GROUP	H
EXHIBIT	
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Agency / Organization

Norfolk Southern

Title

Hazardous Materials Instructions for Rail 2023

HM-1

UNITED STATES

Hazardous Materials Instructions for Rail

EFFECTIVE APRIL 15, 2023

ALL EXPOSURES CAN BE SAFEGUARDED

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UNITED STATES
HAZARDOUS MATERIALS INSTRUCTIONS FOR RAIL

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RAILROAD SPECIAL
HAZMAT INSTRUCTIONS

NORFOLK SOUTHERN CORPORATION

1. GENERAL REQUIREMENT

These rules govern all employees of Norfolk Southern Corporation (NS) and its railroad subsidiaries. On the effective date all employees must transport and handle hazardous materials in compliance with the *United States Hazardous Materials Instructions for Rail* (HM-1).

2. APPLICABILITY TO FOREIGN LINES

Foreign line carriers with trackage rights on NS are governed by the *United States Hazardous Materials Instructions for Rail*. If the foreign line railroad has adopted and issued a comparable document containing the *United States Hazardous Materials Instructions for Rail*, foreign line employees are not required to maintain and have accessible while on duty a current copy of the NS version of the document.

NS employees when operating on a foreign railroad are not required to have a copy of the foreign line hazardous materials manual if the foreign line carrier is governed by the *United States Hazardous Materials Instructions for Rail*.

3. EFFECTIVE DATE

These instructions take effect 12:01 AM, Eastern Standard Time, Wednesday, April 15, 2023. They supersede all previous rules and instructions inconsistent herewith.

Further instructions may be issued by proper authority.

Paul Duncan

Executive Vice President and Chief Operating Officer

Norfolk Southern Corporation

NORFOLK SOUTHERN VISION

Be the safest, most customer-focused and successful transportation company in the world.

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 Materials Instructions for Rail* 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 Materials 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.

Norfolk Southern employees who inspect or transport hazardous materials by rail must have a copy of and comply with the *United States Hazardous Materials Instructions for Rail*. The HM-1 rulebook can also be assessed on the Comply365 app on a company issued mobile device.

Norfolk Southern employees who transport hazardous materials must also have a copy of the current *Emergency Response Guidebook* (ERG) readily accessible while on duty. The ERG app on a company issued mobile device also satisfies this requirement.

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 Materials Instructions for Rail* contact your immediate supervisor.

SECTION 1 — GENERAL INFORMATION

1. DEFINITION OF HAZARDOUS MATERIALS

a. Hazardous materials are defined by the Secretary of Transportation as hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, and materials designated in the Hazardous Materials Table found in the U.S. Code of Federal Regulations (49 CFR 172.101).

b. Hazardous materials are classified according to their chemical and/or physical properties. There are nine numeric classes, some of which may be divided into divisions and two worded classes. 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.

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, Canadian and/or 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

a. All loaded hazardous material shipments and residue/empty time-sensitive hazardous material shipments (see **Table 2**) must be forwarded towards the destination serving yard or applicable interchange as follows:

(1) 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

(2) when less than 5-day week service is performed, on the first available train toward the destination.

EXCEPTION: The 48-hour rule does not apply to shipments that are constructively placed or set out for repair.

b. All Toxic Inhalation Hazard (TIH) shipments must be delivered into the customer's facility at the next available switch after the TIH shipments have arrived in the railroad's yard at destination. For ease of reference, TIH's commonly transported by NS include the commodities identified in **Table 3**.

If delivery cannot take place, Integrated Data Solutions (IDS) must be notified immediately with the reason for failure, and an alternative switching schedule, when applicable, must be scheduled.

TABLE 1. HAZARD CLASSES AND DIVISIONS

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 — Non-flammable, 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 Liquid

LMT QTY (Limited Quantity) *(Exempt from placarding and labeling in rail transportation, but subject to packaging, marking, and possibly, shipping document requirements.)*

TABLE 2. TIME-SENSITIVE SHIPMENTS

(1) Chloroprene, Stabilized	UN1991	4907223	20-Day
(2) Ethylene, Refrigerated Liquid	UN1038	4905735	20-Day
(3) Flammable Liquid, N.O.S. (Methyl Methacrylate Monomer, Uninhibited)	UN1993	4907255	20-Day
(4) Hydrogen Chloride, Refrigerated Liquid	UN2186	4920504	20-Day
(5) Hydrogen, Refrigerated Liquid	UN1966	4905745	20-Day
(6) Vinyl Fluoride, Stabilized	UN1860	4905793	20-Day
(7) Styrene Monomer, Stabilized	UN2055	4907265	30-Day
(8) Styrene Monomer, Stabilized (Recycled)	UN2055	4907235	30-Day

TABLE 3. TOXIC INHALATION HAZARD (TIH) SHIPMENTS COMMONLY TRANSPORTED ON NS	
(1) Acetone Cyanohydrin, Stabilized	UN1541
(2) Allyl Alcohol	UN1098
(3) Anhydrous Ammonia	UN1005
(4) Chlorine	UN1017
(5) Chloropicrin	UN1580
(6) Dimethyl Sulfate	UN1595
(7) Ethylene Oxide	UN1040
(8) Hydrogen Chloride, Refrigerated Liquid	UN2186
(9) Hydrogen Fluoride, Anhydrous	UN1052
(10) Methyl Bromide	UN1062
(11) Phosphorous Trichloride	UN1809
(12) Sulfur Dioxide	UN1079
(13) Sulfur Trioxide, Stabilized	UN1829
(14) Sulfuric Acid, Fuming	UN1831
(15) Toxic By Inhalation Liquid, Corrosive, N.O.S.	UN3390

Note: A comprehensive list of TIH materials is found in AAR Circular OT-55 "Recommended Railroad Operating Practices for Transportation of Hazardous Materials", and in the HM-1 Appendix.

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:

(1) returning residue shipments;

or

(2) regulated Internationally but not in the U.S.

6. OVERWEIGHT HAZARDOUS MATERIALS CARS

a. A hazardous material car discovered in transportation to exceed the maximum allowable total gross weight on rail may be forwarded in transportation without any movement restriction provided the overloaded amount is:

(1) 1% or less of the allowable gross weight on rail, rounded up to the next 100 lbs. for cars weighed on weigh-in-motion scales (for example, if the allowable gross weight is 263,000 lbs., the weight may not exceed 265,700 lbs.).

(2) 1,000 lbs. or less of the allowable gross weight on rail for static scales.

b. IDS must be immediately notified to put a HAZMAT HOLD and remove classification code on a hazardous material car discovered in transportation exceeding the unrestricted maximum allowable total gross weights described above. The car may not be forwarded in transportation unless:

(1) The car is overloaded by 10,000 lbs. or less, and the following actions are completed to authorize the car to move.

(a) IDS will require the shipper to complete and sign a Waiver of Liability;

(b) IDS will require the shipper to obtain a One Time Movement Authority (OTMA) from the Federal Railroad Administration (FRA), requesting that car be authorized to move to the closest point (either the origin or destination);

(c) Revenue Waybilling will add the FRA OTMA number to the shipping documents; and

(d) NS Mechanical Dept. must perform a visual inspection of the car to determine if there are any signs of distress, and if it is safe to move.

(2) If the car is overloaded by more than 10,000 lbs., IDS will coordinate with the shipper and the NS Hazardous Materials Group to off-load product from the car, below the allowable gross weight on rail.

SECTION 2 — 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 documents in a paper or electronic format.

b. Acceptable emergency response information in a paper or electronic format.

c. Electronic or paper document showing the current position of the hazardous material shipment in the train.

The MTR Device (Mobile Train Reporting) can be used for the required hazardous material documentation listed above.

NOTE: The use of electronic shipping documents is authorized under DOT Special Permit 21110 which is included as an appendix.

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 up to date in case of an emergency or for inspection.

2. ACCEPTABLE SHIPPING DOCUMENTS

Any one of the following documents is an acceptable shipping document for hazardous material shipments, if it includes the required shipping description entries (see **Item 6** of this section), is legible, and is printed (manually or mechanically) or in an electronic format 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 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

a. The Emergency Response Guidebook (ERG) contains acceptable emergency response information.

b. Similar information provided by the customer — for example, a Safety Data Sheet (SDS).

4. DOCUMENT INDICATING POSITION-IN-TRAIN

Before moving hazardous material shipments in a train, a member of the crew must have a 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 document before proceeding. The train crew must update the MTR or the paper document by handwriting on it or by appending or attaching another document to it.

5. CHECKING FOR SHIPPING DOCUMENTS

Make sure that a member of the crew has an acceptable shipping document, 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. **Shipping documents and position in train information are still required when receiving or delivering from a customer, and/or interchanging hazmat shipments within a yard or yard limits.**

d. Switching hazardous material shipments outside a yard.

NOTE: Shipping documents are not required in the switch crew's possession when moving hazardous material shipments within a yard or once inside a customer's facility.

