Hazardous Materials Transportation

August 2013
Mouse over the dialogue balloons to read slide notes.
This training is provided to assist University of Wisconsin staff to become familiar with Department of Transportation regulations for preparing and offering hazardous materials for transport. It is intended for informational purposes only and should not be construed or relied upon as legal advice.

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Laws, regulations and standards pertaining to the topics discussed in this production may differ for other states or cities; each organization is subject to its own state and local laws.
Why Have Training?
172.702  Applicability and responsibility for training and testing.

(a) A hazmat employer shall ensure that each of its hazmat employees is trained in accordance with the requirements prescribed in this subpart.
What’s Required?

(1) General awareness/familiarization
(2) Function-specific training
(3) Safety training
(4) Security awareness training
(5) In-depth security plan training
This Training Provides...

- General Awareness/Familiarization
- Function specific – Sign Manifests
- Safety Training
- Security Training (not site-specific)
This Training Doesn’t Provide

- Function-specific training (except as noted)
- Site-specific security training
- In-depth security plan training
- Hazmat employee status
Hazmat Employee

- A person who is employed by a HazMat employer.

- A person who in the course of employment directly affects hazardous materials transportation safety.
Hazmat Employee

A person who during the course of employment

- Loads, unloads or handles hazardous materials
- Prepares hazardous materials for transportation
- Transports hazardous material
- Operates a vehicle used to transport hazardous materials.
Hazmat Employer

A person who uses one or more of its employees in connection with:

- **Transporting** hazardous materials in **commerce**
- **Causing** hazardous materials to be **transported** in commerce

Includes an **owner / operator** of a motor vehicle, which **transports** hazardous materials in **commerce**. Any department, agency, or instrumentality of the United States, a State, a political **subdivision of a State**, or Indian tribe engaged in an activity described in this definition.
Your employer must certify that you have appropriate and sufficient training to be a Hazmat Employee.
What Is a Hazardous Material?

- Most laboratory chemicals
- Solvents
- Alcohol
- Acids
- Compressed gases and lecture bottles
- Dry ice
- Certain cleaners
- Certain pesticides
- Certain paints
- Chemical samples
- Biological samples
- Infectious substances
- Radioactive materials

Hazardous Material is legally defined by class, characteristic and name.
- Classify
- Package
- Mark
- Label
- Placard
- Description on Shipping Papers
### Hazardous Materials Table

49 CFR 172.101

**Identifies and Classifies Hazardous Materials**

<table>
<thead>
<tr>
<th>Symbols</th>
<th>Hazardous materials descriptions and proper shipping names</th>
<th>Hazard class or division</th>
<th>Identification Numbers</th>
<th>PG</th>
<th>Label Codes</th>
<th>Special provisions (§172.102)</th>
<th>(8) Packaging (§173.***</th>
<th>(9) Quantity limitations</th>
<th>(10) Vessel stowage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Acetaldehyde</td>
<td>3</td>
<td>UN1089</td>
<td>I</td>
<td>3</td>
<td>A3, B16, T11, TP2, TP7</td>
<td>201 ..</td>
<td>243 ..</td>
<td>Forbidden 30 L E</td>
</tr>
<tr>
<td>A</td>
<td>Acetaldehyde ammonia</td>
<td>9</td>
<td>UN1841</td>
<td>III</td>
<td>9</td>
<td>IP8, IP6</td>
<td>155 ..</td>
<td>204 ..</td>
<td>200 kg 200 kg A 34</td>
</tr>
<tr>
<td>A</td>
<td>Acetaldehyde oxime</td>
<td>3</td>
<td>UN2332</td>
<td>III</td>
<td>3</td>
<td>B1, IB3, T4, TP1</td>
<td>150 ..</td>
<td>203 ..</td>
<td>60 L 220 L A</td>
</tr>
</tbody>
</table>

