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Collision - BNSF
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BNSF
United States
Hazardous Material
Instructions for Rail
Effective July 29, 2009

BNSF Railway Safety Vision

We believe every accident or injury is preventable. Our vision is that BNSF Railway will operate free of accidents and injuries. BNSF Railway will achieve this vision through:

A culture that makes safety our highest priority and provides continuous self-examination as to the effectiveness of our safety process and performance...

A work environment, including the resources and tools, that is safe and accident-free where all known hazards will be eliminated or safe-guarded...

Work practices and training for all employees that make safety essential to the tasks we perform...

An empowered work force, including all employees, that takes responsibility for personal safety, the safety of fellow employees, and the communities in which we serve.

BNSF SM RAILWAY

United States Hazardous Material Instructions for Rail

IN EFFECT AT 0001
Central, Mountain, and
Pacific Continental Time

Wednesday, July 29, 2009

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Introduction

1. Purpose

One of the rail industry's primary focuses continues to be the safe transportation of hazardous materials. Rail employees interact regularly with employees of other railroads. If subscribing railroads implement and consistently apply a standard set of rules and regulations, we will significantly enhance both our employees' safety and the safety of the communities through which we operate. Those railroads involved in developing the **United States Hazardous Material Instructions for Rail** therefore worked together to create these instructions for employees who transport hazardous materials.

2. Policy

To handle hazardous material shipments or incidents safely and efficiently, without delay, and in accord with local, state, and federal regulations, it is imperative that you familiarize yourself with the **United States Hazardous Material Instructions for Rail**, in addition to other operating rules. These instructions provide guidance on how to perform your duties so that both you and the company will comply with Department of Transportation (DOT) regulations.

Transportation employees who inspect or transport hazardous material by rail must have a copy of and comply with the **United States Hazardous Material Instructions for Rail**.

Employees who transport hazardous materials must also have a copy of the current **Emergency Response Guidebook** (ERG) readily accessible while on duty.

The company will provide appropriate training to each employee who directly affects hazardous material transportation safety.

Always keep in mind that the company requires you to comply fully with the law. Compliance with the letter and spirit of our obligations is good corporate citizenship and is basic to achieving quality in all areas of our operations. Each of us has a duty to see that the railroad's actions are consistent with the highest legal and ethical standards.

3. Questions

For questions about the **United States Hazardous Material Instructions for Rail**, contact your immediate supervisor or the HazMat Department at (785) 435-3570.

4. In effect 0001, Wednesday, July 29, 2009.

5. Additions and Corrections

Individual railroads will make changes in these instructions through appropriate means. (BNSF will use General Order.)

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I. General Instructions

1. Definition of Hazardous Material

A. Hazardous materials are defined as "a substance or material which the Secretary of Transportation has determined to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce."

B. Hazardous materials are classified according to their chemical and/or physical properties. There are two worded classes and nine numeric classes, some of which may be divided into divisions. A hazardous material is assigned to only one class, even if it meets the definition of more than one hazard class. Table 1 lists the hazard classes and divisions.

C. The term "hazardous material" includes hazardous substances, hazardous wastes, elevated temperature materials (HOT or MOLTEN), and marine pollutants.

Numbered Classes and Divisions

1 – *Explosives*

1.1 – Explosive with mass explosion hazard
1.2 – Explosive with projection hazard
1.3 – Explosive with predominantly fire hazard
1.4 – Explosive with no significant blast hazard
1.5 – Very insensitive explosive; blasting agent
1.6 – Extremely insensitive detonating substance

2 – *Gases*

2.1 – Flammable gas
2.2 – Nonflammable, nonpoisonous, (nontoxic) compressed gas
2.3 – Gas poisonous (toxic) by inhalation

3 – *Flammable Liquids*

4 – *Flammable Solids and Reactive Solids/Liquids*

4.1 – Flammable solid
4.2 – Spontaneously combustible material
4.3 – Dangerous when wet material

5 – *Oxidizers and Organic Peroxides*

5.1 – Oxidizer
5.2 – Organic peroxide

6 – *Poisonous (Toxic) Materials and Infectious Substances*

6.1 – Poisonous (toxic) material
6.2 – Infectious substance

7 – *Radioactive Materials*

8 – *Corrosive Materials*

9 – *Miscellaneous Hazardous Materials*

Worded Classes

Combustible Liquids (regulated in bulk packaging)

ORM-D (Other Regulated Materials – Group D) (regulated in air transportation only)

Table 1. Hazard Classes and Divisions

2. General DOT Requirement

A. No person may offer, accept, or transport a hazardous material in commerce unless that material is properly classed, described, packaged, marked, labeled, and placarded and is in proper condition for transportation according to DOT and International regulations.

B. No person may transport a hazardous material in commerce unless the hazardous material is handled and transported according to DOT regulations.

3. Expediting Hazardous Material Shipments

Loaded hazardous material shipments and both loaded and residue/empty time-sensitive shipments (see Table 2) must be forwarded either:

A. Within 48 hours (excluding Saturdays, Sundays, and holidays) after accepting them at the shipper's facility or receiving them in any yard, intermediate (transfer) station, or interchange point,

or

B. When only bi-weekly or weekly service is performed, on the first available train toward the destination.

Exceptions:

- The 48-hour requirement does not apply to shipments that are constructively placed or placed for repairs.
- Only at locations designated in DOT Special Permit 14436, UN1005 (Anhydrous Ammonia) and TIH/PIH shipments may be held to run on specified days. The Special Permit allows this traffic to be held more than 48 hours, but not to exceed 14 days. These locations must maintain a copy of DOT Special Permit. A copy of SP-14436 may be obtained at the following BNSF intranet address:

  http://bnsfweb.bnsf.com/departments/envhaz/hazmat.html

20 Day
(1) Ethylene, refrigerated liquid - UN 1038
(2) Hydrogen, refrigerated liquid - UN 1966
(3) Chloroprene, stabilzed - UN 1991
(4) Flammable Liquid, n.o.s. (Methyl Methacrylate Monomer, uninhibited)- UN 1993
(5) Hydrogen chloride, refrigerated liquid - UN 2186
(6) Vinyl Fluoride, stabilized - UN 1860
30 Day
(1) Styrene monomer, stabilized - UN 2055
(2) Flammable Liquid, n.o.s. (Recycled styrene) - UN 1993

Table 2. Time-Sensitive Shipments

4. Exceptions for U.S. Government Material

A. Department of Energy (DOE) and Department of Defense (DOD) shipments made for the purpose of national security and accompanied by escorts (personnel specifically designated by or under the authority of DOD or DOE) are not subject to DOT regulations or to the instructions in this book.

B. Escorts must travel in a separate transport vehicle from the rail car carrying the hazardous materials.

C. The escorts must have, in their possession, a document certifying that the shipment is for the purpose of national security.

5. International Shipments

International shipments of hazardous materials (including shipments to and from Mexico and Canada), moving with proper International documents and International placards, may be transported in the United States (U.S.):

A. From a U.S. port of entry to their U.S. destination.

B. When moving through the U.S. to a foreign destination.

C. From a U.S. point of origin to the International port of entry, when the cars are either:

1. Returning residue shipments,

   or

2. Regulated Internationally but not in the U.S.

6. Speed Restrictions for Loaded Tank Cars containing PIH/TIH and Inhalation Hazard Materials

Loaded tank cars identified on shipping papers with the phrase "POISON (TOXIC)-INHALATION HAZARD" or "INHALATION HAZARD" and/or SCHI code "IH" are restricted to 50 MPH.

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II. REQUIRED DOCUMENTATION

1. General Requirements

No person may accept a hazardous material for shipment by rail transportation or transport a hazardous material in a train unless a member of the crew has each of the following documents:

A. Acceptable shipping papers.

B. Acceptable emergency response information.

C. A paper document showing the current position of the hazardous material shipment in the train.

Note: The purpose of this documentation is to provide railroad personnel and emergency response personnel with accurate information about the hazardous materials.

Therefore, keep all current hazardous material documents neat and orderly and ensure that they are available in case of an emergency or for inspection. Properly discard superceded documents to eliminate the possibility of confusing or inconsistent information.

2. Acceptable Shipping Papers

Any one of the following paper documents is an acceptable shipping paper for hazardous material shipments, as long as it includes the required shipping description entries (see item 6 of this section), is legible, and is printed (manually or mechanically in English).

A. **Railroad-produced documents** — for example, train consists, train lists, wheel reports, waybills, industry work orders, or other similar documents

B. **Customer-produced documents** — for example, bills of lading [including United Parcel Service (UPS) hazardous materials packets], or switch lists

C. A **connecting carrier's documents**

D. A **hand-printed document** (printed, not cursive letters) – for example, radio waybills

E. A **hazardous waste manifest.**

3. Acceptable Emergency Response Information

Any one of the following documents is acceptable emergency response information:

A. Emergency response information printed as part of the train list/consist.

B. **Emergency Response Guidebook** (ERG).

C. Similar information provided by the customer — for example, a Material Safety Data Sheet (MSDS).

4. Document Indicating Position in Train

Before moving hazardous material shipments in a train, a member of the crew must have a paper document that shows the current position in the train of each hazardous material shipment (loaded and residue/empty).

When making pickups or setouts, update the paper document before proceeding. The train crew must update the document by hand-printing on it or by appending or attaching another document to it.

5. Checking for Shipping Papers

Make sure that a member of the crew has a paper copy of acceptable shipping papers, with the required entries, for each hazardous material when:

A. Accepting hazardous material shipments at a customer's facility, interchange point, or other location.

B. Moving hazardous material shipments in a train.

C. Delivering hazardous material shipments to a customer's facility, interchange point, or other setout point.

D. Switching hazardous material shipments outside a yard.

Note: Shipping papers are not required in the switch crew's possession when moving hazardous material shipments within a yard or at a customer's facility.

Exception: Although they may remain placarded and marked, residue/empty "Elevated Temperature Material" tank cars do not require hazardous material shipping papers and emergency response information.

6. Reviewing Shipping Paper Entries

Review the shipping description entries for each hazardous material on the shipping papers and make sure that the following entries (A-G under this item) are present. (Figure 1 shows two formats for displaying the shipping description entries.)

Vertical Format GATX 12345 (A) 1TC (B) SULFURIC ACID (C) 8 (D) UN1830 (E) PG II (F) RQ (SULFURIC ACID) (H3) EMERGENCY CONTACT: 800-424-9300 (G) HAZMAT STCC = 4930040 (H11)

Horizontal Format
UTLX 12345 (A)
1TC (B) // CHLORINE (C) // 2.3 (D) // UN1017 (E) // RQ (CHLORINE) (H3)
// POISON-INHALATION HAZARD (H6) // ZONE B (H7)
// MARINE POLLUTANT (CHLORINE) (H4)
// EMERGENCY CONTACT: 800-424-9300 (G) // HAZMAT STCC = 4920523 (H11)

Items (A) through (G) are required entries for the basic hazardous material description. Item (H) refers to additional entries that may appear. Typically, items (B) through (F) are in the sequence shown; however, certain items (technical name and subsidiary hazard class) may appear in parentheses between items (B) through (F). **Note:** The identification number (E) may be found either before the proper shipping name (C) or after the hazard class (D) until January 1, 2013 when the identification number must appear before the proper shipping name (C).

Figure 1. Shipping Description Entries

A. Reporting marks (initials) and number

The shipping paper for a rail car, freight container, transport vehicle, or portable tank must include the reporting mark and number **only** when the reporting mark and number are displayed on the rail car, freight container, transport vehicle, or portable tank.

B. Total Quantity Notation

1. For empty packagings, bulk packagings, or cylinders of Class 2 materials, some indication of the total quantity must be shown (certain abbreviations are acceptable). For example, "**1 T/C**" (1 tank car), "**1C/L**" (1 car load), or "**10 CYL**" (10 cylinders).
2. For **non-bulk packaging**, the total quantity is given by both:
   a. Weight or volume (including the unit of measure); for example, "**100 lbs.**", "**55 gal.**","**5 kg**" or "**208 L**",

      and

   b. Number and type of packages; for example "**12 drums**", "**12 boxes**" or "**12 UN1A1**".
3. For Class 1 materials, the quanity must be the net explosive mass.