EXCEPTION: Although they may remain placarded and marked, residue/empty packages of "Elevated Temperature Material" and Class 9 hazardous substances that are not hazardous wastes or marine pollutants do not require hazardous material shipping documents and emergency response information.

6. REVIEWING SHIPPING DOCUMENT ENTRIES

Review the shipping description entries for each hazardous material on the shipping documents and make sure that the following entries (a–g in **Figure 1**) are present. (**Figure 1** shows two formats, each having two acceptable variations for displaying the shipping description entries.)

a. Reporting Marks (Initials) and Number
The shipping document 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.

FIGURE 1. SHIPPING DESCRIPTION ENTRIES

Vertical Format

GATX 12345 **(a)**
1/TC **(b)**
UN1830 **(e)**
SULFURIC ACID **(c)**
8 **(d)**
PGII **(f)**
RQ (SULFURIC ACID) **(h3)**
EMERGENCY CONTACT:
800-424-9300 **(g)**
HAZMAT STCC = 4930040 **(h11)**

Horizontal Format

UTLX 12345 **(a)**
1/TC **(b)** // UN1017 **(e)** // CHLORINE **(c)** // 2.3 (5.1, 8) **(d)** // 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 materials 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).

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), “1 C/L” (1 carload), 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 UN 1A1”, “15 4G”, or “2 UN 3H1 JERRICAN”.

(3) For Class 1 materials, the quantity shown must be the Net Explosive Mass.

c. Identification Number

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

d. 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 include the phrase “Residue: Last Contained” in association with the basic description, including the proper shipping name.

(4) For waste shipments, the word “Waste” will precede or be part of the proper shipping name of the material.

e. Hazard Class/Division – 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, the subsidiary hazard class(es)/division(s) will appear after the primary hazard class. For example, Ethylene Oxide is listed as “2.3 (2.1), and Chlorine is listed as “2.3 (5.1, 8)”.

(2) The hazard class “Combustible Liquid” need not be repeated for Combustible Liquids, N.O.S. shipments.

(3) Divisions 1.1, 1.2, 1.3, 1.4, 1.5, and 1.6 may show a compatibility group letter after the hazard class (for example, “1.1A”). The letter has no significance in rail transportation.

f. Packing Group

The packing group must appear on the shipping documents in Roman numerals (“I”, “II”, or “III”). The packing group may be preceded by the letters “PG” (“PGI”, “PGII”, or “PGIII”).

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. In addition, the following identification numbers from Classes 3, 4.2, 4.3, 5.1, 8, and 9 do not require the packing group notation:

NA1365	UN3121	UN3269	UN3343	UN3477
UN2426	UN3127	UN3316	UN3363	
UN2990	UN3166	UN3334	UN3473	
UN3072	UN3171	UN3335	UN3476	

g. Emergency Response Telephone Number

Shipping documents for hazardous materials must show a 24-hour emergency response telephone number, including the area code, for use in the event of an emergency involving the hazardous materials. For telephone numbers outside the United States, the international access code or the "+" (plus) sign, country code, and city code, as appropriate, must be included.

NOTE: In some cases, a shipper name or contract number may be shown before or after the emergency response telephone number.

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) Krill meal, PG III

(9) Refrigerating machine.

(10) Vehicle, flammable gas powered or vehicle, flammable liquid powered.

(11) Wheelchair, electric

h. Additional Entries

Some hazardous material shipping descriptions may contain 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" or "TOXIC" notation.

(6) "POISON (TOXIC)-INHALATION HAZARD (PIH or TIH)" or "INHALATION HAZARD (IH)" notation.

(7) Hazard Zone notation ("ZONE A," "ZONE B," "ZONE C," or "ZONE D").

(8) "LIMITED QUANTITY" or "LTD QTY" notation.

(9) FRA Movement Approval (for example, "FRA 0109123"), DOT Special Permit (for example, "SP 9271"), Special Approval Number (for example, "SA 920403"), or Competent Authority Number (for example, "CA 9701001").

(10) DOT-113 notation ("DOT-113, Do Not Hump or Cut-Off in Motion").

(11) Hazardous Materials Response Code (STCC "48xxxxx" or "49xxxxx").

(12) Certain shipments described using Canadian regulations may contain both an Emergency Response Assistance Plan (ERAP) number and its activation telephone number (e.g., "ERP-2-1008 (800-555-5555) // SPECIAL COMMODITY").

(13) Box of asterisks with or without wording (not required by DOT but may appear on railroad-produced documents).

(14) Shipper's Certification.

(15) "OIL" notation.

(16) Additional radioactive material entries.

(17) Name and address of the place of business in Canada of the consignor.

(18) Additional hazardous waste shipping description entries (see **Section 2, Item 11a**).

(19) An EX-number for Air Bag Inflators or Modules classified as Class 9. **NOTE:** Recycled Air Bag Inflators or Modules do not require the EX-number entry but must have the words "recycled" after the basic description.

(20) For International shipments the notation *"Dangerous Goods in Excepted Quantities",* as appropriate.

(21) "NON-ODORIZED" or "NOT ODORIZED" notation for non-odorized liquefied petroleum gas.

7. HANDLING SITUATIONS WHEN SHIPPING DOCUMENTS OR REQUIRED ENTRIES ARE NOT AVAILABLE

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

a. Do not move the car until the appropriate shipping document or the required entries on the shipping document 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 2, Item 6**).

or

(2) Obtain the appropriate shipping document from the shipper, your supervisor, or other appropriate person.

or

(3) Use a radio waybill.

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

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

(b) Complete the radio waybill using the information the supervisor or IDS provided.

NOTE: If a radio waybill form is not available, legibly print the required hazardous material information on a sheet of document including the car's initials and number (see **Section 2, Item 6**).

(c) Keep the radio waybill with the other shipping documents until either reaching the final destination or receiving another shipping document 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.

FIGURE 2. EXAMPLE OF RADIO WAYBILL

NOTE: Print legibly

HAZARDOUS MATERIAL

1. Train Number_____
2. Number of Cars from Head End_____
   (Update the position-in-train documents)
3. Car Initial & No._____
4. Total Quantity Notation (Circle One):
   Tank Car Car Load Residue last Contained Other
   If Other, specify weight or volume_____

***** DESCRIPTION OF ARTICLES *****

5. Number of Packages/Car_____
6. UN/NA Id. No. _____
7. Proper Shipping Name_____
   _____
8. Technical Name (_____)
9. Primary Hazard Class_____
   Secondary Hazard Class_____
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 Number(s):_____
    _____
15. Additional Information_____
    _____
16. ERP Plan No.:_____
    (Canadian Shipments Only)
17. ERP Telephone No.: (_____)_____- _____
    (Canadian Shipments Only)
18. Emergency Contact (_____) _____-_____
    (_____) _____-_____

Completed:

Date: _____ /_____ /_____ Time: _____ : _____ AM
MO DAY YR PM

8. CHECKING FOR POSITION-IN-TRAIN DOCUMENT

a. When transporting hazardous material shipments in a train, accepting, delivering, or interchanging cars; make sure a member of the crew has a 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 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.

9. HANDLING SHIPPING DOCUMENTS RECEIVED FROM A CUSTOMER

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

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 documents received from the customer.

10. HANDLING HAZARDOUS WASTE SHIPPING DOCUMENTS AND MANIFESTS

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

(1) Name, address, and telephone number of the hazardous waste generator.

(2) Name and address of the hazardous waste disposal facility.

(3) Name of transporter.

(4) Waste manifest number.

(5) Special handling instructions.

Note: When delivering rail cars of hazardous waste to a disposal facility, the disposal facility has an agreement with the company to forward the signed manifest directly to Revenue Waybilling.

11. HANDLING REQUESTS FOR SHIPPING DOCUMENTS OR EMERGENCY RESPONSE INFORMATION

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

a. Immediately share any requested information from the shipping documents for the shipment, and provide an extra copy of the train list/consist when available. **Note:** Retain any waybills and a copy of the train list/consist until you can deliver them to the first railroad manager on the scene.

b. From the Dashboard in the MTR app:

- To view the Train Consist, select box #1 –Train Consist.
- To share the consist, select box #3 - Print & Share Package. Once in the Print & Share Package screen, select the SHARE button as shown. After clicking SHARE, locate the Select Action drop down and you will see an option for Email, Send, and View. You have the option to email a recipient, share it using Apple AirDrop, or view a PDF of the Wheel Report on the MTR. **The preferred method of sharing is to use the Print & Share Tile instead of the Train Consist Tile.**

c. Immediately provide a copy of the emergency response information provided with the shipment or display corresponding response guide page number using the ERG app on your MTR device.