Identifies and Classifies Hazardous Materials
Hazardous Materials Table

### Table

<table>
<thead>
<tr>
<th>Symbols</th>
<th>Hazardous materials descriptions and proper shipping names</th>
<th>Hazard class or division</th>
<th>Identification Numbers</th>
<th>PG</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td></td>
<td>3</td>
<td>UN1089</td>
<td>I</td>
</tr>
<tr>
<td>Acetaldehyde ammonia</td>
<td></td>
<td>9</td>
<td>UN1841</td>
<td>III</td>
</tr>
<tr>
<td>Acetaldehyde oxime</td>
<td></td>
<td>3</td>
<td>UN2332</td>
<td>III</td>
</tr>
<tr>
<td>Acetic acid, glacial or Acetic acid solution, with more than 80 percent acid, by mass</td>
<td></td>
<td>8</td>
<td>UN2789</td>
<td>II</td>
</tr>
<tr>
<td>Acetic acid solution, not less than 50 percent but not more than 80 percent acid, by mass</td>
<td></td>
<td>8</td>
<td>UN2790</td>
<td>II</td>
</tr>
</tbody>
</table>

Columns 1-5 contain the information needed to identify and classify the material on the shipping paper.
### §172.101 Hazardous Materials Table

<table>
<thead>
<tr>
<th>Symbols</th>
<th>Hazardous materials descriptions and proper shipping names</th>
<th>Hazard class or division</th>
<th>Identification Numbers</th>
<th>PG</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>..........................................................</td>
<td>3</td>
<td>UN1089</td>
<td>I</td>
</tr>
<tr>
<td>A</td>
<td>Acetaldehyde ammonia ........................................</td>
<td>9</td>
<td>UN1841</td>
<td>III</td>
</tr>
</tbody>
</table>
Other Symbols

- **RQ** – Reportable quantity – Listed in tables in Appendix A to HMT; must be identified on package and shipping paper.

- **MP** – Marine Pollutant - Deemed to be hazardous to aquatic environment; Listed in Appendix B to HMT.
## Multiple Symbols

<table>
<thead>
<tr>
<th>Symbols</th>
<th>Hazardous materials descriptions and proper shipping names</th>
<th>Hazard class or Division</th>
<th>Identification numbers</th>
<th>PG</th>
</tr>
</thead>
<tbody>
<tr>
<td>A W</td>
<td>Carbon dioxide, solid or Dry ice.</td>
<td>9</td>
<td>UN1845</td>
<td>III</td>
</tr>
</tbody>
</table>
Column 2 lists the hazardous materials descriptions and proper shipping names of materials designated as hazardous materials. Modification of a proper shipping name may otherwise be required or authorized.

Proper shipping names are limited to those shown in Roman type (not italics).
Selecting the Proper Shipping Name

- Look up the material by its chemical name; make sure the properties meet the hazard class definition.
- Look for a generic description by usage:
  - Paint
  - Paint Related Material
- Look for general hazard class entry:
  - Flammable Liquids, n.o.s.
Hazardous Materials Description & Proper Shipping Name

- *Hazardous wastes.* If the word "waste" is not included in the hazardous material description the proper shipping name shall include the word "Waste" preceding the proper shipping name of the material. For example: Waste acetone.

Selections from 49 CFR 172.101(C)
Column (3) – Hazard class or Division

Column 3 contains a designation of the hazard class or division corresponding to each proper shipping name, or the word "Forbidden". A material for which the entry in this column is "Forbidden" may not be offered for transportation or transported.

A basic description of each hazard class and the section reference for class definitions appear in 49 CFR §173.2
## Hazard Classes

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Explosive (6 Divisions)</td>
</tr>
<tr>
<td>2.1</td>
<td>Flammable Gas</td>
</tr>
<tr>
<td>2.2</td>
<td>Non-Flammable Gas</td>
</tr>
<tr>
<td>2.3</td>
<td>Poison Gas</td>
</tr>
<tr>
<td>3</td>
<td>Flammable Liquid</td>
</tr>
<tr>
<td>4.1</td>
<td>Flammable Solid</td>
</tr>
<tr>
<td>4.2</td>
<td>Spontaneously Combustible</td>
</tr>
<tr>
<td>4.3</td>
<td>Dangerous When Wet</td>
</tr>
<tr>
<td>5.1</td>
<td>Oxidizer</td>
</tr>
<tr>
<td>5.2</td>
<td>Organic Peroxide</td>
</tr>
<tr>
<td>6.1</td>
<td>Poison Inhalation Hazard (other than inhalation hazard, Zone A Poison or B)</td>
</tr>
<tr>
<td>6.2</td>
<td>Infectious substance</td>
</tr>
<tr>
<td>7</td>
<td>Reactive</td>
</tr>
<tr>
<td>8</td>
<td>Corrosive</td>
</tr>
<tr>
<td>9</td>
<td>Class 9</td>
</tr>
</tbody>
</table>
Column (4) – Identification number