C. Proper Shipping Name

1. The proper shipping name of the hazardous material may be one or more words, such as "**Chlorine**" or "**Sulfuric Acid**". The proper shipping name may include a number that indicates the concentration of the material.
2. When a N.O.S. (Not Otherwise Specified) shipping name appears, the technical name of the product may appear in parentheses immediately after the N.O.S. shipping name, such as "**Corrosive Liquid, N.O.S. (Capryl Chloride)**".
3. Residue/empty shipments in tank cars must begin with "**Residue: Last Contained**", followed by the proper shipping name.
4. For waste shipments, the word "**Waste**" will precede or be part of the proper shipping name of the material.

D. Hazard Class – numeric or worded

Reference: For further information on hazard classes, see the definition in the Glossary and the list of hazard classes and divisions in Table 1.

1. For certain hazardous materials, a subsidiary hazard class will appear in parentheses after the primary hazard class. For example, Ethylene Oxide is listed as "**2.3 (2.1)**".
2. The hazard class need not be repeated for Combustible Liquids, N.O.S. shipments.
3. Classes 1.1, 1.2, 1.3, 1.4, 1.5, and 1.6 may show a compatibility group letter after the class (for example, **1.1A**). The letter has no significance in rail transportation.

E. Identification Number

A 4-digit identification number must appear on the shipping papers with the prefix "UN" (United Nations) or "NA" (North America) as appropriate.

Note: The identification number (E) may be found either before the proper shipping name (C) or after the hazard class (D) until January 1, 2013 when the identification number must appear before the proper shipping name (C).

Exception: The proper shipping description "gas generator assemblies for aircraft" does not require identification numbers.

F. Packing Group

The packing group must appear on the shipping papers in Roman numerals ("I", "II", or "III"). The packing group may be preceded by the letters "PG" ("PG I", "PG II", or "PG III").

Exceptions: Hazard Classes 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 2.1, 2.2, 2.3, 4.1 (self-reactive liquids or solids, types B-F), 5.2, 6.2, 7, and ORM-D do not require the packing group notation.

G. Emergency Response Telephone Number

Shipping papers for hazardous materials must show a 24-hour emergency response telephone number. This telephone number must include the area code or international access code.

Exceptions: Emergency response telephone numbers are not required when the hazardous material is shown as a "Limited Quantity", "LTD QTY", or its shipping name is:

1. Battery powered – equipment or vehicle.
2. Carbon dioxide, solid or dry ice.
3. Castor – bean, meal, flake, or pomace.
4. Consumer commodity.
5. Engines, internal combustion.
6. Fish – meal or scrap, stabilized.
7. Fumigated unit.
8. Refrigerating machine.
9. Wheelchair, electric.
10. Vehicle, flammable gas powered or vehicle, flammable liquid powered.

H. Additional Entries

Some hazardous material shipping descriptions also may require one or more of these entries:

1. "Residue: Last Contained ..." (for packages emptied to the maximum extent possible).
2. "HOT" notation added before a proper shipping name for elevated temperature materials.
3. "RQ" for Reportable Quantity notation of a hazardous substance.
4. "MARINE POLLUTANT" notation.
5. "POISON (TOXIC)-INHALATION HAZARD" or "INHALATION HAZARD" notation.
6. Hazard Zone notation ("Zone A," "Zone B," "Zone C," or "Zone D").
7. "LIMITED QUANTITY" or "LTD QTY" notation.
8. FRA Movement Authority (for example, "**FRA 0109123**"), DOT Exemption/DOT Special Permit (for example,"**DOT-SP 9271**"), Special Approval Number (for example, "**SA 920403**"), or Competent Authority Number (for example, "**CA 9701001**").
9. DOT-113 notation ("DOT-113, Do Not Hump or Cut-Off in Motion").
10. Hazardous Material Response Code (STCC "48xxxxx" or "49xxxxx").
11. Certain shipments described using Canadian regulations may contain both an Emergency Response Plan number and its activation telephone number (e.g., "ERP-2-1008 (800-555-5555) // SPECIAL COMMODITY").
12. Starred box with or without wording (not required by DOT, but may appear on railroad-produced documents).
13. Shipper's Certification.

14. "OIL" notation.
15. Additional radioactive material entries.
16. Name and address of the place of business in Canada of the consignor.
17. Additional hazardous waste shipping description entries (see Section II, item 11, a).
18. EX number for air bag modules classified as Class 9.

    Note: Recycled airbag modules do not require the EX number entry, but must have the word recycled after the basic description.

19. For International shipments the following additional information may be present.

    Dangerous Goods in Excepted Quantities, and an indication of number of packages.

    Note: *It must appear on the shipping papers. Voluntary January 1, 2009 and becomes mandatory January 1, 2010.*

7. Handling Situations when Shipping Papers or Required Entries Are Not Available

When the appropriate shipping paper is not present or when all required entries on the shipping paper provided are not present:

A. Do not move the car until the appropriate shipping paper or the required entries on the shipping paper are present.

B. Take one of these three actions:

1. Correct the existing document. Contact the customer or your supervisor, request the entries required to complete the shipping description, and legibly print those entries in the appropriate sequence (see Section II, item 6),

   or

2. Obtain the appropriate shipping paper from the shipper, your supervisor, or other appropriate person,

   or

3. Use a radio waybill.

   a. Contact your supervisor or dispatcher and request the appropriate entries for a radio waybill (see Figure 2, Radio Waybill).

      The supervisor or dispatcher will provide the requested entries to you via radio or telephone.

   b. Complete the radio waybill using the information the supervisor or dispatcher provided.

      Note: If a radio waybill form is not available, legibly print the required hazardous material information on a sheet of paper, including the car's initials and number (see Section II, item 6).

   c. Keep the radio waybill with the other shipping documents until either reaching the final destination or receiving another shipping paper with the appropriate entries.

   d. For each radio waybill issued, add the car initial and number and its position on the position-in-train document.

8. Checking for Emergency Response Information

A. When accepting and transporting hazardous material shipments, make sure a copy of the emergency response information for each shipment (see Section II, item 3) is available.

B. If emergency response information is **not** available, do **not** accept or transport the car.

9. Checking for Position-in-Train Document

A. When transporting hazardous material shipments in a train, make sure a member of the crew has a paper document indicating the current position in train of each hazardous material shipment.

B. If the document indicating the current position in train of each hazardous material is **not** available:

1. Update the paper documents already in your possession,

   or

2. Create a hand-printed list showing the position in train of each hazardous material shipment.

Note: The list must show the reporting marks and number for each hazardous material shipment in the train and its actual position in the train.

Hazardous Material Radio Waybill

NOTE: Print legibly

****

* HAZMAT *

****

1. Train Number _____
2. Number of Cars from Head End _____
3. Car Initial & No. _____

_____

4. 1/ Car Load or Residue Last Contained (Circle One)

••• Description of Articles •••

5. Number of Packages/Car _____

_____

6. Proper Shipping Name _____

_____

7. Technical Name (_____)
8. Primary Hazard Class _____

   Subsidiary Hazard Class(es) _____
9. UN/NA Id. No. _____
10. Packing Group (PG): I II III (Circle One)
11. Reportable Quantity (RQ): (_____)

••• Additional Information •••

12. Poison/Toxic Inhalation Hazard:

    Zone A, Zone B, Zone C, Zone D (Circle One)
13. Marine Pollutant (_____)
14. DOT Special Permit(s) (Exemptions)_____

_____

15. Additional Information _____

_____

16. ERP Plan No.: _____
    (Canadian Shipments Only)
17. ERP Telephone No.: (_____) _____ - _____
    (Canadian Shipments Only)
18. Emergency Contact: (_____) _____ - _____

    (_____) _____ - _____

Completed:

Date: _____ / _____ / _____ Time: _____ : _____ AM PM

MO DAY YR

Figure 2. Example of Radio Waybill

10. Handling Shipping Papers Received from a Customer

When picking up a hazardous material shipment from the customer and the customer provides the original shipping papers:

A. Check for appropriate hazardous material entries.

B. For loaded shipments, make sure that the shipper's certification and signature (signature by hand or mechanical means) are on the shipping papers received from the customer.

11. Handling Hazardous Waste Shipping Papers and Manifests

A. The shipping paper for a hazardous waste shipment must have the following entries in addition to the entries required for other hazardous material shipments:

1. Proper shipping description.
2. Name, address, and telephone number of the hazardous waste generator.
3. Name and address of the hazardous waste disposal facility.
4. Name of transporter.
5. Waste manifest number.
6. Special handling instructions.

B. When accepting a hazardous waste shipment **with** railroad generated shipping papers for the shipment which contains the hazardous waste manifest entries [(A) above], pick up the car containing hazardous waste without a copy of the hazardous waste manifest.

C. When accepting a hazardous waste shipment **without** railroad shipping papers for the shipment, check to see that the hazardous waste manifest contains both the hazardous materials shipping description entries (see Section II, item 6, A-G) and the hazardous waste manifest entries [(A) above].

If all entries are present on the hazardous waste manifest, pick up the car containing hazardous waste with the copy of the hazardous waste manifest.

D. When accepting or delivering a shipment of hazardous waste from the hazardous waste generator:

1. Sign the hazardous waste manifest as requested.
2. Return a copy of the hazardous waste manifest to the person requesting the signature.
3. Mail the remaining copies of the hazardous waste manifest to:

RPW Solutions

TOB/Waybilling Department

2400 Western Center Blvd.

Fort Worth, TX 76131-1322

12. Handling Requests for Shipping Papers or Emergency Response Information

Upon receiving a request for shipping papers or emergency response information from a railroad employee, regulatory enforcement officer, or emergency response personnel in an emergency:

A. Provide **all** the information on the shipping papers for the shipment,

and

B. Provide **all** available emergency response information.

13. Handling United Parcel Service (UPS) Hazardous Material Packets

If hazmat packets are used, conductors will be responsible for the envelope or packet during their tour of duty. (The packets should be opened and coupons looked at to be sure that hazardous material information is available for all shipments.)

Upon arrival at a crew change point, the inbound conductor will advise the outbound conductor of the location of the hazmat packet. The outbound conductor will check the new train list and determine the need to maintain the hazmat packet. If all shipments requiring hazmat descriptions have the information printed on the train list, the hazmat packet will no longer be needed.

When crews are changed enroute, or when it is not possible for the inbound conductor to furnish such information to the outbound conductor, the train dispatcher or terminal supervisor must be contacted by both conductors regarding disposition of the hazmat packet.

Conductors are responsible to see that the hazmat packet for cars set out enroute is handled per an accompanying message or the train dispatcher's instructions. When cars set out enroute are picked up, the conductor will receive a message or train dispatcher's instruction regarding location of a hazmat packet. As a last alternative to replacing a missing hazmat packet, the conductor may secure a packet from the trailer/container door.

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III. INSPECTION

1. General Requirements

A. To determine that they are in acceptable condition for transportation, all loaded and residue/empty hazardous material shipments must be inspected at these points:

1. Before accepting them from the shipper.
2. When receiving them in interchange.

   Note: Run-through trains received in interchange may continue to the next inspection point before being inspected.

3. When placing them in a train.
4. At other points where an inspection is required (e.g., 1000 mile inspection).

B. Accept or transport only those hazardous material shipments that conform to these instructions.

2. Inspection Procedures

In addition to inspecting rail cars for compliance with train make up, mechanical component inspection, visually inspect each loaded or residue/ empty hazardous material shipment (including flat cars transporting placarded or marked trailers or containers) from ground level (do not climb on or go under the car) and check for:

1. Leaking contents,
2. Required placards and markings, including stenciling, car certificates, and tank car qualification dates (see Section IV - Placards and Markings),
3. Secure fastening of closures and intact condition of seals,

   and

4. Signs of tampering, such as suspicious items or items that do not belong, the presence of an "Improvised Explosive Device" (IED), and other signs that the security of the car may have been compromised.

Note: Where an indication of tampering or a foreign object is found, take the following actions:

1. Do not accept or move the rail car.
2. Immediately move yourself and others to a safe location away from the rail car before using radios and cell phones to make notifications.
3. For cars at a customer's facility, immediately contact local plant personnel. If local plant personnel are not available or cannot explain what you see, immediately contact the train dispatcher or the Service Interruption Desk company lines (N) 817-234-6164 (S) 817-234-2350 or the ROCC at 800-832-5452.
4. For cars on interchange tracks or in the yard, immediately contact the yardmaster, train dispatcher, or the Service Interruption Desk company lines (N) 817-234-6164 (S) 817-234-2350 or the ROCC at 800-832-5452.