SECTION 3 — CAR 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., 1,000 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, adequate buffer cars, shiftable loads and temperature control equipment (see Position-In-Train Chart, Instructions 1 through 7) as well as mechanical requirements, visually inspect each loaded or residue/empty hazardous material shipment (including flat cars transporting placarded or marked trailers or containers) and adjacent rail cars, **from ground level** (do not climb on or go under the car) and check for:

- Leakage.
- Required placards and markings (including stenciling, car certificates, and qualification dates — see **Section 4** for details).
- Secure fastening of closures.
- 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. ***(This inspection must take place from the ground, at a close enough distance so that any problems can be readily identified and must NOT be performed from a moving vehicle.)***

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

  - Do not accept or move the rail car.
  - Immediately move yourself and others to a safe location away from the rail car before using radios and cell phones to make notifications.
  - 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 Yardmaster.
  - For cars on interchange tracks or in the yard, immediately contact the Train Dispatcher or Yardmaster.

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 8 (Emergency Response), Item 5**.

(2) Make sure placards and markings are appropriate for the shipment in good condition and displayed correctly (see **Section 4, 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: When heater coil caps are provided, they must be applied.

(5) "Double shelf couplers" and roller bearings are present.

c. Inspecting Placarded/Marked Gondola Cars (from ground level**)**

(1) Look for loosely fastened gondola covers.

(2) Make sure the cover or tie downs do not foul any safety appliances.

d. Inspecting Placarded/Marked Hopper Cars (from ground level**)**

Check that discharge gates are closed and secured.

e. Inspecting Placarded/Marked Intermodal Cars (from ground level**)**

(1) Make sure that an intermodal tank container of hazardous materials is not transported with a container above or below the tank.

(2) Placards must be fully visible when containers are loaded in a well car.

(3) Intermodal tanks must be placed so that any bottom outlet valves are pointed toward the ends of the well car or platform.

f. Inspecting Shipments Placarded EXPLOSIVES 1.1 or 1.2 (from ground level)

(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 Certificate**) 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 18 cm (7.1 in) by 18 cm (7.1 in) or 15 cm (5.9 in) by 20 cm (7.9 in) in size.

(2) Do not accept or transport the car until all damage has been corrected and car certificates are in place.

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.

FIGURE 3. CAR CERTIFICATE

_____ 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 with 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 Materials 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.

SECTION 4 — PLACARDS AND MARKINGS

1. GENERAL REQUIREMENT

Hazardous material shipments that are not properly placarded and marked, whether loaded or containing a residue, must NOT be accepted for transportation or transported unless they are specifically excluded from this requirement in Section 2 below.

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 documents indicate that the shipment is a Limited Quantity, most international shipments (including Canada and Mexico) of hazardous materials require placards.

PLACARD — a sign measuring at least 250 mm (9.8 in) by 250 mm (9.8 in) square-on-point, communicating a hazard by symbol, color, hazard class/division number, and possibly, text. (See **Figure 4** for pictures of placards.) Text indicating the hazard is not required on placards other than the Class 7 (Radioactive) and DANGEROUS placards; however, for shipments originating internationally, text may not appear on a Class 7 placard. The hazard class text does not have to be in English, except for the DANGEROUS placard, as long as the size, color, hazard class, and symbol are correct.

a. Placards are required when transporting **any quantity** 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 Poisonous (toxic) material, inhalation hazard, Hazard Zone A, and Hazard Zone B
- 7 Radioactive Yellow III label or exclusive use shipments of low specific activity (LSA) materials and surface contaminated objects

Figure 4
PLACARDS FOR HAZARDOUS MATERIALS BY HAZARD CLASS

Class 1 (Explosives)

Division 1.1
(Explosive with Mass Explosion

Division 1.2
(Explosive with Projection Hazard)

Division 1.3
(Explosive with
Predominantly a Fire Hazard)

Division 1.4
(Explosive with no Significant Blast Hazard)

Division 1.5
(Very Insensitive Explosive)

Division 1.6
(Extremely Insensitive Explosive)

Class 2 (Gases)

Division 2.1
(Flammable Gas)

Division 2.1 (Flammable Gas in
Cryogenic Form in DOT-113 Tank Car)

Division 2.2
(Non-Flammable Gas)

Division 2.3 Zone A
(Poison Gas)

Division 2.3 Other than Zone A
(Poison Gas)

Division 2.2 Oxygen

United States

Canada

Anhydrous Ammonia

International Placard

NOTE: The word "Toxic" can be used in place of the word "Poison"

May appear in conjunction with U.S. "Poison" Gas Placard (Inhalation Hazard Class 2) on Canadian or International Shipments

Class 3 (Flammable Liquids)

Class 3
(Flammable Liquids)

Class 3 (Combustible Liquids)

Class 3
(Combustible Liquids)

Figure 4.
PLACARDS FOR HAZARDOUS MATERIALS BY HAZARD CLASS

Class 4 (Flammable Solids & Reactive Solids/Liquids)

Division 4.1
(Flammable Solid)

Division 4.2
(Spontaneously Combustible)

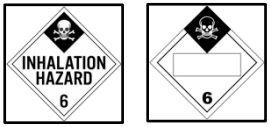
Division 4.3
(Dangerous When Wet Material)

Class 5 (Oxidizers & Organic Peroxides)

Division 5.1
(Oxidizer)

Division 5.2
(Organic Peroxide)

Class 6 (Poisonous Materials)



Division 6.1 Zone A
(Poison or Toxic Inhalation Hazards (PIH or TIH)

Division 6.1 Zone B
(Poison or Toxic Inhalation Hazards (PIH or TIH)

Division 6.1 PG I
(Other than Poison or Toxic Inhalation Hazards (PIH or TIH), PG II, or PG III

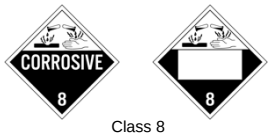
Division 6.1
PG III only

NOTE: The word "Toxic" can be used in place of the word "Poison"

Class 7 (Radioactive Materials)

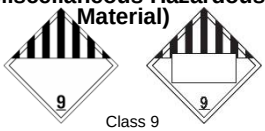
Class 7
(Radioactive Material)

Class 8 (Corrosive Materials)



Class 8
(Corrosive Material)

Class 9 (Miscellaneous Hazardous Material)



Class 9
(Miscellaneous Hazardous Material)

Dangerous Placard (Mixed Load)

United States

Canadian

b. Placards are required when transporting total weight of **1,001 lbs. (454 kg) or more** of these hazard classes:

NOTE: Placards may be displayed for quantities less than 1,001 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 Non-flammable, nonpoisonous 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 materials poisonous (toxic) by inhalation

NOTE: For U.S. transportation of Class 6.1, PGIII, a PGIII 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 must be marked with the identification number (see **Section 4, Item 4**).

Combustible Liquids [see **Item c (7)** below for handling combustible liquids in non-bulk packages]

Mixed loads of hazardous materials only including commodities listed in **Section 4**, **Item b**.

c. Placards are not required for:

(1) Hazardous material shipments with less than 1,001 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 (U.S./Canadian) materials that display the identification number

(5) Limited Quantity (LTD QTY) shipments when identified as such on shipping documents

(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 tank containers of hazardous materials which have been cleaned and purged

(9) Shipments listed as Radioactive White I and Yellow II labels on shipping documents

(10) Class 1.4S

(11) Shipments of molten sulfur moving to or from Canada, provided the letters and numerals "UN2448", or the numerals "2448" 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 2.1 Flammable Gases loaded in DOT-113 tank cars including tank cars containing only a residue of the material.

(3) Hazard Class 2.3 or 6.1 Poison Inhalation Hazard Zone A 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 **Item 2b** of this section.

NOTE: When 1,000 kg (2,205 lbs.) or more of one class of material is loaded at one loading facility, the placard(s) for that class as specified in **Item 2b** of this section must also be applied.

g. Some shipments of hazardous materials require subsidiary placards that represent secondary hazards. These 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, 4.3, or 6.1 with the notation POISON-INHALATION HAZARD or TOXIC-INHALATION HAZARD present on the shipping documents.

h. For residue/empty hazardous materials 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 quantity 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 quantity 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 document 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 a 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. They will arrange to correct the problem at the next inspection point.

4. MARKING REQUIREMENTS AND MARKING INSPECTION

Marking — a descriptive commodity name, identification number, caution (such as inhalation hazard, elevated temperature material, marine pollutant, fumigant, non-odorized, sour crude oil), or tank car specification and qualification dates stencils displayed on hazardous material shipments.

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

a. Identification Number Mark

(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 materials (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. (4,000 kg) or more of non-bulk packages of hazardous materials, 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 materials.

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.

(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) RADIOACTIVE placards.

(c) DANGEROUS placards.

(d) Subsidiary placards.

FIGURE 5. IDENTIFICATION NUMBERS

(4) Make sure that the identification numbers appear as required above and agree with the shipping paper entries.

(5) When **picking up** a hazardous material shipment at a customer's facility or siding or at 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 documents 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 - **see Figure 6**.

