to consider how this TF will function with this many members.

At the April 2017 meeting, the name of this docket needs to be revised to read: "Recommendations for Revisions of 59 CFR Part 179 and 180". FRA stated that the intent of this effort is to focus on clarifying the current regulations, removing obsolete specifications, and alignment of definition with M-1002, and not to revise Part 179 and 180 regulations.

RSI provided their initial thoughts about the need to develop the strawman and framework of driving the AAR M-1002 standards.

Those that were interested in joining the TF provided their business cards during the meeting to AAR staff.

Timeframe: working document by October 2017 TCC meeting.

At the January 2017 meeting, FRA stated that during the January 2017 HM-RSAC meeting the expected timeline stated by FRA was for this TF to have a proposal complete by the October 2017 TCC. Included in this effort should be the review of 49 CFR Part 180. AD McKisic will be the chair of the TF. TF members adding during this meeting: S. Singh, P. Williams, C. Edmonds, J. Perez, L. Loman

Staff Note: Add Part 180 to title. time table outlined by FRA is October TCC 2017. Add to the title Part 180.

Task Force:

Name	Company	Name	Company
McKisic (Chair)	Trinity	Hurley	Occidental Chemical Corporation
Diez	Airgras	Leiby	Quality Transportation Services, Inc.

Loman	Alltranstek	Standish	Rescar Companies
Sloan	American Chemistry Council	Allbritten	Salco Products, Inc.
Culligan	American Railcar Industries	Woloszyk	Salco Products, Inc.
Forister	Association of American Railroads	Dzolovic	Salco Products, Inc.
Dorsey	Association of American Railroads	Hybinette	Salco Products, Inc.
Yuvallos	Caltrax Inc.	Welch	SMBC Rail Services
Nason	Chart, Inc.	Bartley	The Dow Chemical Company
Paine	CIT Rail	Smith	Transco Railway Products Inc.
Walsh	Consultant	Singh	Transport Canada
Caponio	ERCO Worldwide	Becherer	TransQuip USA, Inc.
Edmonds	Exxon Mobil	McKisic	Trinity
Keltz	Federal Railroad Administration	Brewer	UNIFRAX
Sisto	GATX	Perez	Union Tank Car Company
Benites	Girard Equipment, Inc.	Riggs	Union Tank Car Company
Stewart	GNLX Corp.	Edgel	Union Tank Car Company
Hopper	Greenbrier Management Services	Richardson	US Clay Producers Traffic Association
Rader	Greenbrier Management Services	Majors	US DOT
Bass	H.C. Chandler & Son, Inc.	Tavares	Vertex Railcar Corporation
Monger	Koch Rail	Sech	Wells Fargo Rail
Foley	Metso	Rath	Midland Manufacturing
Williams	Norfolk Southern	Blanton	The Andersons
Fleming	Olin	Geneva	TMC

TF Charge:

Number	TF Charge
1.	Review language in Part 179 for completeness, determine which parts of 173 to remove and place in 179.

DOCKET T79.40

Review of the DOT113 Specification for LNG Transportation

At the January 2018 meeting, K. Dorsey discussed this new docket and current list of members on the TF. FRA mentioned that there are companies interested in moving methane and have already submitted application for a special permit. This TF charge will be solely focused on the appropriate tank car packaging for rail transportation, not train operating rules.

TF chair will be determined at the April 2018 TCC meeting. P. Williams (NS), R. Dalske (ARI), and F. Gonzalez (FRA) was asked to be added to the TF during the January 2018 TCC meeting.

At the October 2017 executive session TCC meeting under new business the TCC agreed to open this new docket under the main session agenda. Chair to be determined at January 2018 TCC meeting.

Task Force:

Name	Company	Name	Company
McKisic	Trinity	Dorsey	AAR
Majors	PHMSA	Raj	FRA
Nason	Chart Industries	TBD	CVA
Singh	Transport Canada	Maday	FRA
Williams	NS	Dalske	ARI
Gonzalez	FRA		

TF Charge:

Number	TF Charge
1.	Review the DOT113 Tank Car Specification

DOCKET T80.4

AAR Hazardous Materials Committee Liaison

At the January 2018 meeting, no new update. COD.

At the October 2017 meeting, B. Fronczak provided a presentation of tracking of flammable liquid tank car fleet. Recently a shipper petition PHMSA to allow LNG to be shipped in a tank car by rail. AAR supports the shipper petition minus the operating restrictions within the petition. The operating restriction similar to HHFT.

At the July 2017 meeting, no new updates. COD

AAR Staff Note: Remove TF from this docket and replace with Purpose for Docket statement.