A. Inspecting All Car Types (from ground level)

1. Without climbing on the car, make sure that the hazardous material shipment is not leaking.
   a. Look for leaking contents – drips, wetness, or material on the car or on the ground.
   b. Look for a vapor cloud.
   c. Listen for hissing sounds of the contents escaping.

Note: If you find a hazardous material shipment leaking, follow the instructions in item 3 of this section and in Section VIII (Emergency Response), item 5.

2. Make sure placards and markings are appropriate for the shipment and displayed correctly (see Section IV, Placards and Markings).
3. Before accepting a hazardous material shipment from the shipper, make sure that:
   a. All customer loading and unloading lines are disconnected.
   b. Derails, chocks, and blue flags are removed.
   c. All platforms are raised or in the clear.

B. Inspecting Tank Cars (from ground level)

Check placarded tank cars or tank cars marked with an identification number to see that:

1. Protective housing covers are closed.
2. Manway cover swing bolts are up and in place.
3. All valves and fittings appear to be closed and secure.
4. Visible plugs or caps (including bottom outlet caps) or other fittings are securely in place.

   Note: Heater coil caps may be left off.
5. "Double shelf couplers" and roller bearings are present.
6. Operating platform access, other than to ladders, must have the safety chains/bars applied.

C. Inspecting Placard/Marked Gondola cars

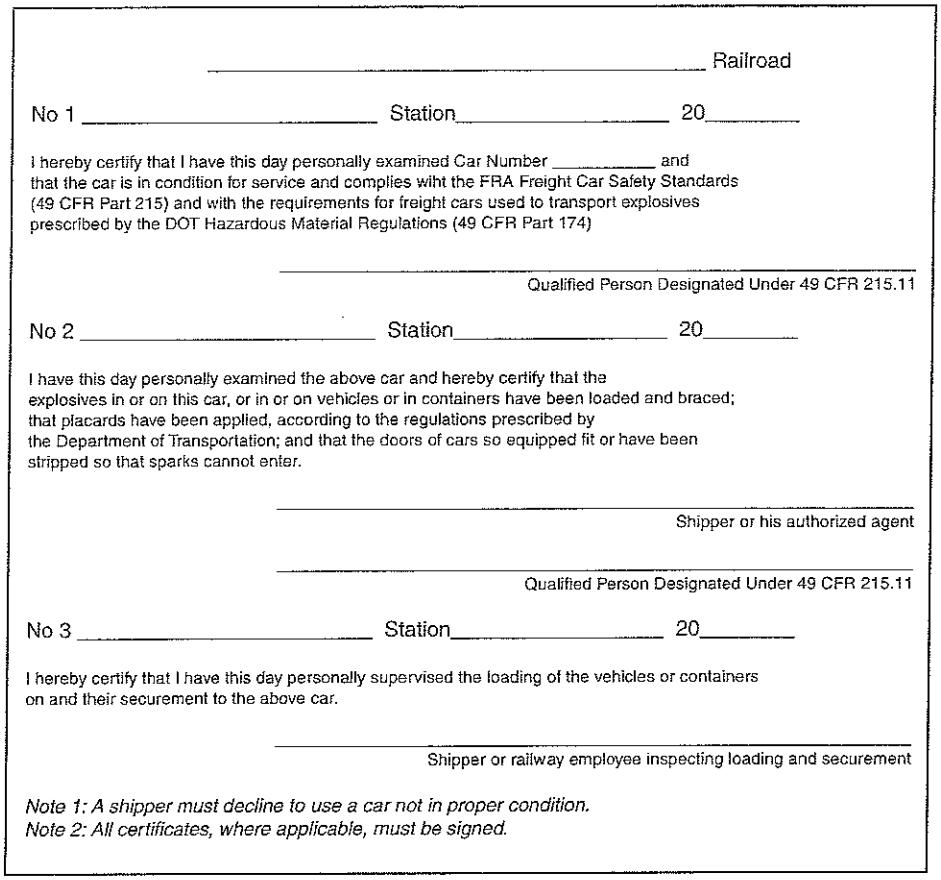
1. Look for loosely fastened gondola covers.
2. Make sure the cover or tie downs do not foul any safety appliances.

D. Inspecting Placard/Marked Hopper cars

Check that discharge gates are closed and secured.

E. Inspecting Shipments Placarded EXPLOSIVES 1.1 or 1.2

1. In addition to the other inspection requirements in this section, for shipments placarded EXPLOSIVES 1.1 and 1.2:
   a. Look for indications of damage to the contents.
   b. Make sure that completed "car certificates" (see Figure 3, Car Certificates) are displayed on both sides of the rail car.
      i. Car certificates must be removed after the rail car, trailer, or container is unloaded.
      ii. Car certificates are either 7.1 by 7.1 inches or 5.9 by 7.9 inches in size.
2. Do not accept or transport the car until all damage has been corrected and car certificates are in place.



_____ Railroad

No 1 _____ Station_____ 20_____

I hereby certify that I have this day personally examined Car Number _____ and that the car is in condition for service and complies wiht the FRA Freight Car Safety Standards (49 CFR Part 215) and with the requirements for freight cars used to transport explosives prescribed by the DOT Hazardous Material Regulations (49 CFR Part 174)

_____
Qualified Person Designated Under 49 CFR 215.11

No 2 _____ Station_____ 20_____

I have this day personally examined the above car and hereby certify that the explosives in or on this car, or in or on vehicles or in containers have been loaded and braced; that placards have been applied, according to the regulations prescribed by the Department of Transportation; and that the doors of cars so equipped fit or have been stripped so that sparks cannot enter.

_____
Shipper or his authorized agent

_____
Qualified Person Designated Under 49 CFR 215.11

No 3 _____ Station_____ 20_____

I hereby certify that I have this day personally supervised the loading of the vehicles or containers on and their securement to the above car.

_____
Shipper or railway employee inspecting loading and securement

Note 1: A shipper must decline to use a car not in proper condition.
Note 2: All certificates, where applicable, must be signed.

Figure 3. Car Certificate

F. Inspecting Placarded/Marked Intermodal Shipments

In addition to completing other inspection requirements in this section:

1. Make sure that an intermodal tank container of hazardous material is not transported with a container above or below the tank. (No Double Stack configuration.)
2. Make sure that placards are fully visible when containers are loaded in a well car.
3. Make sure that intermodal tanks are placed so that the bottom outlet valves are pointed toward the ends of the well or platform.

3. Handling Defects

When a hazardous material shipment does not appear to be prepared for transportation, or signs of tampering, such as suspicious items are found:

A. Do not accept or pull the hazardous material shipment or allow it to continue in transportation.

B. Notify the customer, train dispatcher, yardmaster, or your immediate supervisor, as appropriate, and explain the problem.

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IV. PLACARDS AND MARKINGS

1. General Requirement

Hazardous material shipments, whether loaded or containing a residue, must not be accepted for transportation or transported unless they are properly placarded and marked. However, not all hazardous material shipments require placards.

2. Placard Requirements

Each bulk packaging, freight container, transport vehicle, or rail car containing hazardous material must be placarded on each side and each end in accordance with the instructions below.

Note: Unless the shipping papers indicate that the shipment is a limited quantity, all international shipments (including Canada and Mexico) of hazardous materials require placards.

Placard—a sign measuring 273 mm (10.8 in) by 273 mm (10.8 in) square on point, communicating a hazard by symbol, color, and words or numbers. (see Figure 4 for pictures of placards). Text indicating the hazard is not required on placards other than the DANGEROUS placard. The hazard class text does not have to be in English.

Note: A placard meeting IMDG requirements [minimum of 250 mm (9.8 in) by 250 mm (9.8 in) is acceptable.

A. Placards are required when transporting any quantity (bulk or non-bulk) of these hazard classes:

1.1 Explosive with mass explosion hazard

1.2 Explosive with projection hazard

1.3 Explosive with predominantly fire hazard

2.3 Gas poisonous (toxic) by inhalation

4.3 Dangerous when wet material

5.2 Organic peroxide, Type B, liquid or solid, temperature controlled

6.1 Material poisonous (toxic) by inhalation

7 Radioactive Yellow III label or exclusive use shipments of low specific activity (LSA) materials and surface contaminated objects.

B. For non-bulk packages (capacity less than 119 gallons or 882 pounds) placards are required when transporting quantities of 1001 lbs. (454 kg) or more of these hazard classes:

Note: Placards may be displayed for quantities less than 1001 lbs. of these materials, as long as they are appropriate for the shipment.

Note: Placards may be displayed for a total weight less than 1001 lbs. of these materials, as long as they are appropriate for the shipment.

1.4 Explosive with no significant blast hazard

Note: Placards are not required for Class 1.4S materials.

1.5 Very insensitive explosive; blasting agents

1.6 Extremely insensitive detonating substances

2.1 Flammable gas

2.2 Nonflammable, nonpoisonous (nontoxic) compressed gas

3 Flammable liquid

4.1 Flammable solid

4.2 Spontaneously combustible material

5.1 Oxidizer

5.2 Organic peroxide, other than "organic peroxide, Type B, liquid or solid, temperature controlled" in 2a above

6.1 Poisonous (toxic) material, (other than material poisonous (toxic) by inhalation)

Note: For U.S. transportation of Class 6.1 PG III materials, a PG III placard may be used in place of a POISON (TOXIC) placard.

8 Corrosive material

9 Miscellaneous hazardous material.

Exception: For U.S. transportation only, Class 9 placards are not required. However, bulk shipments of Class 9 materials transported in the US must be marked with the identification number (see Section IV, item 4).

Combustible Liquids [see item C (7) below for handling combustible liquids in non-bulk packages]

Mixed hazardous materials in this item (see page 27, item F).

C. Placards are not required for:

1. Hazardous material shipments with less than 1001 lbs. (454 kg) total weight, provided the hazard classes are included in item B above.
2. ORM-D (Other Regulated Materials – D).
3. Class 6.2 (Infectious Substances).
4. Class 9 (US/Canadian transportation) materials that display the identification number.
5. Limited Quantity (LTD QTY) shipments when identified as such on shipping papers.
6. Cryogenic atmospheric gases, other than Oxygen (for example, Argon).
7. Combustible liquids in non-bulk packaging (i.e., drums), usually found in intermodal shipments, unless the material is a hazardous substance or hazardous waste.
8. Rail cars and intermodal tanks which have been cleaned and purged of hazardous material.
9. Shipments listed as Radioactive White I and Radioactive Yellow II on shipping papers.
10. Class 1.4S.
11. Shipments of molten sulfur moving to the United States from Canada, provided the identification number and the words "MOLTEN SULFUR" appear on each side of the tank car.

D. Placards may be displayed for hazardous materials, even when not required, as long as the placard is appropriate for the contents of the shipment. If displayed, then all instructions for that placard apply.

E. Certain hazard classes require the display of the primary placard on a white square background, including (see Figure 4, Placard Chart): (when required to be affixed to the rail car)

1. Hazard Class 1.1 or 1.2 explosives.
2. Hazard Class 2.3 or 6.1 Poison (Toxic)-Inhalation Hazard Zone A material.
3. Hazard Class 2.1 flammable gases loaded in DOT-113 tank cars, including tank cars containing only a residue of the material.

F. The DANGEROUS placard may be used instead of separate placards for each hazard class when a rail car, trailer, or container is loaded with non-bulk packages of two or more classes of hazardous materials from this section's item 2 B.

Note: When 2,205 lbs. (1,000 kg.) or more of one class of material is loaded at one loading facility, the placards for that class as specified in item 2 B of this section must also be applied.

G. Some shipments of hazardous materials require subsidiary placards that represent secondary hazards. Subsidiary placards must not display a 4-digit identification number, but will display the hazard class or division number.

Note: Subsidiary placards must be displayed when the subsidiary class is 2.3, 6.1 with the notation Poison-Inhalation Hazard or Toxic-Inhalation Hazard present on the shipping papers, or when the subsidiary class is 4.3.