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

(2) When **picking up** a hazardous material shipment at a 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.

FIGURE 6. MARINE POLLUTANT MARK

c. ELEVATED TEMPERATURE MATERIAL Mark

(1) For a material described on the shipping documents with the words "HOT," "ELEVATED TEMPERATURE," or "MOLTEN" and transported in a bulk packaging, the ELEVATED TEMPERATURE MATERIAL mark must be displayed on two opposing sides of the bulk packaging, in one of the following valid formats:

(a) The word "HOT" stenciled on the packaging itself.

(b) The words "MOLTEN SULFUR" (or "MOLTEN SULPHUR") or "MOLTEN ALUMINUM" (or "MOLTEN ALUMINIUM"), as appropriate, stenciled on the packaging itself.

(c) The international ELEVATED TEMPERATURE MATERIAL symbol (see **Figure 7**).

(d) The word HOT displayed on a plain white square-on-point configuration having the same outside dimensions as a placard (see **Figure 7**).

NOTE: Residue/empty shipments that last contained 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 ELEVATED TEMPERATURE MATERIAL 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 an ELEVATED TEMPERATURE MATERIAL 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 an ELEVATED TEMPERATURE MATERIAL 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.

FIGURE 7. ELEVATED TEMPERATURE MATERIAL MARK

d. LIMITED QUANTITIES Mark

(1) For a material listed on the shipping documents as “LIMITED QUANTITY” or “LTD QTY”, the LIMITED QUANTITIES mark (see Figure 8) must be displayed on one side or end of trailers/containers as explained below.

(a) The LIMITED QUANTITIES mark is required:

(i) When the entire load of hazardous materials is limited quantities.

(ii) For a mix of non-hazardous materials and hazardous materials in limited quantity.

(b) The LIMITED QUANTITIES mark is not required when there are limited quantities and other hazardous materials NOT in limited quantities, but you would placard for the regular hazardous materials.

(2) A package displaying the LIMITED QUANTITIES mark is not subject to additional marking requirements for non-bulk packages (e.g., proper shipping name or identification number marking) unless it contains a hazardous substance or a hazardous waste.

FIGURE 8. LIMITED QUANTITIES MARK

e. INHALATION HAZARD Mark

(1) For a material described on the shipping documents 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 a 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) For intermodal tank containers transporting any hazardous materials and for tank cars transporting certain hazardous materials, the commodity name must appear on two opposing sides of the intermodal tank container or tank car. The commodity name (3.9 inches in height for tank cars and at least 2 inches in height for intermodal tank containers) must match the proper shipping name on the shipping documents and may include the technical name, although it is not specifically required.

(2) When **accepting** an intermodal tank container or tank car of hazardous materials 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 for a list of materials that require the commodity name to be stenciled on tank cars.

g. Tank Car Qualification Dates

(1) Make sure the stencils describing the tank car specification (e.g. DOT 111A100W1) and qualification dates are legible (see **Figure 9**). 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 9**).

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.

(3) When the qualification date is overdue, do not load or accept loaded tank cars from the shipper.

(4) When found en route, car may proceed to destination after contacting the supervisor.

FIGURE 9. TANK CAR QUALIFICATION DATE (New Style Example)

	STATION STENCIL	QUALIFIED	DUE
TANK QUALIFICATION	ABC-1	2022	2032
THICKNESS TEST	ABC-1	2022	2032
SERVICE EQUIPMENT	ABC-1	2022	2032
PRD VALVE: 75 PSI	DEF-1	2022	2032
LINING	ABC-1	2022	2032
88.B.2 INSPECTION	ABC-1	2022	2032
STUBB SILL INSPECTION	ABC-1	2022	2032

h. FUMIGANT Mark

(1) As information, the purpose of the FUMIGANT mark (see **Figure 10**) 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: Fumigant mark 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 documents is not required.

(b) For International (Canadian and IMDG) shipments verify that the information for the shipment on the shipping documents includes the following entries — UN3359, Fumigated Unit, Class 9, name of the fumigant, amount of fumigant, date of fumigation, and any disposal information.

FIGURE 10. FUMIGANT MARK

i. Non-Odorized Marks

A tank car or intermodal tank container transporting non-odorized liquefied petroleum gas (LPG) must be legibly marked NON-ODORIZED or NOT ODORIZED on two opposing sides, either near the marked proper shipping name or near the placard(s).

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

j. Sour Crude Oil Mark

A bulk packaging transporting petroleum crude oil containing hydrogen sulfide (i.e. sour crude oil) in sufficient concentration that its vapors may present an inhalation hazard must include a marking to warn of the toxic hazard **(see Figure 11)** which must be displayed at each location (e.g. manway) where exposure to hydrogen sulfide vapors may occur. The square-on-point must be black or red on a white or other contrasting background, and the skull and crossbones symbol must be black, located in the center of the square-on-point, and clearly visible.

FIGURE 11. SOUR CRUDE OIL MARK

SECTION 5 — SWITCHING

1. GENERAL REQUIREMENT

Switch placarded hazardous material shipments only in compliance with the restrictions on the Switching Chart (see **Figure 12**).

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. It 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 6** and the required documentation requirements in **Section 2**.

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

2. SAFETY

Before coupling, position yourself toward the end of a tank car, at least 15 feet, and more, if possible, from the manway and valves. Contents of tank cars may splash during or immediately following coupling due to 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 documents 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.

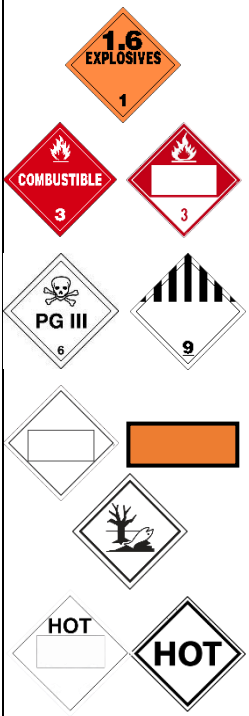
NOTE: Residue/empty tank cars are identified on switch lists, track lists, and track inquiries with an "E" in the appropriate field. The notation "RESIDUE: LAST CONTAINED" on the shipping documents indicates a residue/empty shipment.

(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 "X"s in the columns indicate.

Figure 12	SWITCHING CHART			
GROUP 1	**GROUP 2**	**GROUP 3**		
	 UN2919 UN3328 UN3329 UN3331			
Any Car	**Any Car**	**Loaded Tank Car**	**Other Loaded Car / Residue Tank Car**	**Any Flat Car**
X				
X	X			X
Not Allowed per Restriction 2	Not Allowed per Restriction 2	X		Not Allowed per Restriction 2
		X		

Figure 12	SWITCHING CHART
GROUP 4	**HOW TO USE THIS CHART**
	Select the applicable column of the Switching chart. To do so: 1. Identify the placards and/or markings applied to the car. 2. Use the shipping document to determine whether car is loaded or residue/empty. Note: The notation: "RESIDUE: LAST/CONTAINED" on the shipping document indicate a residue/empty shipment. 3. Identify the car type involved by observation (e.g. tank car, hopper car, gondola, etc.). 4. Find the applicable section on the chart, based on the placard or marking applied, the load/empty status, and the car type. 5. Follow the restrictions associated with the placard or marking as the "X"s in the columns indicate.
	The Word "TOXIC" can be used in place of the word "POISON" on placards.
	Cars with placards displaying 4-digit identification numbers will be handled the same as cars with word description placards. **EQUIVALENT PLACARDS** 
Any Car	**RESTRICTIONS**
	1) Separate these cars from an engine by at least one non-placarded car or by one GROUP 4 placarded or marked car. • Do not place where there is any probable danger of fire (e.g. 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 additional cars until the lead is clear.

SECTION 6 — 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 (**see Figure 13**).

NOTE: Correct hazardous materials train placement errors at the first location that allows switching once an error is identified.

A **Train** is one or more locomotives coupled, with or without rail cars, displaying a marker, requiring an appropriate air brake test. Position-in-Train Chart rules also apply when transporting rail cars **to or from** a customer facility or interchange location.

When taking charge of trains at initial terminals and at outlying locations, Conductors must physically observe the first six (6) cars of their train to ensure the correct placement of placarded hazardous material cars. This requirement is not applicable for intermodal trains and it does not apply at crew change points when a direct physical transfer is made between crews.

Norfolk Southern was granted DOT Special Permit SP-20996 (see appendix). The special permit authorizes trains to transport certain hazardous materials without buffer cars between unoccupied DP locomotives and placarded hazardous material shipments, except for the hazardous material shipment classes/divisions listed below in General Information section and as notated on the Position-in-Train Chart.

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 moving hazmat cars to or from interchange tracks that are owned and operated by another railroad.

d. When moving hazmat cars to or from a shipper's facility or industry tracks into or out of the yard.

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 documents or from observation.