Column 4 lists the identification number assigned to each proper shipping name. Those preceded by the letters "UN" are associated with proper shipping names considered appropriate for international transportation as well as domestic transportation.

Those preceded by the letters "NA" are associated with proper shipping names not recognized for international transportation, except to and from Canada.
Column (5) – Packing Group

Column 5 specifies one or more packing groups assigned to a material corresponding to the proper shipping name and hazard class for that material.

Packing Groups I, II and III indicate the degree of danger presented by the material is either great, medium or minor, respectively.
Column (6) – Label Codes

Hazardous Materials Warning Labels
Actual label size: at least 100 mm (3.9 inches) on all sides

CLASS 1 Explosives:
Divisions 1.1, 1.2, 1.3, 1.4, 1.5, 1.6

CLASS 2 Gases:
Divisions 2.1, 2.2, 2.3

CLASS 3 Flammable Liquid

CLASS 4 Flammable Solid, Spontaneously Combustible, and Dangerous When Wet:
Divisions 4.1, 4.2, 4.3

CLASS 5 Oxidizer, Organic Peroxide: Divisions 5.1 and 5.2

CLASS 6 Poison (Toxic), Poison Inhalation Hazard, Infectious Substance: Divisions 6.1 and 6.2

CLASS 7 Radioactive

CLASS 8 Corrosive

CLASS 9 Miscellaneous Hazardous Material

Subsidary Risk Label
Cargo Aircraft Only

For Regulated Medical Waste (RMW), an Infectious Substance label is not required on an outer packaging if the OSHA Biohazard marking is used as prescribed in 29 CFR 1910.1030(g). CDC Biohazard Agent label must be used as prescribed in 49 CFR 72.3 and 72.6. A bulk package of RMW must display a RMBHAZARD marking.

Hazardous Materials Markings

Keep a copy of the Emergency Response Guidebook handy!
Column (7) – Special Provisions
Specifies codes for special provisions as set forth in 49 CFR 172.102

Column (8) - Packaging authorizations
Columns 8A, 8B and 8C specify the applicable sections for exceptions, non-bulk packaging requirements and bulk packaging requirements, respectively, in 49 CFR 173
Bulk vs. Non-Bulk

**BULK PACKAGING**
- Packing, other than a vessel, but including transport vehicle / freight container:
  - Liquids: maximum capacity over 119 gallons
  - Solids: maximum net mass over 400 kg (882 pounds) and maximum capacity over 119 gallons
  - Gases: water capacity over 1000 pounds

**NON-BULK PACKAGING** is packing with maximum mass or capacity less than that of bulk packaging
Column (9) – *Quantity limitations.* Columns 9A and 9B specify the maximum quantities that may be offered for transportation in one package by passenger-carrying aircraft or passenger-carrying rail car (Column 9A) or by cargo aircraft only (Column 9B)
Column (10) - specifies the authorized stowage locations on board cargo and passenger vessels.
Packages

• A **PACKAGE** is the result of the packing process

• **PACKAGING** is the containers and components making up a package
Packages

Column 8 (Packaging authorization)
» 173.*** three digit number in column is 49 CFR paragraph reference (e.g., 173.306)

EXAMPLE:
Epichlorohydrin
» 8a (exceptions) -- none
» 8b (non-bulk) -- **173.202**
» 8c (bulk) -- **173.243**

» If packing requirements are shown, there are additional standards that must be applied
Marking

172.300 Subpart D

Individual preparing the shipment is responsible for marking the package

- Description/Proper shipping name
- Technical name, if required
- Identification number include UN / NA
- Name and address of consignor or consignee

Must be durable and in English; visible, on a contrasting background with no obstructions
Marking

Additional marking requirement -- Combination packages that have inner packages of liquid hazardous material must be marked with orientation arrows on two opposite vertical sides of the package.