H. For residue/empty hazardous material shipments, the rail car, trailer, or container must remain placarded in the same manner as the loaded shipment, unless the packaging:

1. Has been cleaned of residue,

   or

2. Has been purged of vapor to remove any hazard,

   or

3. Has been refilled, with a material requiring different placards or no placards, to such an extent that any residue remaining in the packaging is no longer hazardous.

4. Contains a residue of an elevated temperature. These shipments may remain placarded in the same manner as when it contained a greater quantify of the material even though the material no longer meets the definition for an elevated temperature material.

5. Contains a residue of a Hazardous Substance, Class 9, that does not meet the definition of another hazard class and is not a hazardous waste or marine pollutant. These shipments may remain marked, labeled, and or placarded in the same manner as when it contained a greater quantify of the material even though the material no longer meets the definition for a Hazardous Substance.

3. Inspecting for Placards

A. Make sure that all required placards are:

1. Consistent with the shipping paper information.
2. On both sides and both ends of the shipment.
3. In placard holders or securely attached to the rail car, trailer, or container.
4. Not damaged, faded - color should be similar to the color printed in this document (see Figure 4, Placard Chart), or obscured by dirt or car part.
5. Oriented horizontally, so you can read them from left to right.
6. Readily visible from the direction they face, except for placards on the ends of trailers and containers in or on a rail car.

B. When **picking up** a hazardous material shipment at the customer's facility or siding, and a placard is not correct, does not meet the standards above, or is missing:

1. Notify the customer, train dispatcher, yardmaster, or your supervisor, as appropriate.
2. Do not accept the hazardous material shipment until corrections have been made.

C. When a placard does not meet the standards above or is discovered missing en route, notify the train dispatcher, yardmaster, or your supervisor, as appropriate. Corrections must be made at the next inspection point.

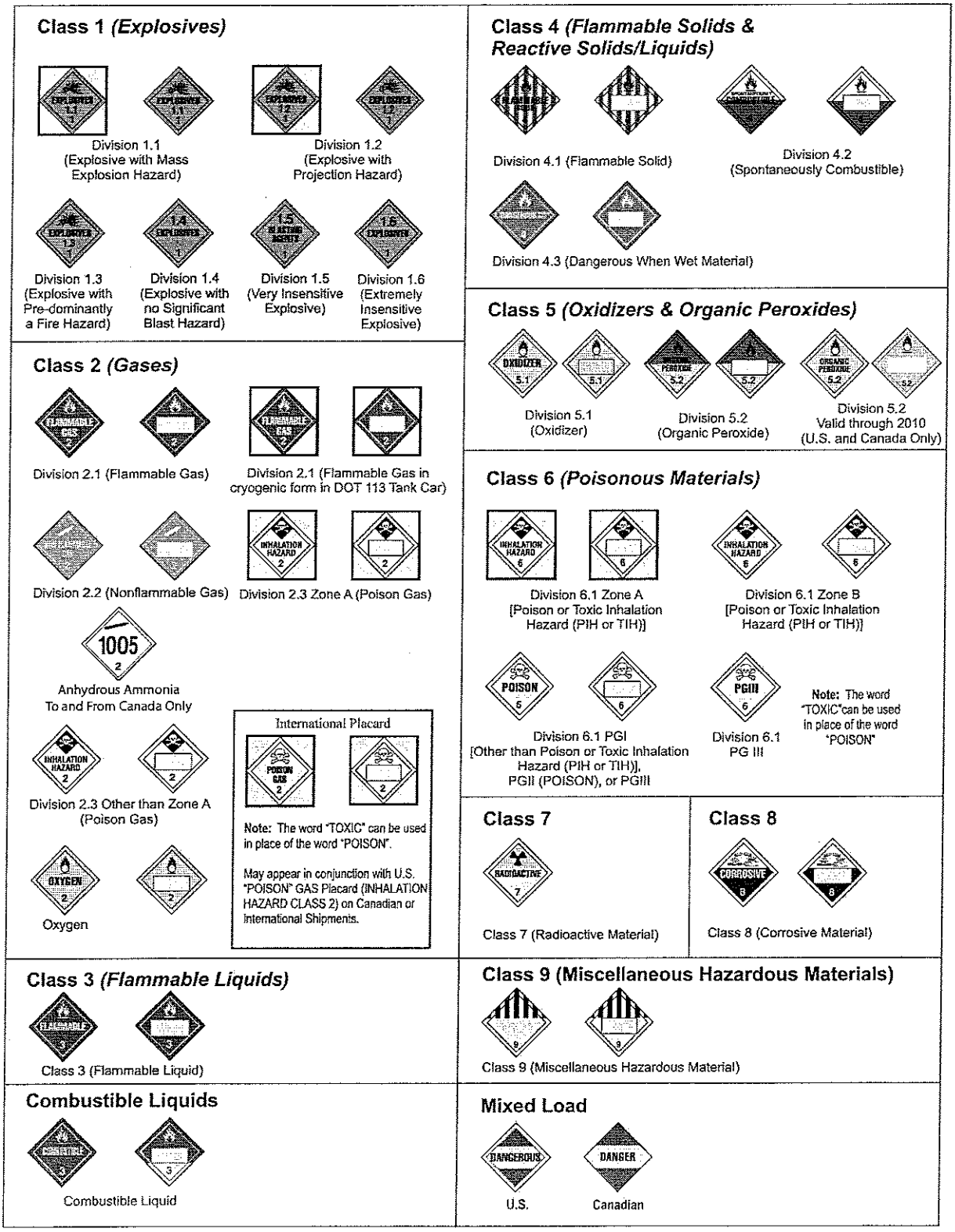

Figure 4. Placard Chart

Text indicating the hazard is not required on placards other than the DANGEROUS and Radioactive placard. The worded hazard class text, except for DANGEROUS, does not have to be in English as long as the size, color, hazard class, and symbol are correct.

4. Marking Requirements and Inspecting for Markings

Marking - a descriptive commodity name, identification number, caution, such as INHALATION HAZARD, HOT, MOLTEN, MARINE POLLUTANT, FUMIGANT, or NON-ODORIZED (NOT ODORIZED), or tank car qualification date displayed on hazardous material shipments.

Make sure the markings above are displayed on bulk packages as follows:

A. Identification Number Markings

1. Identification number markings must appear on both sides and both ends either on the placard or in close proximity to the placard, when a placard is required:
   a. Bulk packages of hazardous material (including Class 9 when no placard is required).

      Note: Identification number markings are not required on the ends of multi-compartmented tank cars transporting more than one hazardous material having different DOT identification numbers.

   b. Rail cars, trailers, and containers when 8,820 lbs. (4000 kg.) or more of non-bulk packages of hazardous material, with the same proper shipping name and identification number, are loaded at one location and the transport vehicle does not contain any other hazardous or non-hazardous material.

      Exception: For shipments of molten sulfur from Canada, the identification number marking must appear only on both sides of the tank car.

2. Identification numbers can be displayed in one of three ways, as Figure 5 shows:

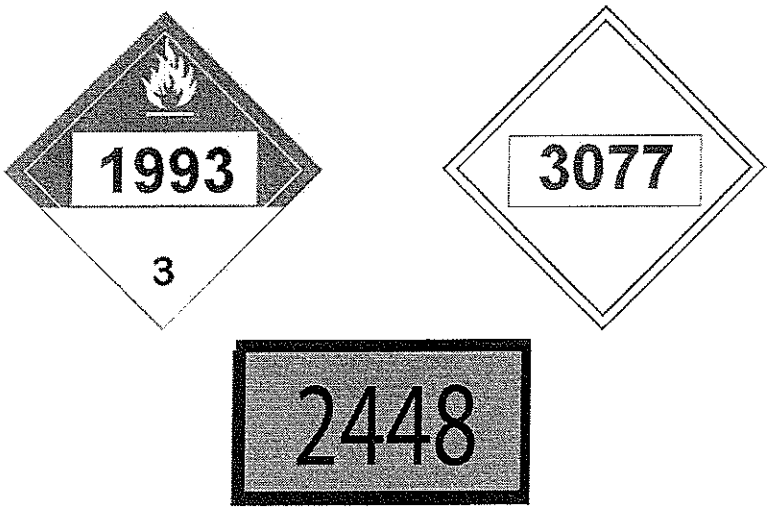

Figure 5. Identification Numbers

3. Identification numbers must not be displayed on:
   a. EXPLOSIVES 1.1, 1.2, 1.3, 1.4, 1.5, or 1.6 placards.
   b. CLASS 7 RADIOACTIVE placards.
   c. DANGEROUS placards.
   d. Subsidiary placards.

4. Make sure the identification numbers appear as required above and agree with the shipping paper entries.
5. When picking up a hazardous material shipment at the customer's facility, a siding or an interchange point and the identification number is not correct, is not legible, or is missing:
   a. Notify the customer, train dispatcher, yardmaster, or your supervisor, as appropriate.
   b. Do not accept the hazardous material shipment until corrections have been made.
6. When an identification number is not correct, is not legible, or is missing **en route**, notify the train dispatcher, yardmaster, or your supervisor, as appropriate. They will arrange to correct the problem at the next inspection point.

   Note: Missing identification numbers must be replaced and may be entered on the appropriate placard, orange panel, or white square-on-point configuration by hand using a black indelible marker.

B. MARINE POLLUTANT Mark

1. For a material described on the shipping papers as a marine pollutant and the shipment does not require a placard, make sure that the MARINE POLLUTANT mark appears on both sides and both ends of bulk packagings in one of the formats in Figure 6.

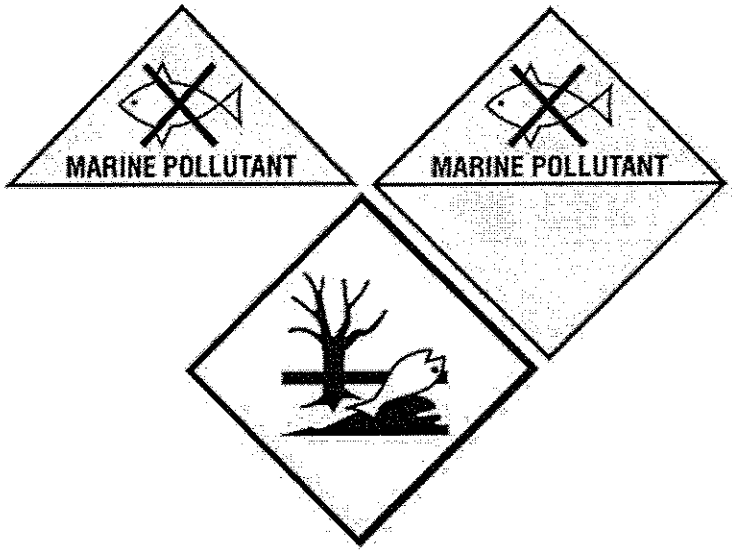

Figure 6. Marine Pollutant Mark

Note: MARINE POLLUTANT marks are not required when the bulk packaging displays a placard.

2. When picking up a hazardous material shipment at the customer's facility or siding or at an interchange point, and a required MARINE POLLUTANT mark is not legible or is missing:
   a. Notify the customer, train dispatcher, yardmaster, or your supervisor, as appropriate.
   b. Do not accept the hazardous material shipment until corrections have been made.
3. When a required MARINE POLLUTANT mark is not legible or is missing **en route**, notify the train dispatcher, yardmaster, or your supervisor, as appropriate. They will arrange to correct the problem at the next inspection point.