At the April 2017 meeting, D. Schoendorfer reported that the 2017 version of the BOE 6000 Tariff is being made available for purchase. Any questions about the purchase of this publication should be directed to boepublications@gmail.com. In February 2017, the AAR Field Guide to Tank Cars was issued. The HazMat Committee requested that the presentation of tracking of flammable liquid tank car fleet should be offered at each Tank Car Committee meeting and posted where it was visible.

At the January 2017 meeting, D. Schoendorfer reported that the AAR Field Guide to Tank Cars was approved this week. The publication release date of version 3 is scheduled for February 1, 2017. PDF copies will be provided and available for reprint, but cannot be resold. BOE Tariff 6000 is no longer going to be available based on the lack of demand. AAR Annual 2015 Report went out December 28, 2016. The 2016 report will be released in early 2017.

Point of Contact: HazMat Committee Current Chair

Name	Company
Schoendorfer (Chair)	Norfolk Southern Railway

Purpose of Docket: For the AAR Hazardous Materials Committee to report to the AAR Tank Car Committee related interest of the transportation of hazardous materials by tank cars.

DOCKET T80.12

North American N.A.R. Program

On March 23, 2018 AAR received the following update from the TF chair:

Task Force chairman Chris Machenberg worked with Todd Treichel, RSI-AAR Railroad Tank Car Safety Research and Test Project, to develop a Strawman schedule for providing NAR presentation information for the 2018 April and October HMC and TCC meetings using the PHMSA data and the independently supplied data from the Canadian railroads.

Strawman schedule that is being utilized for April 2018 meeting preparation:

- "W" is TCC meeting
- "W" minus one week - slides ready for showing to TCC
- "W" minus three weeks – slides distributed to smaller group for review
- "W" minus four weeks – database ready for analysis and slide creation
- "W" minus six weeks – PHMSA data gathered from FACTOR database
- "W" minus seven weeks – request for Canadian incidents

Working with FACTOR since the October 2017 TCC meeting, the 2017 data has been verified. In January, FACTOR did a presentation of their data system and display for Todd Treichel and the team at the University of Illinois. There are still issues of missing data such as missing NAR cause codes in the PHMSA data set. University of Illinois, Todd Treichel and FACTOR worked to correct as many as possible.

In January, Andy Elkins sent the excel spreadsheet for the NAR Award submissions. These awards will be presented at the October 2018 TCC Meeting.

We will be taking names and contact information at the April meeting to begin the main work of the task force now that the data set is clean and current.

At the January 2018 meeting, C. Machenberg reported on the current data efforts between Factor and PHMSA. The NAR visualization tool has been built and continues to be updated. The NAR awards ceremony will continue to be done in the fall of each year, the 2018 venue is TBD. The NAR Reduction task force plans to engage with FRA Hazmat Seminar in August 2018.

At the October 2017 meeting, C. Machenberg stated that the focus of the NAR program will be the follow up of root cause analysis. The NAR data is a key factor in determining TF efforts. Twenty-one companies were awarded the AAR NAR Grand Slam. Paul Williams was awarded the Holden Proefrock Award.

At the July 2017 meeting, C. Machenberg stated that the focus of the NAR program will be the follow up of root cause analysis. The AAR Release Reporter System that the railroads used to submit DOT 5800.1 forms is no longer active as of July 2017. All railroads are reporting to DOT

directly using the PHMSA online reporter system. AAR has worked with PHMSA officials to allow the railroads to enter the AAR NARRI cause codes into the PHMSA 5800 online system. This will provide the same granular detail that was collected with the AAR Release Report System so that trend analysis can still be performed. Manway's continues to be the number one NAR. Goal is to have data analysis complete in the next few weeks.

FRA/PHMSA representative stated that they plan on having a shipper training event focus on NAR's sometime in August 2018. It will be in the Houston, TX area with a similar format to Reno, NV event in years past.

Staff note: AAR to update agenda with C. Machenberg name.

At the April 2017 meeting, C. Machenberg stated that the NAR website is on the AAR website. Working with the industry group on root cause analysis and corrective actions on NAR's will be a primary focus of this program in 2017.

AAR Staff Note: Change Paul Williams to Chris Machenberg as chair. Ray Morgan from GBW wants to be a part of the root cause analysis and corrective action effort.

The TRANSCAER awards were awarded during the April 2017 NAR program session.