Technical Names – any package that has a “G” in column 1 of the hazardous materials table must have a technical name in parentheses included with the proper shipping name.
Labeling

172.400 Subpart E

Labeling is the responsibility of the shipper

Once the material has been classified and a proper shipping name has been selected:

1. Locate **proper shipping name** in column 2 of HMT
2. Refer to column 6 of the Table
3. First code listed is the **primary** label, second is **subsidiary**
4. Refer to chart for label substitution table 172.101 (g)
Labeling

**Placement**

» Must be clearly *visible* and not obscured
» Must be printed on or affixed to a background of *contrasting color*
» Must have a dotted or solid line on the outer boarder
» Can not be placed on the bottom of the box
» If possible, *label should be located on the same surface near the proper shipping name marking.*
» Primary and Subsidiary labels need to be *within 6 inches* of one another
Labeling

Limited Quantities

There are exceptions to labeling for limited quantities in the following sections:

- Section 173.150  Exceptions for Class 3
- Section 173.151  Exceptions for Division 4.1
- Section 173.152  Exceptions for Division 5.1 and 5.2
- Section 173.154  Exceptions for Class 8
- Section 173.155  Exceptions for Class 9
Placards

- Located on bulk packaging and vehicles
- Indicates primary hazard of the material
- Some classes must be placarded in any amount. The remaining classes are placarded at 1,001 lbs. or greater
Placards

- Shipper must offer correct placards
- All required placards on each side and both ends
- Dangerous – Mixed Loads – Typically Corrosive and Flammable
Description on Shipping Papers

- A shipping paper is a document used to identify freight being offered for transportation.

- It is the responsibility of the shipper (you) to properly prepare the shipping papers.

- A shipping paper is required to accompany each shipment of hazardous materials during transportation.

- Hazardous materials shipping papers must be retained for 375 days after the material is accepted by the carrier.

- Retain Hazardous Waste Manifests for 3 years
**HAZARDOUS MATERIAL BILL OF LADING**

State of Wisconsin / DEPARTMENT OF MILITARY AFFAIRS

OFFICE OF THE AdjUTANT GENERAL

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**SHIPPER’S DECLARATION FOR DANGEROUS GOODS**

(Provide at least three copies to FedEx Express)

**Shippers Name and Mailing Address**

**Transporter 1 Company Name**

**Designated Facility Name and Site Address**

**US DOT Description (Including Proper Shipping Name, Hazard Class, etc.)**

**Additional Descriptions for Materials Listed Above**

**Special Handling Instructions and Additional Information**

**Emergency Phone #**

**GENERATOR’S CERTIFICATION:**

I hereby declare that the shipment is classified, packed, and marked in accordance with the International and National Governmental Regulations.

**TRANSPORTER 1 Acknowledgement of Receipt of Materials**

**TRANSPORTER 2 Acknowledgement of Receipt of Materials**

**Discrepancy Indication Space**

**FACILITY OWNER OR OPERATOR:**

Certification of receipt of materials

**Differences Between Quantity and Quantity of Dangerous Goods**

**Proper Shipping Name**

**Class or Division**

**UN Number or ID No.**

**Packing Group**

**Subsidiary Risk**

**Quantity and Type of Packaging**

**Authorizations**

**Additional Handling Information**

**Emergency Telephone Number**

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**

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**HAZARD WARNING**

Fails to comply with any of the applicable Hazardous Materials Regulations may be subject to legal penalties. This Declaration must not be altered, appended, or signed by a consignee or a forwarding agent or an ARAA cargo agent...