C. HOT Mark

1. For a material described on the shipping papers with the words "HOT," "ELEVATED TEMPERATURE," or "MOLTEN" and transported in a bulk packaging, the word "HOT" must be marked on two opposing sides of the bulk packaging, either:
   a. On a plain white square on point configuration having the same outside dimensions as a placard (see Figure 7),

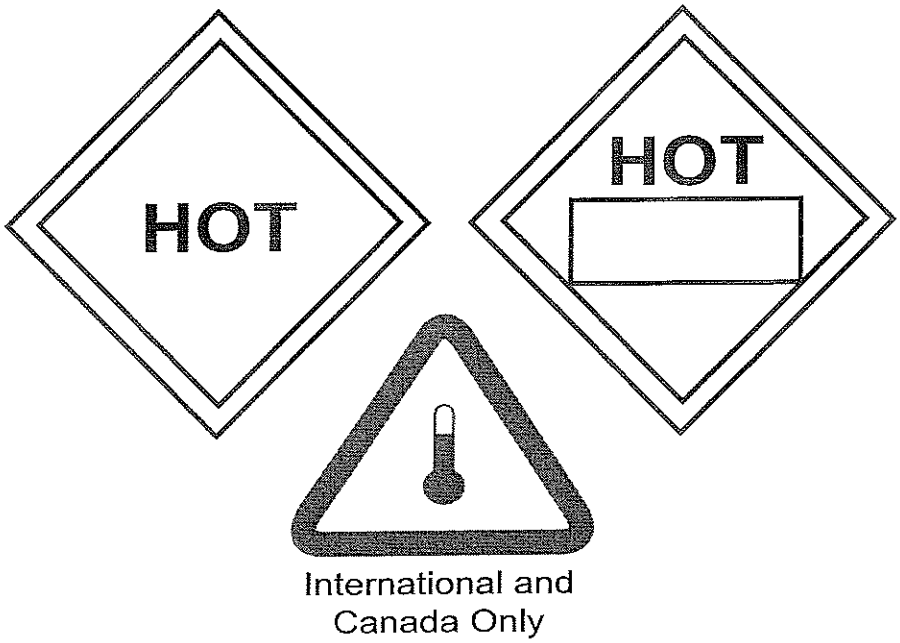

Figure 7. Hot Mark

   or

   b. On the packaging itself.

   Note 1: The word "HOT" is not required for bulk packagings of molten aluminum or molten sulfur marked "MOLTEN ALUMINUM" or "MOLTEN SULFUR," as appropriate.

   Note 2: Residue/empty shipments that last contained an elevated temperature material (HOT), such as asphalt, are not considered hazardous materials and do not require hazardous material shipping description entries on the shipping paper. When the shipping paper indicates empty, the shipment may be accepted and moved in rail transportation without the hazardous material shipping description entries, even though the HOT mark and identification number are displayed.

2. When picking up a hazardous material shipment at a customer's facility or siding or at an interchange point and a HOT mark is not legible or is missing:
   a. Notify the customer, train dispatcher, yardmaster, or your supervisor, as appropriate.
   b. Do not accept the hazardous material shipment until corrections have been made.
3. When a HOT mark is not legible or is missing en route, notify the train dispatcher, yardmaster, or your supervisor, as appropriate. They will arrange to correct the problem at the next inspection point.

D. LIMITED QUANTITY Mark

IMDG international shipments which include all hazardous materials in limited quantities must display markings with the words "LIMITED QUANTITY" or "LTD QTY" on both sides and both ends of trailers/containers. These marks are substituted for placards. If all hazardous materials in the shipment are NOT in limited quantities, the use of placards is required without the display of the LIMITED QUANTITY marking.

E. INHALATION HAZARD Mark

1. For a material described on the shipping papers as "Poison (Toxic)-Inhalation Hazard" or "Inhalation Hazard," the words "INHALATION HAZARD" must appear (in at least 3.9-inch high letters) on both sides of the rail car, trailer, or container, near the placards.

   Note: When the words "INHALATION HAZARD" appear on the placards, the "INHALATION HAZARD" mark is not required on the bulk packaging.
2. When picking up a hazardous material shipment at the customer's facility or siding or at an interchange point and the words "INHALATION HAZARD" are illegible or missing:
   a. Notify the customer, train dispatcher, yardmaster, or your supervisor, as appropriate.
   b. Do not accept the shipment until corrections have been made.
3. When the "INHALATION HAZARD" marking is illegible or missing en route, notify the train dispatcher, yardmaster, or your supervisor, as appropriate. They will arrange to correct the problem at the next inspection point.

F. COMMODITY NAME

1. The commodity name is required on intermodal tanks transporting any hazardous material and on tank cars transporting certain hazardous materials. The commodity name (3.9 inches in height for tank cars and 2 inches in height for intermodal tanks) must match the proper shipping name on the shipping papers and may include the technical name, although it is not specifically required. The commodity name must be on two opposing sides of the intermodal tank or tank car.
2. When accepting an intermodal tank or tank car of hazardous material from the shipper or in interchange and the commodity name is illegible or missing:
   a. Notify the customer, train dispatcher, yardmaster, or your supervisor, as appropriate.
   b. Do not accept the shipment until corrections have been made.
3. When the commodity name on a tank car is discovered illegible or missing en route, notify the train dispatcher, yardmaster, or your supervisor, as appropriate. They will arrange to correct the problem at the next inspection point.

   Note: See Appendix C for list of materials that require the commodity name stencil on tank cars.

G. Tank Car Qualification Dates

1. Make sure the stencils describing the tank car specification and qualification dates are legible. These stencils will appear on both sides of the tank car toward the end on the right as you face the car.
2. Make sure the tank car qualification dates for pressure relief devices (PRD), tank, and interior heater coils are current (a car is currently within the qualification date until the last day of the year shown) (see Figure 8).

   Note 1: When the car is loaded before the end of the year, it may be transported for unloading purposes but must be requalified before reloading.

   Note 2: A tank car containing the residue of a hazardous material that is overdue its periodic qualification date may move and not be in violation of DOT regulations. The regulations only address loading a tank car overdue for its periodic qualification.

Tank Car Qualification Stencil (New Style)

DOT 111A100W1		STATION STENCIL	QUALIFIED	DUE
TANK QUALIFICATION		ABC-1	2002	2012
THICKNESS TEST		ABC-1	2002	2012
SERVICE EQUIPMENT		ABC-1	2002	2012
PRD Valve:	75 PSI	DEF-1	2002	2012
INT HTR	SPGR	FGL-1	2002	2012
LINING		ABC-1	2007	2012
88.B.2 INSPECTION		ABC-1	2002	2012
STUB SILL INSPECTION		ABC-1	2002	2012

Tank Car Qualification Stencil (Old Style)

DOT 112J340W

Safety Valve	280.5 LB
Tested 2006	Due 2016
Tank	340 LB
Tested 2006	Due 2016
Blt.	03/2005

Figure 8. Tank Car Qualification Stencil

3. When the qualification date is overdue, do not accept loaded tank cars from the shipper.
4. When found en route, car may proceed to destination after contacting the supervisor.

H. FUMIGANT Mark

1. As information, the purpose of the FUMIGANT mark (see Figure 9) is to warn persons unloading the rail car, trailer, or container that it has been fumigated and that they must take appropriate precautions before unloading the car. The (*) on the mark will be replaced by the name of the fumigant.

2. The FUMIGANT mark must be in English. However, EPA regulations allow another language in addition to the English version on the same FUMIGANT mark or an additional one.

   Note: The fumigant marking is required on each point of entry to a trailer/or container.

3. Shipping Description Entries

   a. For U.S. shipments that are fumigated, information on the shipping papers is not required.

   b. For International (Canadian and IMDG) shipments verify that the information for the shipment on the shipping papers includes the following entries - UN 3359, Fumigated Unit, name of the fumigant, amount of fumigant, date of fumigation, and any disposal information.

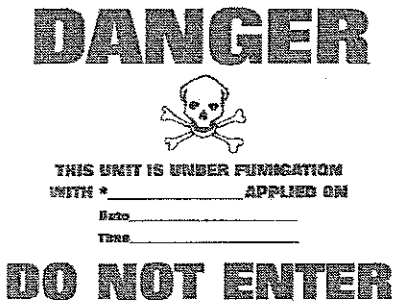

Figure 9. Fumigant Mark

I. Inspecting for Non-Odorized Marks

A tank car or intermodal tank container shipments containing liquefied petroleum gas (LPG) that is unodorized must be legibly marked NON-ODORIZED or NOT ODORIZED on two opposing sides near the marked proper shipping name or near the placards.

The NON-ODORIZED or NOT ODORIZED marks may appear on a tank car or tank container used for both unodorized and odorized LPG.

Shippers may include on shipping papers the information that the shipment is not odorized, if they so choose.

V. SWITCHING

1. General Requirement

Switch placarded hazardous material shipments only in compliance with the restrictions on the Switching Chart (see Figure 10).

Switching is defined as "the operation of moving rail cars within a yard in order to place them in a train or on a classification, repair, or storage track." Switching also includes making pickups and setouts at a customer's facility or interchange points. Switching does **not** include moving rail cars to or from a shipper's facility or industry track into or out of the yard.

Reminder: When moving rail cars to or from a shipper's facility or on an industrial lead into or out of the yard, comply with both the train placement restrictions in Section VI and the required documentation requirements in Section II.

WHEN RAIL CARS ARE CUT OFF IN MOTION, THE COUPLING SPEED MUST NOT EXCEED 4 MILES PER HOUR.

2. Safety

Before coupling, position yourself toward the end of a tank car, if possible, away from the manway and valves. Contents of tank cars may splash during or immediately following coupling, due to either improperly secured closures or the impact of coupling.

3. When to Use the Switching Chart

Refer to the Switching Chart:

A. When moving placarded hazardous material shipments in a yard to place them in a train or on a classification, repair, or storage track.

B. When making pickups or setouts of placarded hazardous material shipments at a customer's facility, interchange point, or other setout point.

4. How to Use the Switching Chart

A. Select the applicable column and row of the Switching Chart. To do so:

1. Identify the placards and/or markings applied to the car, either from information on the shipping papers or from observation.

   Note: When placards are displayed but are not required by regulation (permissive placarding), the rail car must be switched as required for the placard displayed.

2. Determine whether the car is loaded or residue/empty.

   Note: Residue/empty tank cars are identified on switch lists, track lists, and track inquiries with an "E" or "DE" in the appropriate field. The notation "RESIDUE: LAST CONTAINED" on the shipping papers indicates a residue/empty shipment.

3. Identify the car type involved by observation (e.g. tank car, hopper car, gondola, etc.).

B. Find the applicable section on the chart, based on the placard or marking applied, the load/empty status, and the car type.

C. Follow the restrictions associated with the placard or marking as the check marks in the columns indicate.

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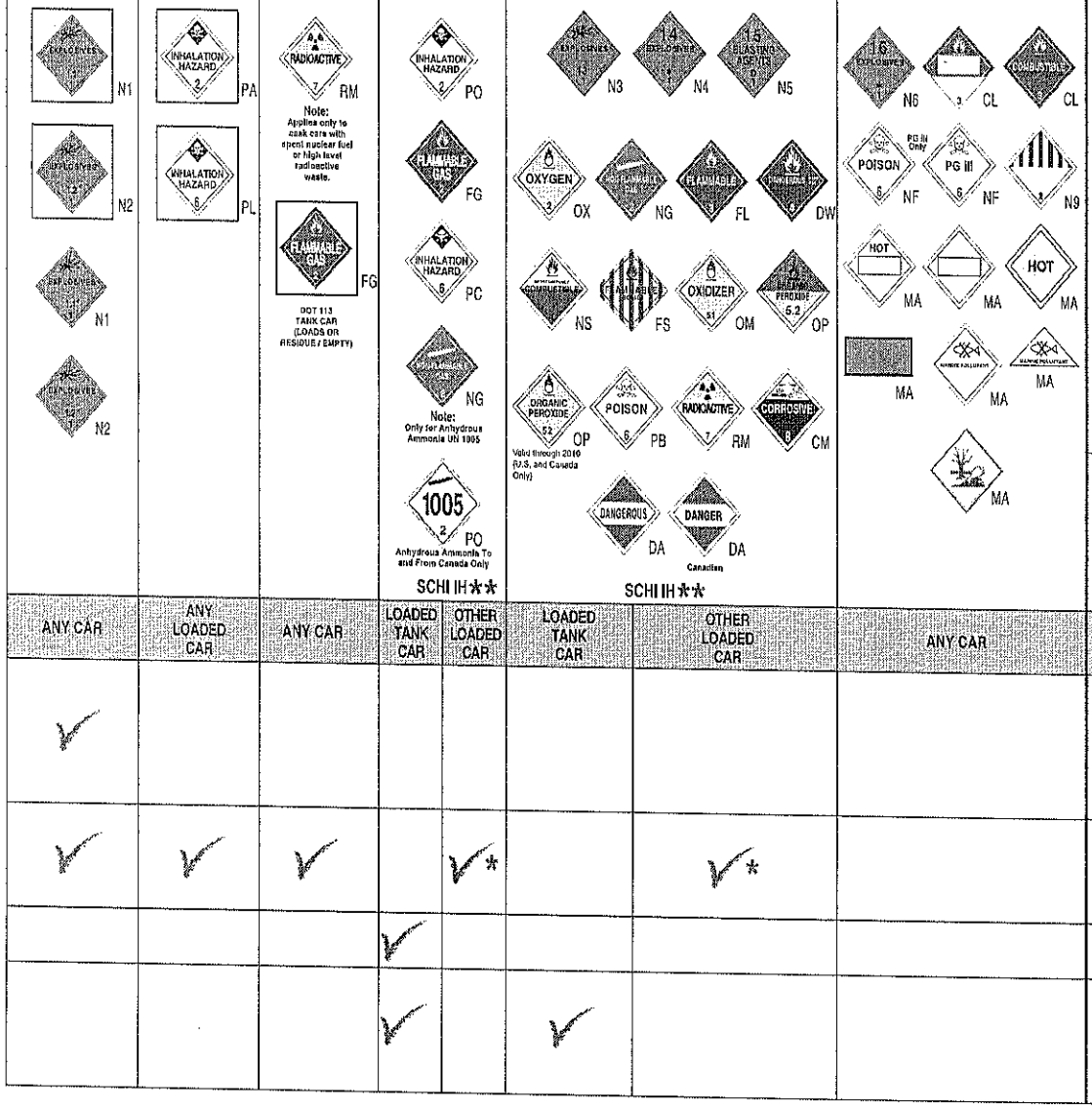
Figure 10. BNSF Switching Chart