NOTE 1: When placards are displayed but are not required by regulation (permissive placarding), the rail car must be switched as required for the placard displayed.

NOTE 2: Molten sulfur identified on the shipping paper as a 4.1, moving to or from Canada and displaying the letters and numerals "UN2448" or the numerals "2448" and the words "MOLTEN SULFUR" (or "MOLTEN SULPHUR") is exempt from placarding and will be treated the same as Group 5 on the Position-in-Train Chart.

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

NOTE: The notation "RESIDUE: LAST CONTAINED" on the shipping documents 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/residue/empty status, and the car type.

c. Follow the restrictions associated with the placard or marking as the "X"s 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 5.

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

(4) Placarded rail car, other than a tank car, as long as it complies with Restriction #7 on the Position-in-Train Chart.

(5) For a loaded bulk commodity train containing hazardous materials (ethanol, crude oil, etc.), a buffer car must:

- Weigh a minimum of 45 tons, and
- Be at least 41 feet long and not exceeding 70 feet in length.

c. A locomotive, working or not working and regardless of placement in a train, is always considered as a locomotive for train placement of hazardous materials. A locomotive can NEVER be counted as a buffer car for train placement purposes. The use of DOT Special Permit 20996 only applies to unoccupied DP locomotives. **The requirements of Restriction 1 and 2 from the Position-in-Train chart for buffer cars between a locomotive and placarded hazardous materials shipments listed in the chart remains in effect for head end locomotives (operating or dead-in-tow), and any other occupied locomotives in the train**.

d. Use of Special Permit 20996 requires the following:

- Unoccupied DP locomotives must be locked, as required by NS-1 rule DP-1 Set-Up.
- Employees must not be deadheaded on DP locomotives.
- Crew members must have access to the special permit SP-20996 when reporting for duty when operating trains under the authority of the special permit for the placement of hazardous material shipments near unoccupied DP locomotives. It is not necessary to possess the special permit while en route on the train.

  NOTE: The special permit is available from the main menu of the OWP under Resources>Resource Guides and on Comply365 under System Rule Books and Reference Documents>Special Permits.

- At least one (1) buffer car must be placed between unoccupied DP locomotives and placarded hazardous material shipments in Group 1 and 2 on the Position-In-Train Chart.
- For all other placarded hazardous material shipments, **buffer cars are not required** to be placed between unoccupied DP locomotives and hazardous material shipments.

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Figure 13 POSITION-IN-TRAIN CHART

GROUP 1

UN2919
UN3328
UN3329
UN3331

GROUP 2

Hazard Zone A

Hazard Zone A

*Canada or International

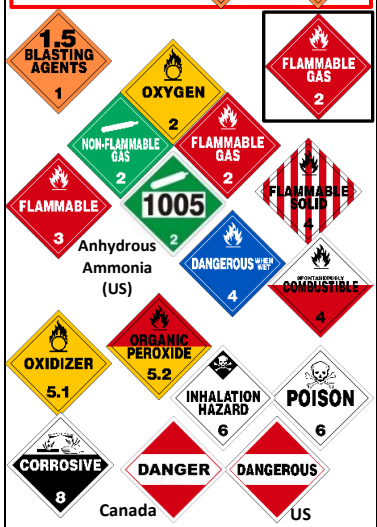
*Anhydrous Ammonia (Canada)

**Division 2.3 Hazard Zone B, C or D placarded cars may be placed next to any placarded cars in Group 4.

GROUP 3

GROUP 4

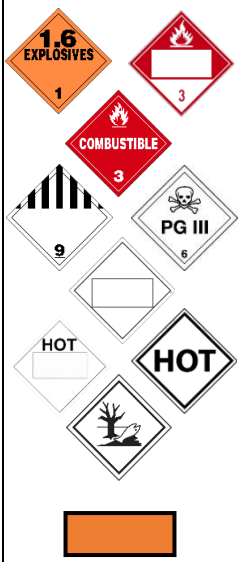
***May be placed next to Explosives 1.1 or 1.2 (Special Permit DOT SP-9271)



Any Car	Loaded Tank Car	Residue Tank Car	Other Loaded Car	Any Car	Loaded Tank Car	Residue Tank Car	Other Loaded Car
X	X				X		
X	X						
X	X	X		X	X	X	
X	X				X		
X	X				X		
X	X				X		
X	X**		X	X	X***		X

Figure 13	POSITION-IN-TRAIN CHART	Compliant with SP-20996

GROUP 5



HOW TO USE THIS CHART

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

1. Identify the placards and/or markings applied to the car. Use the shipping document to determine whether car is loaded or residue/empty. Note: The notation: "RESIDUE: LAST/CONTAINED" on the shipping document indicate a residue/empty shipment.
2. Identify the car type involved by observation (e.g. tank car, hopper car, gondola, etc.).
3. Find the applicable section on the chart, based on the placard or marking applied, the load/empty status, and the car type.
4. Follow the restrictions associated with the placard or marking as the "X"s in the columns indicate.

*Authorized only for U.S. to Canada or Canada to U.S. shipments.

The Word "TOXIC" can be used in place of the word "POISON" on placards.

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

EQUIVALENT PLACARDS

Any Car	RESTRICTIONS
	1) Must not be nearer than the 6th car from the head end engine consist (operating or dead-in-tow), occupied helper unit, 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 head end engine consist (operating or dead-in-tow), occupied helper unit, or occupied caboose/business car. The available buffer cars must be equally divided to protect both head end engine consist, occupied helper unit or occupied caboose/business car. **Exception:** In a loaded or empty bulk commodity unit train, only one buffer car is required to be placed between the placarded car and the head end engine consist and occupied helper unit.
	MUST NOT BE NEXT TO — **2)** Unoccupied DP Locomotives Note: Engine (UDP or dead-in-tow) must remain locked to prevent unintended occupancy during operation and no employee may deadhead.
	3) Occupied Locomotives, Head End Dead in Tow Locomotives or occupied caboose/business car.
	4) 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.
	5) Loaded flat cars, except closed TOFC/COFC equipment, multi-levels, and other specially equipped cars with tie down devices for handling vehicles. Railroad wheels loaded on wheel car flats, in gondolas with no ends, or loaded with the axles above the top of the car.
	6) 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.
	7) Any placarded car in another placarding Group, except it may be next to any residue placarded car or any car placarded or marked as a Group 5.

SECTION 7 — 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 Materials Response Codes – 4929142, 4929143, 4929144, or 4929147

OR

b. one (1) or more loaded tank cars containing materials that require the phrase "POISON/TOXICINHALATION HAZARD" on the shipping documents (Hazard Zone A, B, C, or D), anhydrous ammonia (UN1005), or ammonia solutions (UN3318)

OR

c. twenty (20) or more loaded hazardous materials shipments or intermodal portable tank loads having any combination of hazardous material.

EXCEPTION: Do not count box cars, trailers, or containers carrying mixed loads of hazardous materials when determining Key Train status.

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 documents 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.

4. INSTRUCTIONS FOR OPERATING KEY TRAINS

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

EXCEPTION: Key Trains carrying 20 or more loaded tank cars of Combustible Liquids or Class 3 Flammable liquids, or a combination thereof, are restricted to 40 MPH within High Threat Urban Areas (HTUA). When applicable, the restriction will be indicated on the Wheel Report as follows: "40 MPH SPEED RESTRICTION THROUGH HTUAs". Crews picking up Combustible Liquids or Class

3 Flammable Liquids en-route should refer to their paperwork to determine if these additional cars will require their train to be restricted or contact IDS for assistance. High Threat Urban Areas are identified by milepost limits in Division Timetables or by Operations Bulletins, and in **Section 9**.

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 defect in a Key Train is reported by a wayside/trackside warning detector but a visual inspection fails to confirm evidence of a defect, the train must not exceed 30 MPH until it has passed over the next wayside detector or is delivered to a terminal for a mechanical inspection. If the same car sets off the next detector or is found to be defective, it must be set out from the train.

e. Unless relieved of the requirement to do so by the operating railroad's Train Dispatcher, the crew operating a Key Train on a foreign railroad must, at the earliest opportunity, notify the foreign railroad's Train Dispatcher that the train is a Key Train as defined by the operating railroad.

SECTION 8 — EMERGENCY RESPONSE

1. GENERAL REQUIREMENTS

In case of a hazardous materials incident, safety is the first consideration. Your responsibility, when observing an incident, is to determine the status of the incident and to immediately report the incident to the Train Dispatcher or Yardmaster.

NOTE: Do not allow a leaking hazardous material shipment to continue in transportation until the leak is resolved (e.g., repaired, reconditioned, or overpacked).