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**FEDERAL EXPRESS**
Description on Shipping Papers

• Every HM shipment must be accompanied by shipping papers
  – Meets all DOT shipping paper requirements

• Shipping papers must contain
  – Basic description for each material
  – Shippers certification
  – A signature
  – 24-hour Emergency Contact Phone Number
Description on Shipping Papers

Description of hazardous material (172.200):

» Proper shipping name (*Column 2*)
» Hazard Class (*Column 3*)
» UN/NA Identification number (*Column 4*)
» PG...I, II, III (*Column 5*)
» Limited Quantities or Ltd Qty

✔ The first 4 items **must** be shown in sequence with no other information interspersed unless authorized by regulations.

✔ Identification number must include UN/NA and the packing group must be shown in **Roman numerals** and preceded with the letters PG.

Epichlorohydrin, 6.1, UN 2023, PG II
Description on Shipping Papers

Technical Names

- Most n.o.s and generic shipping names must have a technical name entered in parentheses and found within the hazardous materials basic description.

- If a letter “G” is identified in column 1 of the hazardous materials table, a technical name must appear in parentheses.

Flammable liquid, n.o.s., 3, UN1993, PG I (benzene, xylene)

Flammable liquid, n.o.s. (benzene, xylene), 3, UN1993, PG I
Description on Shipping Papers

Emergency Response Telephone Number

- In most cases an emergency response phone number must be entered on the shipping paper.

- The emergency number must be monitored at ALL TIMES the hazardous material is in transportation.

- It is the responsibility of the person providing the phone number to make sure that the agency or business has the necessary information on file PRIOR to shipment.
# Uniform Hazardous Waste Manifest

- Designed to track HW cradle-to-grave
- Generator Responsibility
- Required by EPA & DOT

![Uniform Hazardous Waste Manifest](image)

**Uniform Hazardous Waste Manifest**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generator's Name and Mailing Address</td>
<td></td>
</tr>
<tr>
<td>Generator's Phone</td>
<td></td>
</tr>
<tr>
<td>Transporter 1 Company Name</td>
<td></td>
</tr>
<tr>
<td>Transporter 1 U.S. EPA ID Number</td>
<td></td>
</tr>
<tr>
<td>Transporter 2 Company Name</td>
<td></td>
</tr>
<tr>
<td>Transporter 2 U.S. EPA ID Number</td>
<td></td>
</tr>
<tr>
<td>Unloading Facility Name and Address</td>
<td></td>
</tr>
<tr>
<td>U.S. EPA ID Number</td>
<td></td>
</tr>
<tr>
<td>Container No.</td>
<td></td>
</tr>
<tr>
<td>Description (Including Proper Shipping Name, HazMat Data, ID Number, and Packing Group [if any])</td>
<td></td>
</tr>
<tr>
<td>15. Containers</td>
<td></td>
</tr>
<tr>
<td>16. Year</td>
<td></td>
</tr>
<tr>
<td>17. U.S. DOT or UN Number</td>
<td></td>
</tr>
</tbody>
</table>

**SIGNATURES:**

- Generator's Signature
- Transporter 1 Signature
- Transporter 2 Signature
- Alternate Facility (if applicable)

**Date:** Month / Day / Year

**EPA Form E100-22 (Rev. 1-06)** Previous editions are obsolete
1. Generator’s EPA ID Number
2. Emergency Telephone Number
3. Generator’s Name & Mailing Address
4. Generator’s Site Address
5. Transporter’s Name & EPA ID Number
6. US DOT Description
7. Number of containers
15. **GENERATOR’S/SHIPPER’S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name; and are classified, packaged, marked and labeled/packaged, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.

I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

<table>
<thead>
<tr>
<th>Generator’s Certification</th>
<th>Signature</th>
<th>Month</th>
<th>Day</th>
<th>Year</th>
</tr>
</thead>
</table>

16. International Shipments
   - Import to U.S.
   - Export from U.S.

Transporter signature (for exports only):

<table>
<thead>
<tr>
<th>Transporter’s Signature</th>
<th>Signature</th>
<th>Month</th>
<th>Day</th>
<th>Year</th>
</tr>
</thead>
</table>

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

<table>
<thead>
<tr>
<th>Transporter 1</th>
<th>Signature</th>
<th>Month</th>
<th>Day</th>
<th>Year</th>
</tr>
</thead>
</table>