Figure 10. BNSF SWITCHING CHART



HOW TO USE THIS CHART

a. Select the applicable column and row of the Switching Chart.

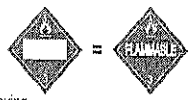
TO DO SO:

- (1) Identify the SCHI codes, placards and/or markings applied to the car, either from information on the shipping papers or from observation.
  Note: When placards are displayed but are not required by regulation (permissive placarding), the rail car must be switched as required for the placard displayed.
- (2) Determine whether car is loaded or empty.
  Note: Residue/empty tank cars are identified on switch lists, and track inquiries with an "E" or "DE" in the appropriate field. The notation "RESIDUE: LAST CONTAINED" on the shipping papers indicates a residue/empty shipment.
- (3) Identify the car type involved by observation (e.g. tank car, hopper car, gondola, etc.)

b. Find the applicable section on the chart, based on the SCHI code, placard or marking applied, the load / empty status, and the car type.

c. Follow the instructions associated with the placard or marking, as the "✓" in the columns indicate.

EQUIVALENT PLACARDS



Cars with placards displaying 4-digit identification numbers will be handled the same as cars with word description placards.

INSTRUCTIONS

1. Separate these cars from an engine by at least one non-placarded car or by one Group F placarded or marked car.
   Do not place where there is any probable danger of fire (ex. switch heaters).
   Do not place under bridges, under overpasses, or along passenger stations.
2. These cars must not be:
   - Cut off in motion,
   - Struck by any free rolling car, or
   - Coupled into with more force than needed to make the coupling
3. These cars must not be cut off in more than two car cuts.
   No more than two car cuts can couple into these cars.
4. When a person must ride a rail car to operate the hand brake:
   - Verify the hand brake is working properly.
   - Do not cut cars off until all preceding cars are clear of the lead.
   - Do not cut off any cars to follow until the lead is clear.

SCHI Codes / Special Handling Codes

SCHI Code	Description (Hazardous)
CL	Combustible Liquid
CM	Corrosive
DA	Dangerous
DW	Dangerous When Wet
FG	Flammable Gas
FL	Flammable
FS	Flammable Solid
IH	Inhalation Hazard
MA	Marked
NF	Division 6.1 PG III
NG	Non-Flammable Gas
NS	Non-Combustible
N1	Explosives 1.1 (Placard on SQ)
N2	Explosives 1.2 (Placard on SQ)
N3	Explosives 1.3
N4	Explosives 1.4
N5	Explosives 1.5
N6	Explosives 1.6
N9	Class 9 Material
OM	Oxidizer
OP	Organic Peroxide
OX	Oxygen
PA	Poison Gas (Placard on SQ)
PB	Poison
PC	Poison Inhalation Hazard
PL	Poison (Placard on SQ)
PO	Poison Gas
RM	Radioactive Material
NP	No Placards Required

NOTE: The word "toxic" can be used in place of the word "poison" on placards displayed in Group E and Group F.

* Only pertains to placarded flatcars or flatcars carrying placarded freight containers, trailers, portable tanks, tote bins, intermodal portable tanks, or UN portable tanks.

** During flat switching operations, loaded tank cars with SCHI code IH must be shoved to rest.

During humping operations, loaded tank cars with SCHI code IH must not be allowed to be set free or humped into a clear track. They must not be cut off until all preceding cars are in the clear of the lead. No cars may be cut off to follow an IH car until the lead is known to be clear of the IH car.

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VI. TRAIN PLACEMENT

1. General Requirement

Place placarded hazardous material shipments in a train so as to comply with the instructions on the Position-in-Train Chart (Figure 11).

Note: Correct hazardous material train placement errors at the first location that allows switching, once the error is identified.

A Train is one or more engines coupled, with or without rail cars, displaying a marker, requiring an appropriate air brake test, and authorized to operate on a main track.

2. When to Use the Position-in-Train Chart

Use the chart to make sure placement position in train is correct:

A. Before a train departs the initial terminal.

B. Before a train departs an intermediate station where pickups and setouts were made en route.

C. When delivering cars to or picking cars up at interchange tracks that are owned and operated by another railroad.

3. How to Use the Position-in-Train Chart

A. Select the applicable column of the Position-in-Train Chart. To do so:

1. Identify the placards and/or markings applied to the car, either from the shipping papers or from observation.

   Note: When placards are displayed but are not required by regulation (permissive placarding), the rail car must be switched as required for the placard displayed.

2. Determine whether the car is loaded or residue/empty.

   Note: The notation "RESIDUE: LAST CONTAINED" on the shipping papers indicates a residue/empty shipment.

3. Identify the car type involved by observation (e.g. tank car, hopper car, gondola, etc.).

B. Find the applicable section on the chart, based on the placard or marking applied, the load or residue/empty status, and the car type.

C. Follow the instructions associated with the placard or marking, as the check marks in the columns indicate.

4. General Information

A. For train placement purposes, each platform or well of an intermodal rail car counts as one car.

B. A buffer car is a:

1. Non-placarded rail car.

2. Rail car with a placard or marking shown in Group E.

3. Residue/empty tank car, as long as it complies with Instruction # 2 on the Position-in-Train Chart.

4. Placarded rail car, other than a tank car, as long as it complies with Instruction # 6 on the Position-in-Train Chart.

C. The word "TOXIC" can appear in place of the word "POISON" on placards.

D. A business car train is not a passenger train.

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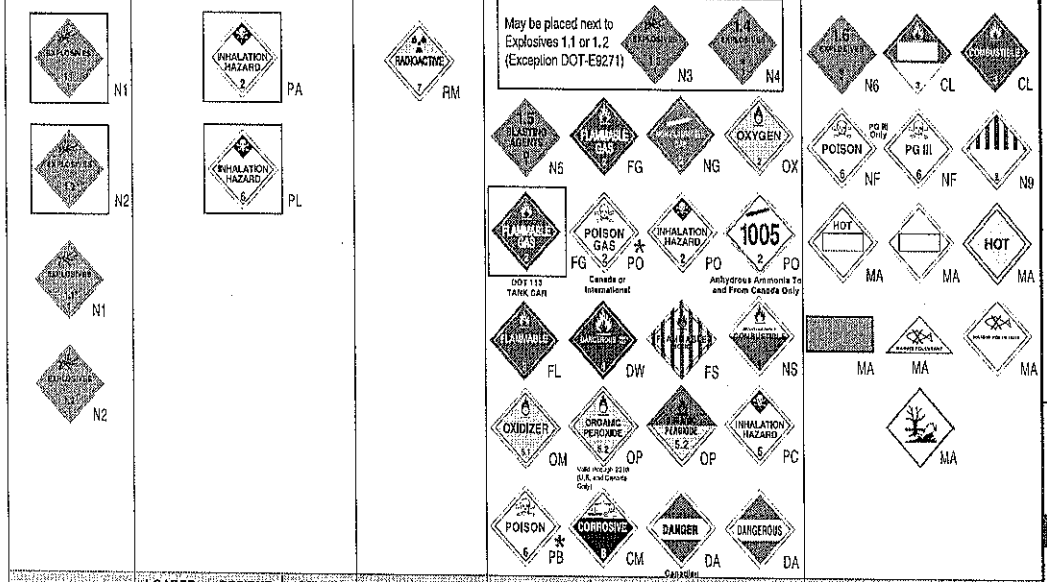
Figure 11. BNSF POSITION IN TRAIN CHART



ANY CAR	LOADED TANK CAR	RESIDUE TANK CAR	OTHER LOADED CAR	ANY CAR	LOADED TANK CAR	RESIDUE TANK CAR	OTHER LOADED CAR	ANY (LOADED/RESIDUE) CAR
✓	✓				✓			
✓	✓	✓		✓	✓	✓		
✓	✓				✓			
✓	✓				✓			
✓	✓				✓			
✓	✓		✓	✓	✓		✓	

HOW TO USE THIS CHART

a. Select the applicable column of the Position-in-Train Chart.

TO DO SO:

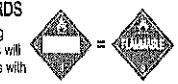
- (1) Identify the SCHI codes, placards and/or markings applied to the car either from the shipping papers or from observation.
  Note: When placards are displayed but are not required by regulation (permissive placarding), the rail car must be switched or placed as required for the placard displayed.
- (2) Determine whether car is loaded or residue/empty.
  Note: The notation "RESIDUE: LAST CONTAINED" on the shipping papers indicates a residue/empty shipment.
- (3) Identify the car type involved by observation (e.g. tank car, hopper car, gondola, etc.)

b. Find the applicable section on the chart, based on the SCHI code, placard or marking applied, the load / empty status, and the car type.

c. Follow the instructions associated with the placard or marking, as the "✓" in the columns indicate.

EQUIVALENT PLACARDS

Cars with placards displaying 4-digit identification numbers will be handled the same as cars with word description placards.



INSTRUCTIONS

1. A placarded car must not be nearer than the 6th car from an engine or occupied caboose/business car. If the train does not have at least five buffer cars, then all available buffer cars must be placed between the placarded car and the engine. When occupied caboose/business car is in the train, the available buffer cars must be equally divided to protect both the engine and occupied caboose/business car from the hazardous material shipment.
2. Must not be next to engine, occupied caboose, or business car.
3. Must not be next to open top cars (including bulkhead flats), when any of the contents protrude beyond the car ends or, if shifted, would protrude beyond the car ends.
4. Must not be next to loaded flat cars (including loaded System Wheel Cars), except closed TOFC/COFC equipment, multilevels, and other specially-equipped cars with tie-down devices for handling vehicles.
5. Must not be next to any rail cars, transport vehicles, or freight containers with temperature control equipment or internal combustion engine, whether running or not.
   Note: Does not apply to cryogenic refrigerated equipment.
6. Must not be next to any placarded car in another placarding Group, except it may be next to a placarded car containing residue or any car placarded or marked as in Group E.

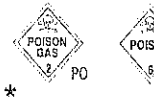
SCHI Codes / Special Handling Codes

SCHI Code	Description (Hazardous)
CL	Combustible Liquid
CM	Corrosive
DA	Dangerous
DW	Dangerous When Wet
FG	Flammable Gas
FL	Flammable
FS	Flammable Solid
IH	Inhalation Hazard
MA	Marked
NF	Division 6.1 PG III
NG	Non-Flammable Gas
NS	Spontaneously Combustible
N1	Explosives 1.1 (Placard on SQ)
N2	Explosives 1.2 (Placard on SQ)
N3	Explosives 1.3
N4	Explosives 1.4
N5	Explosives 1.5
N6	Explosives 1.6
N9	Class 9 Material
OM	Oxidizer
OP	Organic Peroxide
OX	Oxygen
PA	Poison Gas (Placard on SQ)
PB	Poison
PC	Poison Inhalation Hazard
PL	Poison (Placard on SQ)
PO	Poison Gas
RM	Radioactive Material
NP	No Placards Required

NOTE:

(1) The word "toxic" can be used in place of the word "poison" on placards displayed in Group D and Group E.

