

ASSOCIATION
OF AMERICAN
RAILROADS

P. G. Kinnecom
Executive Director - Tank Car Safety

March 1, 2005

CIRCULAR NO. OT-55-G

(CPC-1165)

SUBJECT: Recommended Railroad Operating Practices for Transportation of Hazardous Materials

TO MEMBERS AND PRIVATE CAR OWNERS:

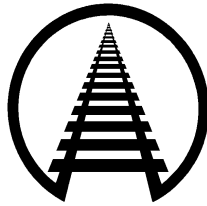
Based on recommendations of the Inter-Industry Task Force on the Safe Transportation of Hazardous Materials by Rail, AAR published Circular No. OT-55 on January 4, 1990 to document recommended railroad operating practices for the transportation of hazardous materials. The circular included recommended road and yard operating practices, designation of key routes, proposed separations from hazmat storage areas, training of transportation employees, and implementation of TRANSCAER®, a national community outreach program to improve community awareness, emergency planning and incident response for the transportation of hazardous materials.

Circular No. OT-55 has been modified to revision G dated 3/1/2005 (copy attached). Circular No. OT-55-G incorporates an industry policy and includes a template for railroads' use in documenting requests from local emergency response agencies to provide commodity flow information.

A copy of Circular No. OT-55-G, *Recommended Railroad Operating Practices for Transportation of Hazardous Materials*, is attached for your reference and use. Changes in the text have been underlined.

Sincerely,

P. G. Kinnecom



**ASSOCIATION
OF AMERICAN
RAILROADS**

R.C. VanderClute
Senior Vice President
Safety and Operations

March 1, 2005

Circular No. OT-55-G

Recommended Railroad Operating Practices For Transportation of Hazardous Materials

Chief Operating Officers:

Based on recommendations of the AAR Risk Management Working Committee, the Safety and Operations Management Committee, on February 17, 2005, approved the following revised recommended operating practices for the transportation of hazardous materials. They are effective March 1, 2005.

Road Operating Practices

I. "Key Trains"

- A. Definition: Any train with five tank car loads of Poison Inhalation Hazard (Hazard Zone A or B) or 20 car loads or intermodal portable tank loads of a combination of PIH (Hazard Zone A or B), flammable gas, Class 1.1 or 1.2 explosives, and environmentally sensitive chemicals, or one or more car loads of Spent Nuclear Fuel (SNF), High Level Radioactive Waste (HLRW) shall be called a "Key Train". Attached as Appendix, A is a list of PIH (Hazard zone A or B) and environmentally sensitive chemicals with 49 Hazmat Codes.
- B. Restrictions:
1. Maximum speed -- "Key Train" - 50 MPH.
 2. Unless siding or auxiliary track meets FRA Class 2 standards, a Key Train will hold main track at meeting or passing points, when practicable.
 3. Only cars equipped with roller bearings will be allowed in a Key Train.
 4. If a defect in a "Key Train" bearing is reported by a wayside detector, but a visual inspection fails to confirm evidence of a defect, the train will not exceed 30 MPH until it has passed over the next wayside detector or delivered to a terminal for a mechanical inspection. If the same car again sets off the next detector or is found to be defective, it must be set out from the train.

II. Designation of "Key Routes"

- A. Definition: Any track with a combination of 10,000 car loads or intermodal portable tank loads of hazardous materials, or a combination of 4,000 car loadings of PIH (Hazard zone A or B), flammables, Class 1.1 or 1.2 explosives, environmentally sensitive chemicals, Spent Nuclear Fuel (SNF), and High Level Radioactive Waste (HLRW) over a period of one year.

B. Requirements:

1. Wayside defective bearing detectors shall be placed at a maximum of 40 miles apart on "Key Routes", or equivalent level of protection may be installed based on improvements in technology.
2. Main Track on "Key Routes" is inspected by rail defect detection and track geometry inspection cars or any equivalent level of inspection no less than two times each year; sidings are similarly inspected no less than one time each year; and main track and sidings will have periodic track inspections that will identify cracks or breaks in joint bars.
3. Any track used for meeting and passing "Key Trains" must be Class 2 or higher. If a meet or pass must occur on less than Class 2 track due to an emergency, one of the trains must be stopped before the other train passes.

III. Yard Operating Practices

- A. Maximum reasonable efforts will be made to achieve coupling of loaded placarded tank cars at speeds not to exceed 4 MPH.
- B. Loaded placarded tank cars of PIH (Hazard zone A or B) or flammable gas which are cut off in motion for coupling must be handled in not more than 2-car cuts; and cars cut off in motion to be coupled directly to a loaded placarded tank car of PIH (Hazard zone A or B) or flammable gas must also be handled on not more than 2-car cuts.