At the January 2017 meeting, Chris Machenberg was announced as the new chair of the NAR TF Chair replacing Paul Williams. The NAR cause codes will now be entered into the PHMSA DOT 5800.1 system when the AAR system is phasing out July 1, 2017. The NAR website has been moved to the AAR, IHST is still managing the site. AAR is working on transition the complete website management over to the AAR. The goal is to get the NAR awards out this year at the April Tank Car Committee meeting instead of the October TCC meeting.

NAR Reduction Task Force:

Name	Company	Name	Company
Machenberg (Chair)	CSX	TBD (Communications Chair)	TBD
Treichel (Data Chair)	RSI-AAR	Bolds (Process Chair)	BOLDS & Associates
Richardson (Hardware Chair)	U.S. Clay Producers Traffic Association		

TF Charge:

Number	TF Charge
1.	TBD

DOCKET T88.2-96

Tank Car NDE Project

At the January 2018 meeting, the following action was made.

Action Taken: motion made to RFD docket and move the reporting of this docket under the T59 docket.

At the October 2017 meeting, see T59. COD

At the July 2017 meeting, F. Gonzalez stated that the new POD software is being used. Total of 8 companies with 56 operators produced 198 drafts. T88.1-93 is a relative reference to this effort.

At the April 2017 meeting, F. Gonzalez stated the TTCI has a computer program to handle the old data. Still waiting on the final report.

At the January 2017 meeting, F. Gonzalez stated that the report issued was based on old data. The new report will be released soon. It will consist of all the new data plus the past data sets.

AAR receive the following report from Francisco Gonzalez on 1/3/2017:
Tank Car NDE Project, I published one report DOT/FRA/ORD-16/39
Link: http://www.fra.dot.gov/eLib/details/L18474#p1_z50_gD

AAR receive the following report from Francisco Gonzalez on 1/3/2017:
Tank Car NDE Project, I published one report DOT/FRA/ORD-16/39
Link: http://www.fra.dot.gov/eLib/details/L18474#p1_z50_gD

Point of Contact

Name	Company
González III	Federal Railroad Administration

Purpose of Docket: To receive updates from FRA on Non Destructive Examination probability of detection project.

DOCKET T95.7.4

Consider New Steels and Modifications to Current Steel Specifications for Tank Car Tanks

At the January 2018 meeting, AAR to issue final CPC from CPC-1326.

At the October 2017 meeting, C. Hybinette reported that the TF is awaiting a finalized CPC from the comment CPC-1326. COD

Action Item: AAR to issue final CPC from CPC-1326.

At the July 2017 meeting, K. Dorsey discussed a comment received on CPC-1326 and applicability of A516 Gr 70 steel. AAR will discuss with C. Hybinette regarding making lower carbon content an M-1002 requirement for TC-128 Gr B and its effects on supplemental chemistry. Discussion around M-1002 allows for this today, and therefore this is a commercial decision. TF member McKisic requested improved TCC direction on TF charges.

Staff Note: C. Hybinette is still the TF chair.

On 5/5/2017 AAR issued CPC-1326 - Solicitation of Comments on Proposed Revision to MSRP Section C Part III, M-1002, Specifications for Tank Cars, Appendix A and Appendix M.

On 5/5/2017 AAR issued CPC-1326 - Solicitation of Comments on Proposed Revision to MSRP Section C Part III, M-1002, Specifications for Tank Cars, Appendix A and Appendix M. Comments still under review at the AAR.

At the April 2017 meeting, C. Hybinette asked for the change to Appendix M to be sent out as a CPC.

At the January 2017 meeting, the TCC agreed to have this TF investigate if the chemistry of TC-128 should be modified with lower carbon content.

Task Force:

Name	Company	Name	Company
Hybinette	Consultant	McKisic	Trinity Industries
Barkan	University of Illinois	Nason	Chart Industries
González III	Federal Railroad Administration	Sandheinrich	American Railcar Industries
Guzel	BNSF	Sims	Sims Professional Engineers
Heckel	SSAB Steel	Strouse	Federal Railroad Administration
Heitmann	ArcelorMittal Steel	Thompson	
Kowing		Thoresen	Chart Industries

Manohar	ArcelorMittal Steel	Treichel	RSI-AAR
McKeighan	Exponent		

TF Charge:

Number	TF Charge
1.	Investigate New Steels for Use in the Construction of Tank Car Tanks
2.	Develop Modifications to Current Steel Specifications

DOCKET T100.22

Asset Health Strategic Initiative for Valves & Fittings

On March 14, 2018 AAR received the following update from the TF chair:
Railinc task group being formed. Work to begin in April 2018.