(2) A rail car placarded in Division 1.1 or 1.2; Division 2.3 (Hazard Zone A; Poisonous Gas); or Division 6.1 (PG I, Hazard Zone A; Poisonous Liquid) in a moving or standing train must be next to and ahead of any car occupied by the guards or technical escorts accompanying the placarded rail car. However, if a rail car occupied by the guards or technical escorts has temperature control equipment in operation, it must be the fourth car behind any car requiring Division 1.1 or 1.2 placards.



* May be used on international shipments (Canada & Mexico).

Figure 11. Position-in-Train Chart

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VII. KEY TRAINS

1. General Requirement

Trains carrying specified numbers of loaded rail cars, trailers, or containers of hazardous materials must be operated as "Key Trains."

2. Key Train Definition

A "Key Train" is any train as described in either A, B, or C below:

A. One (1) or more loads of spent nuclear fuel (SNF) or high level radioactive waste (HLRW) moving under the following Hazardous Material Response Codes (STCC) - 4929142, 4929143, 4929144, 4929147,

or

B. Five (5) or more loaded tank cars containing materials that require the phrase "Poison (Toxic)-Inhalation Hazard" on the shipping papers (Hazard Zone A, B, C, or D) and/or anhydrous ammonia (Identification Number 1005),

or

C. A combination of 20 or more loaded hazardous material shipments, including loaded intermodal portable tanks of "Poison (Toxic)-Inhalation Hazard" (Hazard Zone A, B, C or D), flammable gas (2.1), anhydrous ammonia (Identification Number UN 1005), Class 1.1 or 1.2 explosives, any PG I hazardous material, or environmentally sensitive chemicals (see Table 3).

Exception: Do not count box cars, trailers, or containers carrying mixed loads of hazardous materials when determining key train status.

Table 3. Environmentally Sensitive Chemicals

Allyl Chloride
Carbon Tetrachloride
Chlorobenzene
Chloroform
o-Dichlorobenzene
Dichloropropane (Propylene dichloride)
Dichloropropane/Dichloropropene Mixture
Dichloropropene
Ethyl Chloride
Ethylene Dibromide
Ethylene Dibromide and Methyl Bromide Mixtures
Ethylene Dichloride
Epichlorohydrin
Methyl Chloroform (1, 1, 1 Trichloroethane)
Methylene Chloride (Dichloromethane)
Methylene Chloride/Chloroform Mixture
Perchloroethylene (Tetrachloroethylene)
Perchloroethylene/Trichloroethylene Mixture
Trichloroethylene

Table 3. Environmentally Sensitive Chemicals

3. Identifying Key Trains

A. A computer-generated train consist/train list will identify Key Train status in the header block on the first page.

B. When a computer-generated train consist/train list is not available or hazardous material cars are added to a train, the conductor must review the shipping papers for all hazardous material cars and determine Key Train status.

C. After picking up or setting out hazardous material shipments en route, the Key Train status may change. The conductor must determine whether or not Key Train status has changed and, if so, promptly notify the train dispatcher.

D. Unless relieved of the requirement to do so by the BNSF train dispatcher, the crew operating a Key Train on a foreign railroad must, at the earliest opportunity, notify the other railroad's train dispatcher that the train is a Key Train as defined by BNSF's US Hazardous Material Instructions for Rail.

4. Instructions for Operating Key Trains

A. The maximum authorized speed for Key Trains is 50 MPH, unless further restricted.

Note: Where lower speed restrictions are in effect, or when the train is restricted to a lower speed for other reasons, the lower speed governs.

B. A Key Train will hold the main track, when practicable, unless a speed of greater than 10 MPH is authorized for the siding or auxiliary track.

C. Only cars equipped with roller bearings will be allowed in a Key Train.

D. When a Key Train is stopped by a trackside/wayside warning device, the indicated car (hazmat or not) must be set out. (Note: When a freight train, other than a Key Train, is stopped by a trackside/wayside warning device and the indicated axle is on a loaded placarded non-intermodal railcar, it must be set out.)

E. When moving, Key Trains experiencing an emergency application of the brakes, whether intentional or not, must be protected as prescribed by Rule 6.23 and as supplemented in the current System Special Instructions All Subdivisions. In addition, the entire train must be inspected for derailed or defective cars. If the train is stopped at a location where it cannot be safely inspected (for example: on a bridge), the train may be moved, at the discretion of the appropriate supervisor or train dispatcher, to the nearest location where it can be SAFELY inspected, but at no more than 5 MPH.

VIII. EMERGENCY RESPONSE

1. General Requirement

When an emergency occurs, SAFETY IS OF FIRST IMPORTANCE.

A. Make an emergency call as radio rules require.

B. Look for a fire or vapor cloud.

C. Determine the status of crew members in the area.

D. Warn and keep everyone at a safe distance.

2. When a Fire or Vapor Cloud is Visible

A. Take the shipping papers (including the emergency response information) and move yourself and other crew members uphill and upwind at least one half mile. Stay out of ditches and low areas.

B. Do not smoke or use fusees.

C. Provide the train dispatcher or yardmaster with as much of the following information as is available:

1. Specific location of the emergency (station, mile post location, nearest street or crossing).
2. Type of emergency.
3. Status of crew members.
4. Cars involved, including each car's initials and numbers and their extent of involvement (for example, leaking, derailed, or on fire).
5. Surroundings (e.g., proximity to populated areas, local bodies of water, or nearby drainage ditches or storm sewers; description of terrain; location of access roads; weather conditions).
6. Resources necessary to handle the situation (for example, fire, ambulance, and law enforcement agencies).
7. Location where a crew member with shipping papers will meet arriving emergency response personnel.

D. Once you are in a safe location:

1. Identify yourself and cooperate with the local emergency response personnel as described in Section VIII item 4.
2. Review your shipping papers and emergency response information.
3. If necessary, move to the farthest distance recommended in:

a. The Evacuation Section of the emergency response information accompanying the shipping papers,

or

b. Information from the **Emergency Response Guidebook**.

3. When No Fire or Vapor Cloud is Visible

A. Review the shipping papers for hazardous material shipments.

B. Take the shipping papers (including the emergency response information) and inspect the train to identify the rail cars, trailers, or containers involved, and look for indications of the release of hazardous material.

C. When you encounter a hazardous material release, unusual smells, or noises during this inspection:

1. Avoid contact with the material and its vapors.
2. Move yourself and other crew members upwind and uphill at least one half mile. Stay out of ditches and low areas.
3. Eliminate any ignition sources (no smoking, no fusees).
4. Warn all bystanders to stay away.

D. After completing the inspection, notify the train dispatcher or yardmaster with as much of this information as is available:

1. Status of crew members.
2. Cars involved, including each car's initials and numbers and their extent of involvement (for example, leaking, derailed, or on fire).
3. Surroundings (e.g., proximity to populated areas, local bodies of water, or nearby drainage ditches or storm sewers; description of terrain; location of access roads; weather conditions).
4. Resources necessary to handle the situation (for example, fire, ambulance, and law enforcement agencies).
5. Location where a crew member with shipping papers will meet arriving emergency response personnel.

E. Once you are in a safe location:

1. Identify yourself and cooperate with the local emergency response personnel as described in Section VIII item 4.
2. Review your shipping papers and emergency response information.
3. If necessary, move to the farthest distance recommended in:

a. The Evacuation Section of the emergency response information accompanying the shipping papers,

or

b. Information from the **Emergency Response Guidebook**.

4. Cooperating with Local Emergency Responders

A. Share any requested information from the shipping papers with emergency response personnel.

1. Provide an extra copy of the train consist/train list, when available.

Note: Retain any waybills and a copy of the train consist/train tist until you can deliver them to the first railroad manager on the scene.

2. Provide a copy of the emergency response information provided with the shipment.

B. Help emergency response personnel identify cars and the commodities involved. Use shipping papers or observations from a safe location to accomplish this task.

C. Give the first railroad manager on the scene an oral description of the incident and indicate any assistance you provided emergency responders.

D. Remain at the scene, at a safe distance, until a railroad manager relieves you.

E. A railroad spokesperson will handle discussing the incident with the media or other non-emergency response personnel.

5. Handling Leaking Hazardous Material Shipments

Take these actions when there is any sign of leakage:

A. Do not allow the hazardous material shipment to continue in transportation until the leak is controlled.

Note: Leaking hazardous material shipments may be moved, with proper railroad authority, only as far as necessary to reduce or eliminate the immediate threat of harm to human health, the environment, or railroad operations. Movement of leaking hazardous material shipments may require government approval.

B. When it is necessary to move a leaking hazardous material shipment, use an adequate number of buffer cars between the locomotive and the leaking car, to prevent chemical exposure.

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APPENDIX A — Exemption DOT-SP 9271

The following is provided in compliance with the DOT exemption to the regulations as noted. The exemption applies only to car separation requirements for Division 1.1, 1.2, 1.3 and 1.4 explosives.

DOT-SP 9271 (ELEVENTH REVISION)

1. GRANTEE: BNSF Railway Company
2. PURPOSE AND LIMITATION:
   a. This special permit authorizes the deviation from car separation requirements for transportation in commerce of packages prescribed herein of Division 1.1, 1.2, 1.3 and 1.4 explosives. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein.
   b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce.
   c. Unless otherwise stated herein, this special permit consists of the special permit authorization letter issued to the grantee together with this document.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.203(a) in that marking the shipping paper with the special permit number is waived; and § 172.302(c) in that marking the special permit number on the packaging is waived and § 174.85(d) Table in that deviation from car separation requirements is authorized, except as specified herein.
5. BASIS: This special permit is based on the application of Union Pacific Railroad Company dated August 21, 2002, submitted in accordance with § 107.109.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Proper Shipping Name Hazardous Materials Description	Hazard Class/ Division	Identification Number	Packing Group
Various explosives particularly Rocket motor and spacecraft assemblies	1.1 1.2 1.3 1.4	As Appropriate	As Appropriate

7. SAFETY CONTROL MEASURES: Prescribed packaging is as defined in 49 CFR Part 173, Subpart C.
8. SPECIAL PROVISIONS:
   a. The car separation requirements of § 174.85 are waived in lieu of the following:
      (1) Flatcars carrying loaded trailers or containers placarded EXPLOSIVES 1.1 or 1.2 may be placed next to flatcars loaded with trailers or containers placarded EXPLOSIVES 1.3 or 1.4 without a buffer car in between.
      (2) Flatcars in trailer-on flatcar or container-on-flatcar service with loads placarded EXPLOSIVES 1.1 or 1.2 may be placed next to non-placarded, loaded, specially equipped cars in trailer-on-flatcar service or container-on-flatcar service, or may be placed next to flatcars loaded with vehicles secured by means of a device designed for that purpose and permanently installed on the flatcar and of a type generally accepted for handling in interchange between railroads (i.e., bi-level and tri-level auto racks).

(3) Flatcars with rocket motors, placarded EXPLOSIVES 1.1, 1.2, 1.3 or 1.4 in trailers with automatic refrigerator or heating apparatus in operation may be placed next to flatcars with rocket motors, placarded either EXPLOSIVES 1.1, 1.2, 1.3 or 1.4, in trailers with automatic refrigerator or heating apparatus in operation. This apparatus must conform to DOT Special permit 5022.

(4) Freight cars placarded EXPLOSIVES 1.1 or 1.2 may be placed next to a freight car placarded EXPLOSIVES 1.3 without a buffer car in between.

b. Carriers who receive packages covered by this special permit in interchange may transport the packages under the terms of this special permit provided a copy of this special permit is maintained at the carrier's principle place of business and is made available to a representative of the Department of Transportation upon request.

c. Sections 172.203(a) and 172.302(c) are waived.