IV. Storage

Separation Distance for New Facilities

Loaded Tank Cars and Storage Tanks from Mainline Class II Track or Higher

Activity	PIH (Zone A or B), Class 3, Division 2.1, Division 2.2 and all other Hazard Classes	Combustible Liquids, Class 8, and Class 9
Loading and Unloading	100 FEET	50 FEET
Storage of Loaded Tank Cars	50 FEET	25 FEET
Storage in Tanks	100 FEET	50 FEET

Note 1 - With regard to existing facilities, maximum reasonable effort should be made to conform to this standard taking into consideration cost, physical and legal constraints.

Note 2 - The proposals apply to storage on railroad property and on chemical company property located close to railroad mainline.

V. TRANSCAER® (Transportation Community Awareness and Emergency Response Implementation of Transcaer®)

Railroads will assist in implementing TRANSCAER®, a system-wide community outreach program to improve community awareness, emergency planning and incident response for the transportation of hazardous materials. Objectives of TRANSCAER® are as follows:

- Demonstrate the continuing commitment of chemical manufacturers and transporters to the safe transportation of hazardous materials;

- Improve the relationship between manufacturers, carriers and local officials of communities through which hazardous materials are transported;
- When requested assist Local Emergency Planning Committees (LEPC's) in assessing the hazardous materials moving through their communities and the safeguards that are in place to protect against unintentional releases. Upon written request, AAR members will provide bona fide emergency response agencies or planning groups with specific commodity flow information covering at a minimum the top 25 hazardous commodities transported through the community in rank order. The request must be made using the form included as Appendix B by an official emergency response or planning group with a cover letter on appropriate letterhead bearing an authorized signature. The form reflects the fact that the railroad industry considers this information to be restricted information of a security sensitive nature and that the recipient of the information must agree to release the information only to bona fide emergency response planning and response organizations and not distribute the information publicly in whole or in part without the individual railroad's express written permission. It should be noted that commercial requirements change over time, and it is possible that a hazardous materials transported tomorrow might not be included in the specific commodity flow information provided upon request, since that information was not available at the time the list was provided;
- Assist LEPC's in developing emergency plans to cope with hazardous materials transportation incidents;
- Assist community response organizations in preparations for responding to hazardous materials incidents.

TRANSCAER® activities are also addressed in the Distribution Code of the American Chemistry Council's Responsible Care® program. Many members have joined the Responsible Care® Partnership Program to help describe and improve their ongoing safety, health and environmental programs.

An important product of the TRANSCAER® program will be to overcome the widespread belief that every local firefighter and policeman must have the expert skills and equipment to respond personally to any hazardous materials emergency. Through the awareness training and contingency planning provided through TRANSCAER®, states and local communities will be able to pool their expertise and resources with those of industry to provide for a more coordinated and better managed emergency response system.

TRANSCAER® should be highly publicized to produce the maximum desirable enhancement of public awareness.

VI. Criteria for Shipper Notification

The railroads will initiate the shipper's emergency response system by calling CHEMTREC, or the appropriate contact telephone number as required by regulation on the shipping document, when an incident occurs involving any car (load or residue) containing a hazardous material regulated in transportation by the Department of Transportation.

An incident is defined as a rail car which is derailed and not upright, or which has sustained body or tank shell damage, or has sustained a release of any amount of product.

The shipper's emergency response system should also be initiated if the carrier believes there is reason to suspect any other potential for injury to people, property or the environment.

In the event of a major rail accident, a consist (to include shipper, consignee and commodity description for each hazardous material), waybill or equivalent document, should be provided upon request to CHEMTREC or the appropriate shipper contact as identified by the emergency response telephone number displayed on the shipping document. This can be accomplished by facsimile or other appropriate and acceptable electronic means.

A major rail accident is defined as one resulting in fire, explosion, the potential for an explosion, fatalities, evacuation of the general public, or multiple releases of hazardous materials.

Anytime a consist or other document is provided to CHEMTREC or the appropriate contact a follow-up call by the carrier should be made to confirm the receipt of the information as well as to provide other additional information pertaining to the incident not contained in the facsimile or electronically transmitted document.

This practice does not preclude any carrier from notifying CHEMTREC or the appropriate shipper contact of a rail incident involving hazardous materials that does not meet the criteria outlined above.

VII Time Sensitive Materials

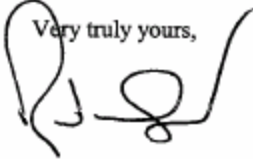
Railroads and shippers will be responsible for monitoring the shipments (loads & residue) of products classified by the Department of Transportation as being time sensitive.