2. REPORTABLE INCIDENTS

Reportable incidents include:

a. All unintentional or accidental releases (including very minor leaks) of hazardous materials in transportation.

b. All unintentional or accidental releases of non-hazardous materials in transportation

c. All derailments and/or accidents (including sideswipes) involving rail cars containing either a hazardous material, substance, or waste, including residue shipments, in which the:

(1) packaging is damaged;

or

(2) car is derailed and not upright, regardless of damage, leaks, or releases.

d. All releases of any petroleum product (including oil, diesel fuel, gasoline, etc.) or other materials that can cause environmental damage. For example, spills on shorelines next to water, or spills that cause a sheen on the water.

When in doubt, report all release incidents, regardless of the amount of material involved.

3. WHEN AN EMERGENCY OCCURS

SAFETY IS OF FIRST IMPORTANCE.

Carry out the following actions as closely as possible; however, on-scene judgment based on actual circumstances must be the final guide for protecting people, property, and the environment.

a. Make an emergency call, as radio rules require.

b. Look for a fire or vapor cloud.

c. Rescue the injured if qualified, without endangering yourself or others. Warn and keep everyone at a safe distance until it can be determined what, if any, chemicals are involved.

4. WHEN A FIRE OR VAPOR CLOUD IS VISIBLE

a. Take the shipping documents (including the emergency response information) and the ***Emergency Response Guidebook*** and move yourself and other crew members uphill and upwind the evacuation distances recommended in the ***Emergency Response Guidebook***.

b. Stay out of ditches and low areas.

c. ***Do Not Smoke or use fusees.***

d. Provide the Train Dispatcher or Yardmaster with as much of the following information as possible:

(1) specific location of the emergency (station, mile post location, nearest street or crossing);

(2) type of emergency;

(3) status of crewmembers;

(4) cars involved, including each car's initials and numbers and its 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 required to handle situation (for example, fire, ambulance, and law enforcement agencies); and

(7) location where a crewmember with shipping documents will meet arriving emergency response personnel.

e. Once you are in a safe location, identify yourself and cooperate with the local emergency response personnel as noted in **Item 6** of this section.

5. WHEN NO FIRE OR VAPOR CLOUD IS VISIBLE

a. Review the shipping documents for hazardous material shipments.

b. Take the shipping documents (including the emergency response information) and the ***Emergency Response Guidebook*** and inspect the train to identify the rail cars, trailers, or containers involved, and look for indications of the release of hazardous materials.

c. If you encounter a hazardous materials release (regardless of car type – tank, hopper, or box), unusual smells, or noises during this inspection:

(1) avoid all contact with the material and its vapor;

(2) do not step in the material (includes both liquids and solids)

(3) move yourself and other crewmembers uphill and upwind the evacuation distance recommended in the ***Emergency Response Guidebook***.

(4) stay out of ditches and low areas.

(5) remove all possible ignition sources. ***Do Not Smoke;*** and

(6) warn all bystanders to stay away;

d. After completing the inspection, notify the Train Dispatcher or Yardmaster with as much of the following information as possible:

(1) status of crewmembers;

(2) cars involved, including each car's initials and numbers and its 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 situation (for example, fire, ambulance, and law enforcement agencies); and

(5) location where a crewmember with shipping documents will meet arriving emergency response personnel.

e. Once you are in a safe location, identify yourself and cooperate with the local emergency response personnel as noted in **Item 6** of this section.

6. COOPERATING WITH LOCAL EMERGENCY RESPONDERS

a. Immediately share any requested information from the shipping documents with emergency response personnel.

(1) Provide an extra copy of the train consist/list, when available. When a printed copy is not available, share using the MTR app.

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

(2) Immediately 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 documents 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.

7. 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.

8. EMERGENCY RESPONSE PLANS

In the event of an emergency situation NS has plans to respond and manage incidents, with a primary objective of protecting life and health (employees and the general public), protecting the environment and minimizing property damage, complying with regulatory requirements, and restoring train operations.

a. The Norfolk Southern Corporate Emergency Response Plan (ERP) has been developed to provide guidance and standard operating procedures to employees responding to emergency situations. These situations may include, but not limited to, derailments, releases of hazardous materials and natural disasters such as earthquakes, floods and hurricanes.

All employees should be familiar with the Corporate ERP, which is accessible electronically at several locations including the OWP, ERC, mobile app on company issued devices, and Desktop Link:

https://nsconline.sharepoint.com/sites/NSEnvironmental/SitePages/ERP.aspx

b. Several NS yards have Yard Evacuation Plans, These are required at all NS hump classification yards, system flat switching yards, and regional flat switching yards. Other yards locations have also been selected based on factors such as yard throughput traffic, facility size, hazmat traffic volumes, and locations where there are 10+ employees working at the same facility.

The Local Safety & Service Planning Committee is responsible for developing and maintaining an Evacuation Plan for each required yard/terminal. All division and terminal supervision **must** be familiar with the Evacuation Plan at their facility and ensure that all employees know how to access it and are familiar with the plan.

Where applicable, Yard Evacuation Plans and maps should be posted at visible locations and accessible to employees for review.

SECTION 9 — RAIL SECURITY SENSITIVE MATERIALS

1. GENERAL REQUIREMENT

Loaded rail cars, trailers, or containers carrying any Rail Security Sensitive Materials (RSSM) must be handled in accordance with the rules in this section.

2. RAIL SECURITY SENSITIVE MATERIAL DEFINITION

A "Rail Security Sensitive Material" or RSSM is described in either a, b, or c below:

a. A rail car, trailer, or container containing more than 5,000 lbs. of a Division 1.1, 1.2, or 1.3 explosive material.

b. A loaded tank car containing a Toxic Inhalation Hazard (TIH). A list of commonly transported TIH materials is included in **Section 1, Table 3**.

c. A rail car containing a highway-route controlled quantity of Class 7 (radioactive) material shipped under any of the following HazMat STCCs or Hazardous Materials Response Codes — 4929142, 4929143, 4929144, 4929147.

3. INSTRUCTIONS FOR RECEIVING RSSM SHIPMENTS FROM A SHIPPER

a. Loaded rail cars, trailers or containers of RSSM shipments may only be picked up from a Rail Secure Area in a customer's facility. A Rail Secure Area is a pre-designated physically secure location identified by a rail hazardous materials shipper or receiver for the purpose of inspecting, preparing, loading, storing, and/or unloading RSSM shipments.

b. When picking up a loaded Rail Security Sensitive Material from a shipper:

(1) A hazardous materials and security inspection must be performed as instructed in **Section 3 — Car Inspection**.

(2) The shipper must have a representative physically present at the car when the railroad pulls the car so that "Positive Control" is maintained at all times.

(3) The shipper representative and the Conductor must both complete a Chain-of-Custody form.

(4) The shipper will be supplied the Chain-of-Custody form by the IDS or may use its own form with the same required information. The Conductor must ensure that any time RSSM is picked up, the crew completes a Chain-of-Custody form, and the Conductor must send the completed form to IDS at the end of their shift but prior to the Hours of Service limit.

(5) If the industry work order indicates that an RSSM shipment is to be pulled and there is no shipper representative present or a Chain-of-Custody form is not completed, the shipment must not be pulled from the customer's facility.

4. INSTRUCTIONS FOR DELIVERING RSSM TO A CONSIGNEE

When delivering RSSM shipments to NS customers, the Chain-of-Custody documentation and "Positive Control" requirements for RSSM shipments is only required for customers located in a High Threat Urban Area or HTUA. HTUA locations have been designated by the U.S. Department of Homeland Security based on the threat, vulnerability, and consequences calculated for various metropolitan areas.

The following HTUA locations are located on the Norfolk Southern system:

- Atlanta, GA
- Baltimore, MD
- Buffalo, NY
- Charlotte, NC
- Chicago, IL
- Cincinnati, OH
- Cleveland, OH
- Columbus, OH
- Detroit, MI
- Jacksonville, FL
- Jersey City/Newark, NJ
- Kansas City, MO
- Louisville, KY
- Memphis, TN
- New Orleans, LA
- Philadelphia, PA
- Pittsburgh, PA
- St. Louis, MO
- Toledo, OH
- Washington, DC

a. Loaded rail cars, trailers or containers of RSSM shipments may only be placed in the consignee's pre-designated Rail Secure Area in the customer's facility.

b. When delivering a loaded Rail Security Sensitive Material to a consignee in a HTUA:

(1) The consignee must have a representative physically present at the car when the railroad delivers the car so that "Positive Control" is maintained at all times.

(2) The consignee representative and the Conductor must both complete a Chain-of-Custody form.

(3) Receivers of RSSM shipments will be noted on industry work orders. The Conductor must ensure that any time RSSM is delivered, the crew completes a Chain-of-Custody form, and the Conductor must fax the completed form to IDS at the end of their shift but prior to the Hours of Service limit.