Transporter 2 Printed/Typed Name

<table>
<thead>
<tr>
<th>Transporter 2</th>
<th>Signature</th>
<th>Month</th>
<th>Day</th>
<th>Year</th>
</tr>
</thead>
</table>

18. Discrepancy

<table>
<thead>
<tr>
<th>Discrepancy Indication Space</th>
<th>Quantity</th>
<th>Type</th>
<th>Residue</th>
<th>Partial Rejection</th>
<th>Full Rejection</th>
</tr>
</thead>
</table>

Manifest Reference Number:

<table>
<thead>
<tr>
<th>Manifest Reference Number</th>
</tr>
</thead>
</table>

19. Alternate Facility (or Generator)

Facility’s Name:

<table>
<thead>
<tr>
<th>Facility’s Name</th>
<th>U.S. EPA ID Number</th>
</tr>
</thead>
</table>

19a. Signature of Alternate Facility (or Generator)

<table>
<thead>
<tr>
<th>Signature</th>
<th>Month</th>
<th>Day</th>
<th>Year</th>
</tr>
</thead>
</table>

19b. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

<table>
<thead>
<tr>
<th>Method Code</th>
<th>Month</th>
<th>Day</th>
<th>Year</th>
</tr>
</thead>
</table>

20. Designated Facility Owner or Operator Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

<table>
<thead>
<tr>
<th>Printed/Typed Name</th>
<th>Signature</th>
<th>Month</th>
<th>Day</th>
<th>Year</th>
</tr>
</thead>
</table>

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)
Uniform Hazardous Waste Manifest

Continuation Page
PCBs on UHWM

- Use Hazardous Waste Manifest to ship PCB waste
- Report weight of PCBs in kilograms (kg)
- Include out-of-service date on manifest
- If not otherwise HW, do NOT send copy to DNR
### Uniform Hazardous Waste Manifest

<table>
<thead>
<tr>
<th>Page</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Designated Facility to Destination State (if required)</td>
</tr>
<tr>
<td>2</td>
<td>Designated Facility to Generator State (if required)</td>
</tr>
<tr>
<td>3</td>
<td>Designated Facility to Generator</td>
</tr>
<tr>
<td>4</td>
<td>Designated Facility’s Copy</td>
</tr>
<tr>
<td>5</td>
<td>Transporter’s Copy</td>
</tr>
<tr>
<td>6</td>
<td>Generator’s Initial Copy</td>
</tr>
</tbody>
</table>
Uniform Hazardous Waste Manifest
State-Specific Instructions

**Wisconsin** – If Designated Facility is in Wisconsin, Generators do NOT send copy to DNR.

If Designated Facility is **NOT** in Wisconsin, Generators send signed copy to DNR within 30 days of receipt from facility.

**Illinois** – If Designated Facility is in Illinois, Generators send copy to ILEPA within 2 days of shipment of RCRA-hazardous or PCB waste.

**Texas** – Texas does NOT require signed copies from either Generator or Designated Facility.
Manifest Copy Distribution
In Wisconsin

1. Generator
   - (6)
   - Copy (3) w/ 30 days if TSDF is out-of-state

2. ILEPA
   - Copy (6) w/ 2 days

3. Transporter
   - (5)
   - (1), (2), (3), (4)

4. TSDF
   - (4)
   - (1), (2), (3), (4)
   - Copy (3) w/ 30 days if TSDF is in Wisconsin

5. Acetone
   - UN 1090
   - Flammable Liquid
   - 3

6. UN 4G/Y29
Uniform Hazardous Waste Manifest

• Generator Manifest Responsibilities
  – Prepare shipping papers
  – Always check for container discrepancies or other errors (EPA ID Number)
  – Print clearly and press hard (All copies must be legible)
  – Violations will come back to the generator
Hazmat Safety

Each hazmat employee shall receive safety training in:

- Emergency Response
- Hazard Protection
- Avoiding accidents, safe handling

OSHA or EPA training may be substituted if applicable.
Hazmat Safety – Emergency Response