AAR Update: M. Forister working with TF members to establish stakeholder representation on the pressure relief valve component tracking project with Railinc. AAR continues to work with Railinc on the Project Charter in preparation for the TF review.

At the January 2018 meeting, RPSWC approved as 2018 project. M. Forister is AAR liaison for this / K. Dorsey will lead TCID. AAR reminded the TCC that the upcoming billing to tank car owners will occur during the February Umler billing timeframe. As discussed to the industry during the October 2017 TCC meeting this will cover the cost of program development.

Action Item: The next step is for AAR staff to work with Railinc staff on project charter document. Once this is complete AAR will determine new TF charge.

At the January 2018 private session meeting, the TCC agreed to add the following TF charge to this docket: TF Charge: develop language in M-1002 using the precedent AAR Brake Systems Committee standard to address the valve body are tied to the identification and existing serial number and if changed the serial number and identification tag can no longer be used.

> Background New TF Charge: During an AAR tank car facility audit AAR staff got into a debate with the facility about when is a valve a valve for the purposes of identification and traceability. This is directly related to the identification tag and serial number. In the process of C5 demonstration the tank car facility inspected and rejected the entire valve body (top and bottom portions) and replaced it with brand new stock, however used the same serial number on the ID tag. Also replace the handle in this process. AAR Brake Systems Committee has a process and established policy on serialization of brake valves whereas the serial number is integral to the casting and is not to be reused or transferred if the body is replaced. Thus, the TCC agreed to add the TF charge as addressed above.

At the October 2017 meeting, D. Clayton stated the cost benefit analysis was performed by Railinc and the ROI was positive. The RPSWC conditionally approved the component tracking programming project for pressure relief valves. The programming efforts will start in 2018. AAR stated that each car owner will be charged for the development and maintenance of this effort through Railinc fee structures on a per car basis. The next steps of the TF is to work on modifying M-1002 to incorporate the requirements of component tracking of pressure relief valves and leverage the existing requirements in Appendix A marking requirements.

At the July 2017 meeting, M. Forister reported the following:

AAR, TF members, and industry stakeholders continue to work on progressing the AHSI for tank car service equipment with the initial focus on PRV's. In parallel effort to work on the requirements of M-1002 is the opportunity that became available because of the engagement the TF had with Railinc. Over the last month or so AAR and the stakeholder worked with Railinc to develop a 2018 AHSI benefit case that will be presented to the Railinc Project Support Working Committee (RPSWC). There was a positive ROI presented to AAR on this effort and the project will be soon considered by the RPSWC.

Throughout the July 2017 TCC meeting many other dockets being discussed mentioned that having component tracking on service equipment provides a valuable tool that can supplement many other TF initiatives to accomplish a common goal. For example, being able to identify a specific piece of service equipment when filing an NAR report, processing QA non-conformance reports effectively, reducing non-approved designs entering the industry, and providing the AAR the ability to have positive recall on in-service and inventory tank car service equipment.

Action Taken: A motion was made, seconded, and passed on the development of AAR standards for component tracking of tank car service equipment with the initial focus on PRV's. The TCC also supports the direction of programming through the RPSWC.

July 2017 Update: AAR, TF members, and industry stakeholders continue to work on progressing the AHSI for tank car service equipment with the initial focus on PRV's. In parallel effort to work on the requirements of M-1002 is the opportunity that became available because of the engagement the TF had with Railinc. Over the last month or so AAR and the stakeholder worked with Railinc to develop a 2018 AHSI benefit case that will be presented to the Railinc Project Support Working Committee (RPSWC). AAR will go into more detail during the meeting.

At the April 2017 meeting, D. Clayton stated that the TF is working on the PRD component tracking efforts. TF has met three times recently. A list of attributes is being derived, a list of concerns have been compiled and will be provided to AAR, and then AAR will forward to the TCC for processing if necessary.

TF Chair Update 3/31/2017: The last TF meeting was held March 31, 2017. Here are the meeting minutes:

1) Forister read the antitrust statement. No antitrust concerns were raised during the meeting.
2) TF will submit information to Railinc required to begin incorporation of reclosing PRD into CEPM.
3) Forister will provide Railinc with M-1002 App A existing requirements for PRD marking.
4) Clayton will circulate proposal for valve attribute collection to TF for final comments and submit to Railinc when finalized.

5) Clayton will collect any remaining TF concerns regarding valve CEPM and ask Railinc to address during incorporation.