(4) If the industry work order indicates that an RSSM shipment is to be delivered and there is no consignee representative present or a Chain-of-Custody form is not completed, **the shipment must not be placed at the customer's facility.**

5. INSTRUCTIONS FOR INTERCHANGING RSSM SHIPMENTS

a. The instructions for interchanging RSSM shipments do not apply at the following interchange locations:

Connecting Carrier	Connecting Carrier Location
AGR	Kimbrough, AL
AGR	Mcintosh, AL
BNSF	Birmingham, AL
CERA	Marlon, IL
CGR	Mobile, AL
CHR	Palmerton, PA
CSXT	Brunswick, GA
CSXT	Evansville, IN
CSXT	Hopewell, VA
CSXT	Valdosta, GA
FGLK	Geneva, NY
GFRR	Adel,GA
GFRR	Albany, GA
GITM	Anguilla Jct., GA
HPTO	High Point, NC
ICRK	Anderson, IN
IN	Montpelier, OH

Connecting Carrier	Connecting Carrier Location
KCS	Hattiesburg, MS
LRWY	Sayre, PA
LVRR	Northumberland, PA
MDDE	Townsend, OE
MIDH	Middletown, PA
MNJ	Campbell Hall, NY
NBER	Tyrone, PA
OHIC	Bayard, OH
RBMN	Reading, PA
RJCL	Massillon, OH
RSR	Silver Springs, NY
SAPT	Savannah, GA
TPW	Logansport, IN
TYBR	Fairless, PA
TZPR	East Peoria, IL
VR	Valdosta, GA

The requirements for interchange of RSSM shipments do not apply if the interchange occurs between Conrail and NS, and the interchange takes place within the following monitored and staffed rail yards:

(1) North Jersey — Oak Island and Croxton

(2) South Jersey — Pavonia and Stoney Creek

(3) Detroit — Livernois, North Yard and River Rouge

b. Loaded rail cars, trailers or containers of RSSM shipments may only be interchanged at an attended location, which is defined as:

(1) a location where a railroad employee or authorized representative is physically located in reasonable proximity to the RSSM rail car;

(2) can reasonably detect unauthorized access or unlawful activity near the rail car; and

(3) the person in attendance can promptly respond to unauthorized access or activity near the rail car. For example, someone capable of immediately contacting law enforcement or other authorities to investigate.

c. When delivering or receiving RSSM shipment in interchange:

(1) Both of the interchanging rail carriers are required to complete a Chain-of-Custody form. These Chain-of-Custody forms will be

included in the crew's paperwork when an RSSM car is present in the train.

(2) Both interchanging carriers must have a representative physically present at the car at the time of pickup or delivery.

(a) When a foreign line carrier brings an interchange cut or train to an NS yard, the NS Yardmaster will be the chain-of-custody contact (either directly or by voice communication) in attended yards. The NS Yardmaster should complete the Chain-of-Custody form.

(b) When interchange cuts or trains are delivered by NS crews to a foreign line carrier yard, the crew should contact IDS or the NS Yardmaster and request a Wheel Report for the interchange cut, prior to departure. The Wheel Report will include the Chain-of-Custody forms. The Conductor must ensure that the Chain-of-Custody form is completed.

(3) The NS Yardmaster or Conductor completing the Chain-of-Custody form when cars are handled in interchange must **fax** the completed form to IDS during or at the end of their shift. Chain-of-Custody information must be provided to IDS prior to the crew's Hours of Service limit.

(4) When delivering RSSM shipments in interchange, if the foreign line does not have a representative present to document the Chain-of-Custody, the shipment must not be interchanged.

(5) When picking up RSSM shipments at interchange from a foreign line carrier who has left the cars unattended, the NS crew may pickup the RSSM cars provided:

(a) Yardmaster, control station, or supervisor, is made aware of the unattended status and has authorized the pickup (after attempting to reach the delivering carrier).

(b) A hazardous materials and security inspection is performed as instructed in **Section 3 — Car Inspection**.

(c) A Chain-of-Custody form is completed and the notation "Unattended" is entered in the blank space provided for the foreign carrier employee first and last name.

6. CHAIN-OF-CUSTODY FORM

a. An example of the Chain-of-Custody form is shown in **Figure 14**.

b. The following information must be completed on the Chain-of-Custody form:

(1) the date and time;

(2) the location of the industry or interchange;

(3) the shipper, consignee, or rail carrier name when picking up or delivering RSSM shipments;

(4) the first and last names of the representatives participating in the transfer (NS employees, foreign rail carrier, shipper, or consignee as applicable); and

(5) the car initials and number for all RSSM shipments.

c. Chain-of-Custody information must be provided to IDS prior to the crew's Hours of Service limit. If a crew determines they will not be able to fax the Chain-of-Custody form to IDS prior to expiration of their Hours of Service limit, information from the form must be provided to IDS using an alternate means; including use of a radio. A phone may be used but only if all FRA and Norfolk Southern requirements governing the on-duty use of electrical/electronic devices have been met. The Chain-of-Custody paperwork must then be faxed to IDS at the start of the crew's next tour of duty.

FIGURE 14. CHAIN-OF-CUSTODY FORM FOR RSSM SHIPMENTS

NOTE: Print legibly

The listed or attached Rail Security Sensitive Materials (RSSM) have changed custody between the parties listed:

Date: _____ /_____ /_____ Time: _____ : _____ AM PM *(Circle One)*
(DD/MM/YYYY)

Place / Pull / Interchange Location: _____
(Circle One) *(Location Name)*

Interchange Location: _____
(Please enter Milepost Number, Name of Rail Yard, or Designated Siding Name)

Shipper / Consignee: _____
(Circle One) *(Company Name)*

Shipper / Consignee: _____
(Circle One) *(Employee First and Last Name)*

Foreign Carrier: _____ _____
(Road Initial) *(Employee First and Last Name)*

Norfolk Southern: _____ _____
(Employee First and Last Name) *(NS ID #)*

Initial	Number	Initial	Number
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Completed copy should be faxed to IDS @ 1-800-476-0180 prior to end of shift.

GLOSSARY

Buffer Car — A non-placarded rail car, a rail car with a placard or marking shown in Group 4 on the Switching Chart or Group 5 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 tanks, 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 documents. 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) — 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.

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

Limited Quantity (LTD QTY) — A term used on shipping documents 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 specification and qualification date displayed on hazardous material shipments. (See **Section 4** 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 documents, 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.

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

- Packing Group I (shown as "PGI" or "I" on the shipping documents) indicates great danger.
- Packing Group II (shown as "PGII" or "II" on the shipping documents) indicates medium danger.
- Packing Group III (shown as "PGIII" or "III" on the shipping documents) indicates minor danger.

Placard — A sign measuring 10¾ by 10¾ 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, pages 20–21** for examples of placards).

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

Poison/Toxic Inhalation Hazard (PIH or TIH) or Inhalation Hazard — Terms 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 a locomotive.

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 documents by the phrase "RESIDUE: LAST CONTAINED" in association with the basic description.

Special Permit — 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.

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 Document — Any document, paper or electronic, providing the appropriate entries for a hazardous material shipment. (See **Section 2** 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.

Toxic Inhalation Hazard (TIH) — Terms 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 locomotives 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 up and breaking up trains and for other purposes such as repair or storage of cars.

APPENDIX

COMMODITY STENCIL REQUIREMENT

A tank car containing any of the following materials must be marked on each side with the key words of the proper shipping name specified for the material or with a common name authorized for the material, such as Liquefied Petroleum Gas:

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

(2) The parts of the names above that appear in italics are not required to be stenciled.

DOT Special Permit SP-20996

February 26, 2021

U.S. Department
of Transportation

Pipeline and Hazardous
Materials Safety Administration

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

DOT-SP 20996
(SECOND REVISION)

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: (See individual authorization letter)

2. PURPOSE AND LIMITATION:

   a. This special permit authorizes the transportation in commerce of hazardous materials by rail without buffer cars between placarded cars and unoccupied engines. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.

   b. The safety analyses performed in the development of this special permit only considered the hazards and risks associated with the 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 § 174.85(a) in that a buffer car is not required between an unoccupied distributed power locomotive, dead-in-tow locomotives, and placarded hazmat carrying cars.

5. BASIS: This special permit is based on the application of Norfolk Southern Railway Company dated January 6, 2021 submitted in accordance with § 107.105 and the public proceeding thereon.

6. HAZARDOUS MATERIALS (49 CFR 172.101): As authorized in the HMR.

7. SAFETY CONTROL MEASURES:

a. PACKAGING: All train types and railcar types used with unoccupied distributed power units (UDPs) and dead-in-tow locomotives.

b. OPERATIONAL CONTROLS:

(1) All locomotives located at the head of the train, or closer than 10 freight cars to an occupied locomotive or occupied rail car, must continue to be subject to the position in train requirements of 49 CFR 174.85.

(2) Dead-in-tow locomotives must continue to be subject to the requirements of 49 CFR 229.9.

(3) The operating rail carrier must keep a copy of the special permit at its operating headquarters.

(4) The operating rail carrier must not deadhead employees on DPUs or dead-in-tow locomotives operating under this special permit.