This monitoring process will, at a minimum, provide a means to ensure the movement of rail cars containing time sensitive materials (for list see Appendix A, page 6) in order to achieve delivery of the product within the time specified by the Department of Transportation.

As warranted, railroads will implement an internal escalation process and communicate with shippers, receivers and other rail carriers concerning any rail car containing a time sensitive product that has been delayed in transit to the extent that it may not reach destination within the time specified by the Department of Transportation. In such cases, an expedited movement of the rail car, or other action as deemed appropriate by the carrier and shipper will be taken.

Each AAR member will commit without reservation to comply with these recommendations/standards on its operations within the United States of America.

On behalf of the Safety and Operations Management Committee.

Very truly yours,

R.C. VanderClute

Attachment

Supersedes Circular No. OT-55-F dated May 14, 2004.

**Appendix A to
Circular OT-55-G**

March 1, 2005
(Appendix A last modified May 14, 2004)

Poisonous Inhalation Hazard Liquids

Acetone cyanohydrin, stabilized	4921401
Acrolein, inhibited	4927007
Allyl alcohol	4921019
Allylamine	4921004
Allyl chloroformate	4930001/4923113
Arsenic trichloride	4923209
Boron tribromide	4932010
Bromine or Bromine solutions	4936110
Bromine trifluoride	4918507
Bromine pentafluoride	4918505
Bromoacetone	4921727
n-Butyl chloroformate	4921730
sec-Butyl chloroformate	4921207
n-Butyl isocyanate	4907415/4927027
tert-Butyl isocyanate	4907485/4927026
Chloroacetone, stabilized	4921558
Chloroacetonitrile	4921009
Chloroacetyl chloride	4931210/4923117
Chloropicrin	4921414
2-Chloroethanal	4921402
Chloropivaloyl chloride	4921746
Chlorosulfonic acid	4930204
Crotonaldehyde, stabilized	4909137/4921248
Cyclohexyl isocyanate	4921010
3, 5 Dichloro-2, 4, 6 trifluoropyridine	4921741
Diketene, inhibited	4912433/4921254
Dimethylhydrazine, symmetrical	4909352/4921251
Dimethylhydrazine, unsymmetrical	4921202
Dimethyl sulfate	4921405
Ethyl chloroformate	4921020
Ethyl chlorothioformate	4933327
Ethyl dichloroarsine	4921404
Ethylene chlorohydrin	4921420
Ethylene dibromide	4921497
Ethyleneimine, inhibited	4927006
Ethyl isocyanate	4907434
Ethyl phosphonothioic dichloride, anhydrous	4921745
Ethyl phosphonous dichloride, anhydrous	4921742
Ethyl phosphorodichloridate	4921744
Hexachlorocyclopentadiene	4821722/4921722
Hydrocyanic acid solution in alcohol	4921239
Hydrocyanic acid aqueous solution or hydrogen cyanide, aqueous solutions	4921028
Hydrogen cyanide, stabilized	4927014
Iron pentacarbonyl	4927004
Isobutyl chloroformate	4921211
Isobutyl isocyanate	4907409
Isopropyl chloroformate	4907628/4921252

Isopropyl isocyanate	4909306
Methacrylonitrile, inhibited	4910370
Methanesulfonyl chloride	4921239
Methyl isothiocyanate	4907453
Methoxymethyl isocyanate	4909307
Methyl bromide and ethylene dibromide,mixture	4921438
Methyl chloroformate	4927008
Methylchloromethyl ether	4927012
Methyldichloroarsine	4921275
Methylhydrazine	4927011
Methyl iodide	4921304
Methyl isocyanate	4927009/4921487
Methyl orthosilicate	4907452/4921255
Methyl phosphonic dichloride	4921695
Methyl phosphonous dichloride	4921008
Methyl vinyl ketone, Stabilized	4927022
Nickel carbonyl	4927010
Nitric acid, red fuming	4931201
Pentaborane	4916138
Perchloromethylmercaptan	4921473
Phenylcarbylamine chloride	4921587
Phenyl isocyanate	4921216
Phenyl mercaptan	4921413
Phosphorus oxychloride	4932352
Phosphorus trichloride	4921016/4832359/ 4932359
Poisonous liquids, corrosive, n.o.s. (antimony pentachloride, arsenic trichloride)	4821269/4921269
Poisonous liquids, corrosive, n.o.s. (sulfur chloride)	4921276
Poisonous liquids, corrosive, n.o.s. (vanadium oxytrichloride and titanium tetrachloride)	4921262
Poisonous liquids, corrosive, n.o.s. (sulfur dichloride)	4921223
n-Propyl chloroformate	4921756
n-Propyl isocyanate	4907458/4927025
Sulfur Chloride	4930260
Sulfuric acid, fuming	4830030/4930030
Sulfur trioxide, inhibited	4930050/4936565
Sulfur trioxide, uninhibited	4930051
Tetranitromethane	4918180
Thiophosgene	4923298
Titanium tetrachloride	4932385
Toxic liquid, inorganic, n.o.s. [inhalation hazard, Packing Group I Zone A]	4927020
[inhalation hazard, Packing Group I Zone B]	4921234
Toxic liquid, corrosive, inorganic, n.o.s. [inhalation hazard, Packing Group I Zone A]	4927021
[inhalation hazard, Packing Group I Zone B]	4921237