At the January 2017 meeting, AAR is working with the TF chair on setting up a meeting for TF members to discuss the AAR component tracking system. The goal is to draft language for doing a pilot project for PRD's using the AAR component tracking system. COD

Task Force:

Name	Company	Name	Company
Clayton (Chair)	GATX Rail Corporation	Jachim	Rescar Companies
Cook	Midland Manufacturing	Kissick	Caltrax
Edgel	Union Tank Car Company	Loman	AllTranstek
Edmonds	ExxonMobil Chemical	Prince	Flowserve Corporation
Foley	Metso Automation USA	Siebold	BNSF Railway Company
Forister	Association of American Railroads	Vaughn	Railinc
Gambow	Kelso Technologies	Woloszyk	Salco Products
Hurst	Trinity Industries		

TF Charge:

Number	TF Charge
1.	Recommend to the Tank Car Committee whether or not to require component identification database (CID) tracking of valves and fittings.
2.	Develop language in M-1002 using the precedent AAR Brake Systems Committee standard to address the valve body are tied to the identification and existing serial number and if changed the serial number and identification tag can no longer be used.

DOCKET T146.1

Notification of Tank Car Committee Meeting Schedule

This docket is an FYI only docket to notify the industry of the upcoming Tank Car Committee Meeting Schedule. Those labeled under the Column header "Meeting" as TCC are executive TCC meetings (invitation only) and those labeled "Main" denotes main session open to the public.

Year	Dates	Meeting	Location
2018	January 17-18	TCC	Jacksonville, FL
2018	April 18-19	Main	Atlanta, GA
2018	July 18-19	TCC	Roanoke, VA
2018	October 17-18	Main	TBD based on hotel availability of approved locations
2019	January 23-24	TCC	TBD based on hotel availability of approved locations
2019	April 17-18	Main	TBD based on hotel availability of approved locations
2019	July 24-25	TCC	TBD based on hotel availability of approved locations
2019	Oct 16-17	Main	TBD based on hotel availability of approved locations

Point of Contact:

Name	Company
Dorsey	Association of American Railroads

Purpose of Docket: To notify the industry of Tank Car Committee meeting schedule.

DOCKET T147

Tank Car Committee Structure and Procedures

At the January 2018 meeting, COD

At the October 2017 meeting, KCS de Mexico representative Jorge Cesin was replaced by Alvaro Almaguer.

During the executive session at the October 2017 meeting, Alvaro Almaguer was recommended by the nominating committee to be the new Kansas City Southern de Mexico representative replacing Jorge Cesin.

Action Taken: a motion was made, seconded, and passed to approve Alvaro Almaguer to be the new KSCM representative on the tank car committee.

At the July 2017 meeting, AAR was made aware of a new representative for KCSM. AAR needs a resume for the replacement of Jorge Cesin.

Action Item: AAR Tank Car Committee asked the AAR staff to provide a current list of TCC Member Contacts.

At the April 2017 meeting, K. Dorsey reported on the structure of the TCC meeting.

Staff Note: Change the docket name from Subcommittee Structures and Procedures to Tank Car Committee Structures and Procedures.

At the January 2017 meeting, the TCC approved the following:

Name	Company	TCC Member Type	Official Approval Date	Previous Member
Anthony Ippolito	CN	Railroad	12/21/2016	Lee Nelson
Robyn Kinsley	CI	Non-Railroad Shippers	12/22/2016	Frank Reiner
JR Gelnar	ASLRRA	Railroad	12/28/2016	Jim Rader
Ryan Miller	KCS	Railroad	12/28/2016	Steve McNealy
Joe Perez	UTLX	RSI	1/25/2017	Brian Paine

Kelly Davis	RFA	Non-Railroad Shippers	1/25/2017	New Position

Point of Contact:

Name	Company
Fronczak	Association of American Railroads

Purpose of Docket: To discuss any changes in membership or procedures of the committee and subcommittee.

DOCKET T59

Tank Car Research Program

On March 16, 2018 AAR received the RSI-AAR Project report.
On March 28, 2018 AAR received the TC Research report.
On April 2, 2018 AAR received the FRA Research report.

At the January 2018 meeting, S. Garneau (Transport Canada), Francisco Gonzalez (FRA), and Todd Treichel (AAR-RSI Safety Project) provided detail reports during the meeting.

At the October 2017 meeting, S. Singh (Transport Canada), Francisco Gonzalez (FRA), and Todd Treichel (AAR-RSI Safety Project) provided detail reports during the meeting.

At the July 2017 meeting, S. Singh (Transport Canada), Francisco Gonzalez (FRA), and Todd Treichel (AAR-RSI Safety Project) provided detail reports during the meeting based on the updates provided in the docket.