(5) UDPs and dead-in-tow locomotives must be locked to prevent unintended occupancy during operation.

(6) UDPs and dead-in-tow locomotives are prohibited from placement next to the following rail cars and must be separated by at least one (1) buffer car:

(i) Divisions 1.1 and 1.2.

(ii) Division 2.3 (TIH/PIH) tank cars.

(iii) Division 6.1, Packing Group I, Zone A tank cars

(iv) Class 7 (SNF & HLRW Shipments Only)

(7) The operating rail carrier must provide operating employees any necessary changes to their hazmat instructions to ensure compliance with the special permit.

(8) The operating rail carrier must provide notification to the FRA Staff Director, Hazardous Materials Division that it intends to utilize the special permit. The FRA contact is:

Mark A. Maday
Staff Director
Hazardous Materials Division
Office of Technical Oversight
Federal Railroad Administration
1200 New Jersey Avenue, SE
Washington, DC 20590
Phone: 202-493-0479
Email: mark.maday@dot.gov

8. SPECIAL PROVISIONS: A current copy of this special permit must be maintained at each facility where the train is assembled or interchanged in transportation and must be accessible to each train crew operating UDPs and dead-in-tow locomotives in a train consist.

9. MODES OF TRANSPORTATION AUTHORIZED: Rail freight.

10. MODAL REQUIREMENTS: None.

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.

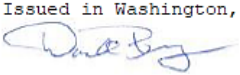
Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when this 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.:



for William Schoonover
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at https://www.phmsa.dot.gov/approvals-and-permits/hazmat/special-permits-search. Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: Kenny Herzog

DOT Special Permit SP-21110 Electronic Train Consists

March 03, 2022

U.S. Department of Transportation

Pipeline and Hazardous Materials Safety Administration

1200 New Jersey Avenue, SE
Washington, DC 20590

DOT-SP 21110
(FIRST REVISION)

EXPIRATION DATE: 2026-02-28

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Norfolk Southern Railway Company
Norfolk, VA

2. PURPOSE AND LIMITATION:

a. This special permit authorizes the use of electronic means to maintain and communicate on-board train consist information in lieu of paper documentation when hazardous materials are transported by rail. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.

b. The safety analyses performed in the development of this special permit only considered the hazards and risks associated with the transportation in commerce.

c. No party status will be granted to this special permit.

3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.203(a) in that the special permit number must be marked on the shipping papers and § 174.26(a) in that a train crew must have a document reflecting current position in the train of each rail car containing a hazardous material, except as specified herein.

5. BASIS: This special permit is based on the application of Norfolk Southern Railway Company dated September 30, 2021 submitted in accordance with § 107.109.

Tracking Number: 2021095773

6. HAZARDOUS MATERIALS (49 CFR 172.101): As authorized in the HMR.

7. SAFETY CONTROL MEASURES:

a. PACKAGING: As required in the HMR, special permit, or approval.

b. OPERATIONAL CONTROLS:

(1) This permit is limited to specific routes associated with designated routes in described in this application.

(2) The information describing how to conduct operations under this special permit must be included in the grantee's HM-rules.

(3) The following information must be readily available by electronic means to the train crew during operations; and to Federal, State, or local government representatives (e.g., emergency responders) in the event of an accident or inspection:

(i) Shipping paper information required pursuant to 49 CFR Part 172, Subparts C and G.

(ii) The current position and identification numbers for all rail cars containing hazardous materials.

(4) Any changes to position of railcars in the train consist must be updated electronically, in real-time, as railcars are added or removed from the train.

(5) As soon as practicable, the grantee must transmit updated car position information to Railinc for use in the AskRail application.

(6) The train crew must be provided mobile device(s) containing the following:

(i) Instructions to the train crew on how to provide the information required by paragraph 7.b.(3) above in electronic format to Federal, State, or local government representatives;

(ii) A copy of this special permit; and

(iii) An electronic document reflecting the current position in the train of each rail car containing a hazardous material.

(7) More than one method of electronic information exchange must be made available to train crews to ensure redundancy and account for potential mobile device limitations of the requesting authority. Upon initial notification of an incident to the agency having jurisdiction ("AHJ") a copy of the train consist must be offered to the AHJ.

(8) One of the selected method of electronic information exchange must allow for immediate exchange of information to the onsite responders (e.g., transmission between mobile devices).

(9) In the event electronic communication is unavailable, one of the following communication options must be utilized to communicate to first responders.

(i) Conventional land line or facsimile.

(ii) An alternative communication method (e.g., land mobile radio communication, satellite phones) to provide up-to-date electronic shipping paper and train placement information.

(iii) Providing the mobile device directly to first responders for review and inspection.

(10) Training must be provided by the grantee for first responders along areas of the route without cellular service on the methods to be taken in an emergency to access the information on the electronic device when communication with an employee from the railroad is not possible.

(11) Each employee subject to functions covered by this special permit shall be provided training on how to perform these functions by the grantee.

(12) The grantee must provide notification and instruction on the use of this special permit to the emergency response officials along the right of way where the permit is being used.

c. REPORTING REQUIREMENTS:

(1) The grantee in addition to other notification requirements in this special permit, must electronically notify the Associate Administrator for Hazardous Materials Safety of any incidents involving operations under this special permit by using the following email address: specialpermits@dot.gov.

(2) In the event of an incident where information is shared electronically with first responders, the grantee must document the incident in a report and maintain the report for up 12 months after the incident. Report(s) must be made available to

DOT representatives upon request. The report must include (at a minimum) the following:

(i) Time/Date of Request;

(ii) Estimated time between request and information exchange;

(iii) Means of electronic information exchange (e-mail, air drop, etc.);

(iv) Requestor Name;

(v) Requestor Position and Agency;

(vi) Phone Number; and

(vii) Email Address.

(3) A consolidated report of information required under paragraphs 7.c.(1) and 7.c.(2) above must be submitted to the Associate Administrator for Hazardous Materials Safety every six months via e-mail using the following e-mail address: specialpermits@dot.gov. The consolidated report must include an evaluation of each occurrence where the information exchange occurred, an evaluation of its effectiveness, and, if electronic exchange of information was unsuccessful, a description of corrective actions to prevent reoccurrence.

(4) The grantee must provide a report identifying the routes for which the electronic consist will be used. This report shall be updated and provided to PHMSA and FRA as routes are removed or added. Reports must be provided using the following email addresses: specialpermits@dot.gov and HMAssist@dot.gov.

8. SPECIAL PROVISION(S): A current copy of this special permit must be maintained at each facility where a train is operating under the terms of this special permit.

9. MODES OF TRANSPORTATION AUTHORIZED: Rail freight.

10. MODAL REQUIREMENTS: None as a requirement of 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 this 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.:

for William Schoonover
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, East Building PHH-13, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at https://www.phmsa.dot.gov/approvals-and-permits/hazmat/special-permits-search. Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: TG

FORM 12162 Rev. (10/08) ITEM# 203688

RADIO WAYBILL

NOTE: Print legibly

HAZARDOUS MATERIAL

1. Train Number _____
2. Number of Cars from Head End _____
   (Update the position-in-train documents)
3. Car Initial & No. _____
4. Total Quantity Notation (Circle One):
   Tank Car Car Load Residue last Contained Other
   If Other, specify weight or volume _____

*** DESCRIPTION OF ARTICLES ***

5. Number of Packages/Car _____
6. UN/NA Id. No. _____
7. Proper Shipping Name _____
   _____
8. Technical Name (_____)
9. Primary Hazard Class _____
   Secondary Hazard Class_____
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 Number(s): _____
    _____
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 14. CHAIN-OF-CUSTODY FORM FOR RSSM SHIPMENTS

NOTE: Print legibly

The listed or attached Rail Security Sensitive Materials (RSSM) have changed custody between the parties listed:

Date: _____ /_____ /_____ Time: _____ : _____ AM PM *(Circle One)*
(DD/MM/YYYY)

Place / Pull / Interchange Location: _____
(Circle One) *(Location Name)*

Interchange Location: _____
(Please enter Milepost Number, Name of Rail Yard, or Designated Siding Name)

Shipper / Consignee: _____
(Circle One) *(Company Name)*

Shipper / Consignee: _____
(Circle One) *(Employee First and Last Name)*

Foreign Carrier: _____ _____
(Road Initial) *(Employee First and Last Name)*

Norfolk Southern: _____ _____
(Employee First and Last Name) *(NS ID #)*

Initial	Number	Initial	Number
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Completed copy should be faxed to IDS @ 1-800-476-0180 prior to end of shift.

NOTES

FOR EMERGENCIES

INVOLVING NORFOLK SOUTHERN

TRACK OR EQUIPMENT

USE RADIO DTMF CODE

911

or

Call the Norfolk Southern

Police Communication Center

1-800-453-2530

(24 HOUR)

Please refer hazardous material questions to
the Safety & Environmental Group at
hmreports@nscorp.com