• **Basic description & technical name**

• Immediate hazards to health; risks of fire or explosion; immediate precautions to be taken in the event of an accident or incident; immediate methods for handling fires; initial methods for handling spills or leaks in the absence of fire; and preliminary first aid measures.
Hazmat Safety – Emergency Response

- 24 hour number provided by contractor
- Monitored at all times
- Knowledgeable of material being shipped
- Entered on shipping paper
Hazmat Safety – Measures to Protect Employees

- HAZCOMM
- OSHA Lab Safety Standard
- Do not perform an aggressive response
- PPE Program
Hazmat Safety – Avoiding Hazmat Accidents

• Proper inspection/handling of hazmat packages

• Familiar with types of classification

• Secondary containment

• Awareness of surroundings

• Do not vary from established procedures.
Hazmat Safety – Avoiding Hazmat Accidents

- **DO NOT** touch a container that is open, leaking, weeping, broken or if the hazardous material is not otherwise contained.

- **DO NOT** expose yourself to hazardous materials unless you are trained to use them.

- **DO** handle packages carefully to prevent accidents. Carry packages securely. Don’t use mechanical lifts or carts unless you have been trained.
Hazmat Safety

- **Small** spills (one which you can safely clean up yourself)
- **Major** spill (one which you can’t safely clean up yourself)
Hazmat Safety

To clean up a small chemical spill (i.e., one which you can safely clean up yourself)

• **Notify** your colleagues and your supervisor

• **Control access** to the area to prevent contact or spread of the spill

• **Consult** Emergency Response Guidebook
What should be done if a discharge of hazardous waste occurs during transportation?

1. Call the Wisconsin 24-hour number emergency hotline: 800/943-0003.
2. Comply with the hazardous substance spill requirements in section 292.11, Wisconsin Statutes and ch. 706, Wis. Adm. Code.
3. Give notice as required by 49 CFR 171.15 to the National Response Center at 800/424-8802.
5. Remove, containerize, transport and dispose of spilled hazardous waste according to the hazardous waste management requirements in the NR 600 Series, Wis. Adm. Code
Necessary Information for 911 Call...

• Name
• Location
• Type of emergency (i.e., Fire, Spill, Explosion)
• Any injuries
• **DO NOT HANG UP!**
Hazmat Security

- Use the “Eyes and Ears” approach
- Make security a way of life
- Identify your vulnerabilities
Hazmat Security

- Assess
- Develop performance standards
- Develop/implement security plan
- Train and administer
Hazmat Security Plan

- **49 CFR 172.800**
  - “…each person who offers for transportation in commerce or transports in commerce one or more of the following hazardous materials must develop and adhere to a security plan for hazardous materials that conforms to the requirements of this subpart:”

  - **Sixteen categories including:**
    - (9) A quantity of a Division 4.3 material requiring placarding in accordance with subpart F of this part;
    - (11) Any quantity of organic peroxide, Type B, liquid or solid, temperature controlled;
§ 172.802 Components of a security plan

- Assessment of security risks for shipments of the hazardous materials listed in §172.800 and appropriate measures to address the assessed risks. At a minimum, a security plan must include the following elements:
  
  - (1) Personnel security.
  - (2) Unauthorized access.
  - (3) En route security.

Other plans may substitute...
In-depth security plan training

• Company security objectives
• Organizational security structure
• Procedures
• Employee duties and responsibilities
• Specific actions to be taken
Additional Resources

• Uniform Hazardous Waste Manifest video
  http://www.pneac.org/hazwastemanifest/manifest_video/manifest.html

• Training resources (not a complete list)
  – Lion Technology
  – JJ Keller & Associates
  – FedEx
  – Environmental Resource Center
Conclusions

- Hazmat employer must certify
- Site specific security plan/training
- Function-specific training required
Conclusions

"A hazmat employee shall receive the training required by this subpart at least once every three years."

Training records must include:
(1) The hazmat employee's name;
(2) The most recent training completion date of the hazmat employee's training;
(3) A description, copy, or the location of the training materials used to meet the requirements in paragraph (a) of this section;
(4) The name and address of the person providing the training; and
(5) Certification that the hazmat employee has been trained and tested.