At the April 2017 meeting, remove NTSB from the title of this docket. S. Singh (Transport Canada), F. Gonzalez (FRA), and T. Treichel (RSI-AAR Safety Project) reports on their research during the meeting.

At the January 2017 meeting, S. Singh (Transport Canada), F. Gonzalez (FRA), and T. Treichel (RSI-AAR Safety Project) provided reports on the tables provided in the docket.

RSI-AAR Research Projects

Project Title	Abstract	Sponsor(s)	Dockets	Contractors	Completion Target	Status
AFFTAC thermal model improvements	A variety of upgrades being made to the model will improve its use as a research tool and a planning tool for future fire tests.	RSI-AAR	T59	Southern Rockies Associates (Dr. Scott Runnels)	Various	Validation against high-fidelity models is in final stages. Planned for 2018: improvement to modeling of multi-component mixtures; further generalization of PRV model; further examination of model behavior under certain specific conditions.
Development and Operation of Tank Car Integrated Database (TCID)	Current version: FRA funded the development. The RSI-AAR Safety Project has added funds to replace paper R-1 and R-2 forms. The Safety Project is funding the ongoing data collection process. New version under development at Railinc.	Current version: FRA, RSI-AAR New version: Funded by tank car owners through per-car fee paid to Railinc	T59, T59.2.1, T59.2.2	Current version: Sims Professional Engineers New version: Railinc	New version: EOY 2018	Development of new program at Railinc in 2018, preparatory to eventual link to other configuration management databases. During this period, operation of TCID by Sims Professional Engineers will remain the same as before,
Update and expand study of conditional probabilities of release	This work will replace Report RA-05-02 with an updated study incorporating a broader group of variables pertinent to tank car accident performance	RSI-AAR	n/a	U. of Illinois at Urbana-Champaign	Final report publication 2Q18	Final report is under review for approval to publish. Estimates of loss probability used in evaluating HM-251 options and HM-219A comments, and industry petition regarding future TIH cars.
Collection and analysis of tank car accident data	Ongoing effort since the beginning of the RSI-AAR Tank Car Safety Project in 1970	RSI-AAR	n/a	Sims Professional Engineers	n/a	Sims collects data from many sources and creates and maintains a detailed record of the events and outcomes in accidents that damage tank cars. Assistance in Sims

						investigations is beneficial to tank car safety, and very much appreciated.

Contact: **Todd Treichel - Director**
RSI-AAR Railroad Tank Car Safety Research & Test Project
(540) 822-4800 ttreichel@aar.org

FRA Research Projects

Project Title	Abstract	Sponsor(s)	Dockets	Contractor(s)	Completion Target	Status
Railroad Tank Car Nondestructive Methods Evaluation	Evaluation and validation of nondestructive evaluation methods for use on tank cars and the quantification of the NDE process to improve the probability of defect detection.	FRA		AAR TTCI	Ongoing review of other procedures.	**Published:** **DOT/ORD/FRA-16/35 and 16/13** **http://www.fra.dot.gov/eLib/details/L18338#p2_z50_gD** **Final report under FRA review.**
Non-pressure tank car fittings protection	Current research on more robust concepts that could protect fittings in more severe accident scenarios. These concepts include: -Recession of the fittings arrangements down below the tank top shell surface; & Using deflective geometry through a structural roll bar arrangement or a fabricated skid welded through pads to protect the fittings. Initial simulations of these concepts indicate that they provide more significant protection, especially at higher speeds.	FRA	(Note: Results to be shared with TCC)	Sharma Associates	Phase II Completed. Working on Phase III	**Report published:** **DOT/FRA/ORD-16/12** **http://www.fra.dot.gov/eLib/details/L17462#p4_z50_gD** **Phase III test performed August 2017. Report due in May.**
Tank Car Environment Study	The main goal of this project is to have the instrumented tank car couple with the FRA's T16 high-speed research vehicle and record the track geometry and train handling along with the trainloads to have a complete picture of the environment.	FRA	(Note: Results to be shared with TCC)	ENSCO	Ongoing	**Report Published:** **DOT/FRA/ORD-16/39** **http://www.fra.dot.gov/eLib/details/L18474#p1_z50_gD** **Ongoing**