9. MODES OF TRANSPORTATION AUTHORIZED: Rail freight.

10. MODAL REQUIREMENTS: A current copy of this special permit or a current transcript of the complete text without the signature in a carrier provided document must be in the possession of a member of the train crew.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

- All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
- Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
- Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when the special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)- 'The Hazardous Materials Safety and Security Reauthorization Act of 2005' (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term 'exemption' to 'special permit' and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 B Immediate notice of certain hazardous materials incidents, and 171.16 B Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:

Robert A. McGuire, Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, Department of Transportation, Washington, D.C. 20590. Attention: PHH-31.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

APPENDIX B — Exemption DOT-SP 7991

The following is provided in compliance with the DOT exemption to the regulations as noted.

The exemption applies only to transportation in commerce of flagging kits of specified construction, containing certain Class 1.4 and 4.1 materials.

DOT-SP 7991 (EIGHTH REVISION)

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: BNSF Railway Company
2. PURPOSE AND LIMITATION:
   a. This special permit authorizes the transportation in commerce of flagging kits of specified construction, containing certain Class 1.4 and 4.1 materials, not subject to the Hazardous Materials Regulations (HMR) except as specifically stated herein.
   b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce.
   c. Unless otherwise stated herein, this special permit consists of the special permit authorization letter issued to the grantee together with this document.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR 171-180, except as specified herein.
5. BASIS: This special permit is based on Union Pacific Railroad Company's application of October 4, 2004 submitted in accordance with § 107.109. Continuation of DOT-SP 7991 (8th Rev.)
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Proper Shipping Name/ Hazardous Materials Description	Hazard Class/ Division	Identification Number	Packing Group
Articles, pyrotechnic for technical purposes	1.4G	UN0431	II
Fusee *(railway or highway)*	4.1	NA1325	II
Signal devices, hand	1.4S	UN0373	II
Signal devices, hand	1.4G	UN0191	II
Signals, railway track, explosive	1.4S	UN0193	II

7. SAFETY CONTROL MEASURES:
   a. Packagings authorized are:
      (1) A flagging kit consisting of a two compartment container constructed of 24 gauge galvanized steel. Each compartment must be equipped with a cover and latching device. Each packaging may contain a maximum of 12 Fusees and 36 railway torpedoes.
      (2) A flagging kit identified in the applicant's request as PPSC #50056-2, PPSC #50026-18. Each packaging may contain a maximum quantity of 12 fusees and 36 railway torpedoes.
      (3) A flagging kit constructed in accordance with Consolidated Rail Corporations drawing D-49053-B. Each packaging may contain a maximum of 36 fusees and 36 railway torpedoes.
   b. Compartments for railway torpedoes must be equipped with a spring loaded positive locking device. Each compartment may contain only one type of device.

8. SPECIAL PROVISIONS:
   a. Packagings may be transported only on Maintenance-of-way vehicles or other railroad motor vehicles such as Car Department, Signal Maintainers, or Operating Department motor vehicles, including privately owned motor vehicles under the direct control of on-duty railroad employees.
   b. No more than 6 flagging kits may be transported at any one time on any motor vehicle.
   c. All materials described in paragraph 6 must be kept in closed flagging kits whenever they are not being used on the railroad right-of-way. Personnel may not open the flagging kits during such time as they are driving the vehicle or when it is located on other than railroad property.
   d. When flagging kits are left in unattended motor vehicles on non-railroad property they must be locked, locked inside the vehicle, or stored in a locked compartment on the motor vehicle.
   e. A current copy of this special permit must be kept on file and be made available to any state and/or local agency that requests a copy.
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle.
10. MODAL REQUIREMENTS:A current copy of this special permit must be carried aboard each motor vehicle used to transport packages covered by this special permit.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
    - All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
    - Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
    - Registration required by § 107.601 et seq., when applicable.

    Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

    No person may use or apply this special permit, including display of its number, when the special permit has expired or is otherwise no longer in effect.

    Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)- 'The Hazardous Materials Safety and Security Reauthorization Act of 2005' (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term 'exemption' to 'special permit' and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.
12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:

Robert A. McGuire, Associate Administrator for Hazardous Materials Safety

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Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

APPENDIX C — List of materials which must be marked on tank cars

Division 2.1 materials

Division 2.3 materials

Acrolein, stabilized

Ammonia, anhydrous, liquefied

Ammonia solutions (more than 50% ammonia)

Bromine or Bromine solutions

Bromine chloride

Chloroprene, stabilized

Dispersant gas or Refrigerant gas

Formic acid

Hydrocyanic acid, aqueous solutions

Hydrofluoric acid, solution

Hydrogen cyanide, stabilized (less than 3% water)

Hydrogen fluoride, anhydrous

Hydrogen peroxide, aqueous solutions (greater than 20% hydrogen peroxide)

Hydrogen peroxide, stabilized

Hydrogen peroxide and peroxyacetic acid mixtures

Nitric acid (other than red fuming)

Phosphorus, amorphous

Phosphorus, white dry or Phosphorus, white, under water or Phosphorus white, in solution, or Phosphorus, yellow dry or Phosphorus, yellow, under water or Phosphorus, yellow, in solution

Phosphorus white, molten

Potassium nitrate and sodium nitrate mixtures

Potassium permanganate

Sulfur trioxide, stabilized

Sulfur trioxide, uninhibited

Note: Many other materials, hazardous and non-hazardous, *may* have the name marked on the car at the discretion of the shipper or car owner. The above listed materials **must**, by regulation, have the name marked on each side of the tank car.

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GLOSSARY

Buffer car
A non-placarded rail car, a railcar with a placard or marking shown in Group F on the Switching Chart or Group E on the Position-in-Train Chart, a residue/empty tank with no other restrictions, or a placarded rail car with no other restrictions.

Bulk packaging
Packaging with capacity greater than 119 gallons or 882 pounds. For example, bulk bags, intermodal (IM) portable tanks, portable tanks, portable bins, gondola cars, hopper cars, or tank cars.

Container
Any freight container, intermodal (IM) portable tank, portable tank, or portable bin.

Emergency
An unforeseen combination of circumstances or the resulting state that calls for immediate action (for example, derailment and leaks).

Emergency response information
Hazard and response information for each hazardous material, contained in either the train documentation or the Emergency Response Guidebook (ERG), to assist response personnel at hazardous material incidents.

Hazard class
The category of hazard assigned to a material. A class may be subdivided into divisions for clarity. A class may be expressed as a number or with words.

Hazardous material
A substance or material which the Secretary of Transportation has determined to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce. The term "hazardous material" includes hazardous substances, hazardous wastes, elevated temperature materials (HOT or MOLTEN), and marine pollutants.

Hazardous material shipment
A hazardous material in rail cars, trailers, or containers in rail transportation. All hazardous material shipments require shipping papers. When moved in rail cars, trailers, or containers, hazardous material shipments may or may not be placarded or marked with an identification number.

Hazardous waste manifest
A document specifically for tracking hazardous wastes in transportation. It contains the shipping description and identifies the waste generator, each transporter, and the disposal facility.

Hazard zone
One of four levels of inhalation hazard (Hazard Zones A through D) assigned to gases, and one of two levels of hazard (Hazard Zones A and B) assigned to liquids that are poisonous/toxic by inhalation. For example, when the hazard zone is "A," it is shown on the shipping paper as "Zone A." Zone A is the most hazardous, and Zone D is the least hazardous.

Improvised Explosive Device (IED)
Is a device fabricated in an improvised manner incorporating explosives or destructive, lethal, noxious, pyrotechnic, or incendiary chemicals in its design. This device generally includes a power supply, a switch or timer, and a detonator or initiator.

Inhalation Hazard
Term used to identify certain gases and liquids that may cause health problems if breathed in very low concentrations for short periods of time.

Interchange
The process of transferring rail cars to or from another railroad.

Limited quantity (LTD QTY)
A term used on shipping papers to indicate a hazardous material shipment which is allowed an exception to the labeling, packaging, and placarding requirements because the hazard associated with a small package is low.

Marking
A descriptive commodity name, identification number, caution (such as INHALATION HAZARD, HOT, MOLTEN, or MARINE POLLUTANT), or tank car test date displayed on hazardous material shipments. (See Section IV for marking requirements.)

Movement Approval
A one time authorization to move a non-conforming package not meeting the applicable hazardous material regulations. This provides no relief of any regulations other than specifically stated in the approval.

N.O.S.
Initials, found on shipping papers, which mean "Not Otherwise Specified."

Non bulk packaging
Packaging with a capacity equal to or less than 119 gallons or 882 pounds. For example, bags, bottles, boxes, cylinders, or drums.

ORM D (Other Regulated Material - D)
A material such as a consumer commodity that, due to its form, quantity, and packaging, presents such a limited hazard that it is not subject to the hazardous material regulations when transported by rail.

Packing group
A grouping of hazardous materials according to the degree of danger:

- Packing Group I (shown as "PG I" or "I" on the shipping papers) indicates great danger.
- Packing Group II (shown as "PG II" or "II" on the shipping papers) indicates medium danger.
- Packing Group III (shown as "PG III" or "III" on the shipping papers) indicates minor danger.

Placard
A sign measuring 103/4 by 103/4 inches square on point, communicating a hazard by symbol, color, and words or numbers. Some placards must be displayed on a square background which is white with a black border (see Figure 4, page 21 for examples of placards).

Placarded car
A rail car displaying placards in accordance with DOT regulations.

PIH/TIH
Poison (Toxic)-Inhalation Hazard.

Poison Inhalation Hazard (PIH)
Term used to identify certain gases and liquids that may cause health problems if breathed in very low concentrations for short periods of time.

Position-in-Train document
A document showing the current position of all hazardous material shipments within the train. This document could be the train consist/train list or a separate document specifically for this purpose.

Radio waybill
A form used to record shipping description entries provided orally.

Rail car
Equipment used in rail transportation. For example, box car, flat car, gondola car, hopper car, tank car, or caboose, but not an engine.

Residue
The hazardous material remaining in a packaging, including a tank car, after its contents have been unloaded to the maximum extent possible. It is indicated on the shipping papers by the phrase "RESIDUE: LAST CONTAINED" before the proper shipping name.

Special Car Handling Instructions (SCHI) Code (specific to BNSF operations)
Two-letter code used to identify the primary placard required for a hazardous material shipment.

Special Permit
Special permit means a document issued by the Associate Administrator under the authority of 49 U.S.C. 5117 permitting a person to perform a function that is not otherwise permitted under subchapter A or C of this chapter, or other regulations issued under 49 U.S.C. 5101 et seq. (e.g., Federal Motor Carrier Safety routing requirements). The terms "special permit" and "exemption" have the same meaning for purposes of subchapter A or C of this chapter or other regulations issued under 49 U.S.C. 5101 through 5127. An exemption issued prior to October 1, 2005 remains valid until it is past its expiration date, terminated by the Associate Administrator, or issued as a special permit, whichever occurs first.

Shipper's Certification
A signed (or electronically printed) declaration on the shipping paper provided by the shipper to the first transporter for a loaded hazardous material shipment. It indicates compliance with the DOT regulations. The certification must be signed by hand or mechanically. It may read either:

"This is to certify that the above named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.",

or

"I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name, and are classified, packaged, marked, and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations."

Note: A shipper's certification is required on any shipping paper that the customer provides to the crew for loaded hazardous material cars.

Shipping paper
Any document providing the appropriate entries for a hazardous material shipment. (See section II for shipping paper requirements.)

Switching
The operation of moving rail cars within a yard, at a customer's facility, or at an interchange point, in order to place them in a train or on a classification, repair, or storage track. It does not include moving rail cars to or from a shipper's facility or industry track into or out of the yard.

Technical name
A recognized chemical name used in scientific and technical handbooks, journals, and texts to further identify a hazardous material.

TIH/PIH
Toxic (Poison)-Inhalation Hazard.

Toxic Inhalation Hazard (TIH)
Term used to identify certain gases and liquids that may cause health problems if breathed in very low concentrations for short periods of time.

Train
One or more engines coupled, with or without rail cars, displaying a marker, requiring an appropriate air brake test, and authorized to operate on a main track.

Yard
A system of tracks, other than main tracks and sidings, used for making and breaking up trains and for other purposes, such as repair or storage of cars.