Toxic liquid, corrosive, inorganic, n.o.s. (antimony pentachloride, arsenic trichloride)	4821261/4921261
Toxic liquid, corrosive, inorganic, n.o.s. (sulfur dichloride)	4921264
Toxic liquid, corrosive, inorganic, n.o.s. (sulfur chloride)	4921278
Toxic liquids, corrosive, organic, n.o.s. [Inhalation Hazard, Packing Group I, Zone A]	4927005
[Inhalation Hazard, Packing Group I, Zone B]	4921270
Toxic liquids, corrosive, organic, n.o.s. (bis(tri-chloromethyl sulfide and dimethyl formamide)	4921263
Toxic liquids, flammable, organic, n.o.s. [inhalation hazard, Packing Group I Zone A]	4927001
[inhalation hazard, Packing Group I Zone B]	4921271
Toxic liquids, flammable, organic, n.o.s. (chloropicrin)	4921015
Toxic liquids, flammable, organic, n.o.s. (chloropicrin, dichloropropene)	4921064
Toxic liquids, flammable, organic, n.o.s. (methylchlorosilane, dimethylchlorosilane)	4921021
Toxic liquids, organic, n.o.s. [inhalation hazard, Packing Group I Zone A]	4927002
[inhalation hazard, Packing Group I Zone B]	4921272
Toxic liquids, oxidizing, n.o.s. [inhalation hazard, Packing Group I Zone A]	4927003
[inhalation hazard, Packing Group I Zone B]	4921273
Toxic liquids, water-reactive, n.o.s. [inhalation hazard, Packing Group I Zone A]	4927030
[inhalation hazard, Packing Group I Zone B]	4921256
Trichloroacetyl chloride	4935231
Trimethyl acetylchloride	4921063
Trimethyloxysilane	4921213
Trimethylacetyl chloride	4931745

Poisonous Inhalation Hazard Gases - Hazard Zones A & B

Arsine	4920135
Boron trifluoride	4920522
Bromine chloride	4920715
Carbonyl fluoride	4920559
Chlorine	4920523
Chlorine pentafluoride	4920189
Chlorine trifluoride	4920352
Chloropicrin and methyl bromide mixtures	4920547/4920516
Chloropicrin and methyl chloride mixtures	4920392
Compressed or liquefied gas, toxic, flammable, n.o.s.	
[inhalation hazard Zone A]	4920165
[inhalation hazard Zone B]	4920396
Compressed or liquified gas, toxic, n.o.s.	
[inhalation hazard] Zone A]	4920181
[inhalation hazard] Zone B]	4920570
Compressed gas, toxic, corrosive, n.o.s.	
[inhalation hazard] Zone A]	4920102
[inhalation hazard] Zone B]	4920331
Compressed gas, toxic, flammable, corrosive, n.o.s.	
[inhalation hazard] Zone A]	4920102
[inhalation hazard] Zone B]	4920303
Compressed gas, toxic, oxidizing, corrosive, n.o.s.	
[inhalation hazard] Zone A]	4920103
[inhalation hazard] Zone B]	4920306
Compressed gas, toxic, oxidizing, n.o.s.	
[inhalation hazard] Zone A]	4920104
[inhalation hazard] Zone B]	4920337
Cyanogen chloride, inhibited	4920178
Cyanogen, liquified	4920395
Diborane	4920107
Dichlorosilane	4920398
Dinitrogen tetroxide, liquefied	4920174
Fluorine, compressed	4920180
Germane	4920354
Hexafluoroacetone	4920528
Hydrogen selenide, anhydrous	4920122
Hydrogen sulfide, liquefied	4920513
Insecticide gas, toxic, flammable, n.o.s.	
[inhalation hazard Zone A]	4920116
[inhalation hazard Zone B]	4920302
Liquified gas, toxic, n.o.s.	
[inhalation hazard] Zone A]	4920195
[inhalation hazard] Zone B]	4920571
Liquefied gas, toxic, flammable, n.o.s.	
[inhalation hazard Zone A]	4920164
[inhalation hazard Zone B]	4920382
Liquefied gas, toxic, corrosive, n.o.s.	
[inhalation hazard Zone A]	4920105
[inhalation hazard Zone B]	4920311
Liquefied gas, toxic, flammable, corrosive, n.o.s.	
[inhalation hazard Zone A]	4920108
[inhalation hazard Zone B]	4920314