Project Title	Abstract	Sponsor(s)	Dockets	Contractor(s)	Completion Target	Status
						Phase II ongoing. Testing for Coupling Load Analysis underway. Part 1 finished (Anvil car). Part 2 Started
Evaluation of Loading and Unloading Operations for Molten Sulphur Rail Tank Cars	The FRA wants to work with The Sulphur Institute and with industry to reduce these occurrences of solid sulphur residue on molten sulphur rail tank cars.	FRA		TSI	October 2017	**The study on Sulphuric and Spent Sulphuric Acid Completed Final report submitted to FRA**
Small Scale fire testing	Demonstrate by scaled testing that in rail tank cars loaded with Sodium Hydroxide solution (NaOH) or Potassium Hydroxide solution (KOH) solutions and not equipped with a PRD can survive a minimum of 100 minutes in a pool fire without rupture or otherwise release any lading.	FRA		Sharma & Associates, Dr. Burke, The Chlorine Institute.	**June** 2015	**Final Report will be published in April**
Full scale Crash test of tank cars	Conduct four tank car crash tests in a period of two years. The specimens will be four different specification tank cars	FRA		TTC	December 2017	**Report published on DOT 112.** **DOT/FRA/ORD-16/38.** **http://www.fra.dot.gov/eLib/details/L18451#p1_z50_gD** **Research Results Published for DOT 105 and DOT 117.** **Working on Technical Reports.**
Evaluation of Risk Reduction from Tank	This research utilizes a novel and objective methodology for quantifying	FRA, TC		Sharma & Associates, Ltd.	**December 2016**	**Completed Phase I, and Phase II,**

Project Title	Abstract	Sponsor(s)	Dockets	Contractor(s)	Completion Target	Status
Car Design & Operations	and characterizing the reductions in risk (or reductions in puncture probabilities) that result from changes to tank car designs or the tank car operating environment.					**Published under the docket (HM-251) FAST act tests finished and results published on docket.**
Full-scale fire test on a UN-T75 ISO tank (LNG service)	Obtain experimental data in a full-scale fire test. Provide a realistic fire exposure to the tank and flatcar.	FRA		SwRI, Sharma & Associates	**October 2017**	**Test performed at SwRI in May 2017. Draft report under review. Phase II started. Second test will be Fall 2018**
Evaluating Performance Of Tank Car Pressure Relief Devices Under Fire Conditions	The intent of this project is to evaluate PRD performance under fire conditions through high temperature fire testing. No analytical evaluations of PRD performance are planned. This effort will be delivered through the development of a test matrix, the development of a suitable fire test setup, confirmatory/demonstration testing of the setup, followed by execution of the full test matrix. It is intended that this testing be achieved through one-fourth or one-third scale test tanks (compared to full scale tank cars), though the PRDs are expected to be full scale.	FRA		Sharma and Associates	**May 2019**	**Contract issued, Building the tank, obtained the valves. Possible date for the first test June 2018.**
LNG tender railroad crossing accident scenario test.	Perform a full scale test on a LNG tender in accordance with AAR M1004	FRA, PHMSA,		CVA, SWrI, S&A, TTC,	**December 2019**	**Working on building tender and plans to do the test at TTC February 2019.**

Contact:
Francisco González, III
Tank Car and Hazardous Materials Project Manager
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U.S. Department of Transportation Federal Railroad Administration
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There is a new section for Miscellaneous Hazmat papers, for reports not published by FRA, but sponsored by FRA.

The SWRI report on the Properties of Tank Car steels retired from the fleet is in this section, ASME papers and the NGRTC reports.

http://www.fra.dot.gov/Page/P0505

ASSOCIATION OF AMERICAN RAILROADS

Transport Canada – Research update – March 2018

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Project Title	**Abstract**	*Sponsor*	**Contractor**	**Target end date**	Status
Research Related to the Transport of Petroleum Crude Oil	TC is working with the Canadian Crude Quality Technical Association (CCQTA) on several projects: 1. Develop and validate a field tester to measure H2S gas concentration that evolves into the vapour space of a petroleum crude oil container under equilibrium conditions. 2. Crude Oil Flammability Study – test and assess the variability in flammability of a variety of North American crudes to better understand the risks associated with a release during transport.	TC / CCQTA and research partners	CCQTA and various research partners - Natural Resources Canada, Alberta Innovates Technology Futures, Albert Department of Energy, Omnicon Consultants	Project 1: Dec 2018 Project 2: Sept 2017	**Project 1:** The overall goal is an ASTM method for this tester. Project is under way. A preliminary prototype of the automated field tester has been finalized. However, due to new technical issues, an improved prototype will be available in September 2018. **Project 2:** Initial testing of dilbit and conventional crude flammability has been conducted and completed. Phase 1 is complete. Phase 2 work is has been completed; bitumen with varying amounts of diluents have been investigated for their flammability (flash point) and sustained combustion (or ability to self-extinguish). Bench scale flammability studies on a few crude oils have been completed
Behavior of crude oil and other complex mixtures in tank cars exposed to fire conditions	A combination of experimental work and computational modelling to determine how tank cars containing crude oil and other complex mixtures behave when exposed to fire conditions.	TC	National Research Council of Canada, Sandia National Labs	Literature Review Complete. Testing: 2017-2018	Final report on literature review and test plan completed. Continued problems with experiments have delayed testing. Two metre pool fire tests were conducted using Bakken crude oil in January 2018. Additional crude oil pool fire tests are being considered for FY2018-2019.
Crude Oil Equation of State Modeling	A combination of experimental work and computational modelling to	TC	Natural Resources	Initial modeling	Literature review and modeling work completed.

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and Experimental Test Validation	determine how crude oil behaves when heated in a closed container (such as a tank car).		Canada (NRCan)	and experimental validation work completed in March 2018. Potential for further testing and modeling in 2018-2019.	Medium crude model validation work completed in 2017. Dilbit and heavy crude oil model validation work completed in March 2018. Draft report to be delivered in TC in April 2018.
Computational 2D Modeling of Behavior of Tank Cars Carrying Crude Oil in Fires	Investigate using computation fluid dynamics to model fluid motion and heat transfer in tank cars carrying crude oil or other flammable liquids in fires.	TC	Natural Resources Canada (NRCan)	Initial modelling complete. Current end date May 2018.	2D modelling complete. For 2017-2018 investigating performance of PRVs releasing liquid crude oil and effectiveness of an air gap between a tank car jacket and shell as thermal protection (assuming insulation has degraded and is no longer effective). Work is complete on these two areas, and a draft report has been delivered to TC.
Tank Car Steels Investigation	Review of available information on TC128B and ASTM A516 grade 70 steels. Investigate low temperature fracture toughness and high temperature performance of more recent iterations of TC128B and ASTM A516 grade 70 steels.	TC	Natural Resources Canada (NRCan)	Literature Review, testing and final reporting completed.	Fracture toughness, high temperature performance, and corrosion literature reviews completed. Fracture toughness of TC128B completed and report completed. TC128B high temperature testing is complete. Fracture toughness and high temperature performance of ASTM A516 Gr. 70 steel were investigated. Reports have been received by TC.
Jack Rabbit II Project	Large-scale chlorine release testing to improve understanding and fill critical knowledge, data, and capability gaps for chlorine and toxic inhalation hazard (TIH) chemical releases, which have never been experimentally tested or validated at scales represented by rail car, tanker truck, barge, or storage tank release scenarios.	TC/US Department of Homeland Security (project lead)	US DHS and a number of government and industry partners, University of Arkansas	June 2018	Large scale chlorine releases completed in August/September 2016. Final test report has not yet been published by US DHS. TC has obtained additional funding to support smaller-scale chamber testing – with more focus on quantifying the reactivity of chlorine with

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					organic materials and on chlorine deposition to impact on dispersion. This work has begun and the experimental matrix is being finalized. Experiments will take place at University of Arkansas in April-May 2018.
Tank Car Lading Structure Interaction (Sloshing)	Assessing effect of sloshing on probability of derailment.	TC	National Research Council of Canada	February 2018 (project is complete)	NRC held a workshop on their findings on Aug. 25, 2017. Final provided to TC in February 2018.
Modelling of a cryogenic UN portable tank during fire testing	Develop a model of an UN portable tank containing a cryogenic liquid, exposed to fire. The tank geometry will be incorporated into numerical simulation software capable of modelling chemical reactions, thermal loading and two phase equation of state. Model will be validated using data from the FRA's full scale UN portable tank fires.	TC	Friedman Research Corporation (FRC)	Phase 1 will be complete in March 2018, with possibility of extension.	Task 1 - Data analysis from FRA's UN portable tank fire test (nitrogen lading) includes review of: flow rate through PRV, heat flux applied to the tank, internal tank conditions throughout test. Tasks 2 and 3 incorporated the tank geometry into the simulation software to simulate the fire test environment and validate the model. Task 4 is an incorporation of the phase change effects of the liquid nitrogen into the model. Report to be delivered to TC in late March 2018.
Crude oil freight demand model for quantitative risk assessment	Development of a preliminary crude oil freight demand model for eventual use in quantitative risk assessment.	TC	University of Waterloo	Completed in March 2017	An empirical rail and pipeline crude oil freight model was developed to identify the potential modal split of crude oil transport between pipeline and rail. The model can be used for crude oil shipment forecasting or scenario analysis. Future applications could include quantitative risk analysis (QRA).