Liquefied gas, toxic, oxidizing, corrosive, n.o.s	
[inhalation hazard Zone A]	4920110
[inhalation hazard Zone B]	4920312
Liquefied gas, toxic, oxidizing, n.o.s	
[inhalation hazard Zone A]	4920111
[inhalation hazard Zone B]	4920317
Methylchlorosilane	4920394
Nitric oxide	4920112
Nitric oxide and dinitrogen tetroxide mixtures	4920113
Nitrogen dioxide	4920174
Nitrogen trioxide	4920175
Oxygen difluoride	4920173
Perchloryl fluoride	4920356
Phosgene	4920184
Phosphine	4920160
Phosphorus pentafluoride	4920183
Silicon Tetrafluoride	4920357
Selenium hexafluoride	4920106
Stibine	4920167
Sulfur tetrafluoride	4920187
Tellurium hexafluoride	4920188
Trifluoroacetylchloride	4920347
Tungsten Hexafluoride	4920371

Environmentally Sensitive Chemicals

Allyl Chloride	4907412
Carbon Tetrachloride	4821831/4860106/ 4921830/4921831/ 4960115
Chlorobenzene	4909153
Chloroform	4925224/4925225 4921767/4921769
o-Dichlorobenzene	4915132/4925203
Dichloropropane (Propylene dichloride)	4909265
Dichloropropane/Dichloropropene mixture	4910234
Dichloropropene	4909255
Ethyl Chloride	4905712/4908129/ 4908162
Ethylene Dibromide (already listed as PIH)	
Ethylene Dibromide and Methyl Bromide Mixtures (already listed as PIH)	
Ethylene Dichloride	4909166/4912081/ 4908129/4910437/ 4913242/4913295/ 4921030
Epichlorohydrin	4921005
Methyl Chloroform (1,1,1 Trichloroethane)	4825182/4925182/ 4910463/4010475/ 4915969/4925310/ 4960205
Methylene Chloride (Dichloromethane)	4925131/4905764
Methylene chloride/chloroform mixture	4960150
Perchloroethylene (Tetrachloroethylene)	4825202/4910134 4840355/4925202
Perchloroethylene/Trichloroethylene mixture	4940373
Trichloroethylene	4925181

Time Sensitive Materials**20 day**

Ethylene, refrigerated liquid	4905735
Hydrogen, refrigerated liquid	4905745
Chloroprene, stabilized	4907223
Flammable Liquid, n.o.s. (Methyl Methacrylate Monomer, uninhibited)	4907255
Hydrogen chloride, refrigerated liquid	4920504

30 day

Styrene monomer, stabilized	4907265
Flammable Liquid, n.o.s. (Recycled styrene)	4910159
Styrene monomer, stabilized	4907235

**Appendix B to
Circular OT-55-G**

March 1, 2005

[Company LOGO]

Request for Hazardous Materials COMMODITY FLOW INFORMATION

Organization Requesting Information : _____

Contact Person: _____

Phone Number: _____

Email Address: _____

Mailing Address: _____
(Street Address)

(City, State, Zip)

Geographical Description of Area for study: _____

Preferred method to receive report: Email U.S. Mail (Mark One)

By signing below I acknowledge and agree to the terms set forth by **[RAILROAD NAME]** for use and dissemination of the **[RAILROAD'S]** Hazardous Materials Commodity Flow Information . **[RAILROAD'S NAME]** considers this information to be restricted information of a security sensitive nature. I thus affirm and agree that the information provided by **[RAILROAD NAME]** in this report will be used solely for and by bona fide emergency planning and response organizations for the expressed purpose of emergency and contingency planning. This information will not be distributed publicly in whole or in part without the expressed written permission of **[RAILROAD NAME]**.

(Signature of person requesting commodity flow information)

Return Completed Form to: [INSERT RAILROAD NAME AND ADDRESS]

For [RAILROAD] Use Only

[PERSON RESPONSIBLE FOR APPROVAL]: ___Yes___ NO Date: _____

Hazardous Materials Service Support:

Date Request Received: _____

Time Period Covered: _____

Date Report Sent: _____

Report sent via: Email U.S. Mail