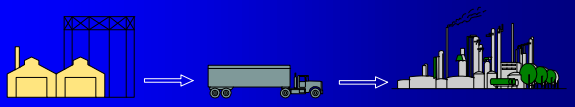
Transporters follow the generator in the "cradle-to-grave" management of hazardous waste. This section provides an overview of the RCRA generator requirements associated with transporting hazardous waste off-site, transporter requirements, and how these requirements coordinate with those issued by the U.S. Department of Transportation (DOT).

At the end of this module you should be able to:

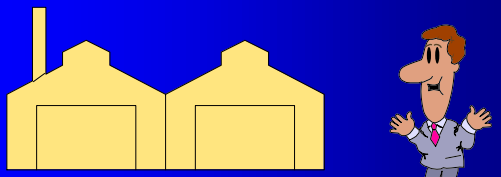
1. Explain when hazardous waste transport requirements apply. (p. 4)
2. List the five elements of generator pretransport requirements. (p. 4)
3. Explain the difference between placards, labels, and markings. (pp. 7-9)
4. Recognize the use of a hazardous waste manifest and the information required. (pp. 11-15)
5. Recognize the elements of a waste minimization program. (p. 14)
6. Cite one recent exemption from manifest provisions. (p. 17)
8. List transporter responsibilities under RCRA, including the steps that must be taken in response to a discharge of hazardous waste. (pp. 19-20)

“Cradle-to-Grave” Management



Generator **Transporter**

What responsibilities apply to ***generators*** shipping hazardous waste?



The five pretransport requirements that concern generators are: packaging, labeling, placarding, marking, and waste accumulation. The EPA regulations for the first four of these are simply references to the Department of Transportation (DOT) requirements in 49 CFR 172,173, 178, and 179. The accumulation time standards are EPA regulations and are found at 40 CFR 262.34 and 265. Waste accumulation standards are operationally different from the other pretransport requirements and were covered under the Generator Standards module of this course. Most of the pretransport regulations are promulgated and enforced through an arrangement (a memorandum of understanding) between EPA and DOT. Under RCRA authority, EPA establishes standards that are consistent with the regulations promulgated by DOT under the Hazardous Materials Transportation Act (HMTA) and the Hazardous Materials Transportation Uniform Safety Act (HMTUSA).

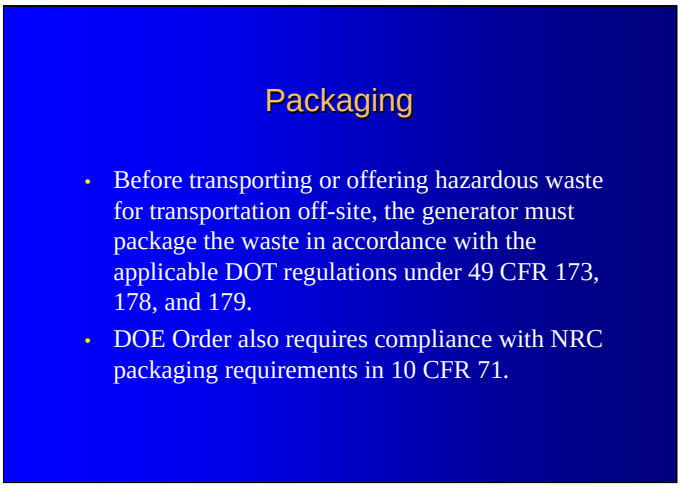
One of EPA's responsibilities in this shared authority is to monitor generators and operators of TSDFs for compliance with RCRA regulations. EPA also is in charge of enforcing transportation regulations when the violation is ancillary to the disposition of the waste. For instance, EPA will prosecute a "midnight dumper" because transportation is ancillary to the disposal in that case.

DOT is responsible for conducting inspections of hazardous materials transporters on an ongoing basis to ensure compliance with HMTUSA regulations, and will also conduct investigations based on EPA reports of suspected violations of HMTUSA. Likewise, any information in DOT's possession that indicates a RCRA violation will be passed on to EPA for enforcement action.

The DOE, DOT, and Nuclear Regulatory Commission (NRC) all regulate radioactive materials. DOT has jurisdiction over DOE shipments of commercial radioactive materials but not defense nuclear materials. For transportation of these materials, DOT and DOE have agreed that DOE may certify itself, using NRC standards.

Responsibilities for Pretransport Include DOT Requirements

- 40 CFR 262.30 - Packaging
- 40 CFR 262.31 - Labeling
- 40 CFR 262.32 - Marking
- 40 CFR 262.33 - Placarding

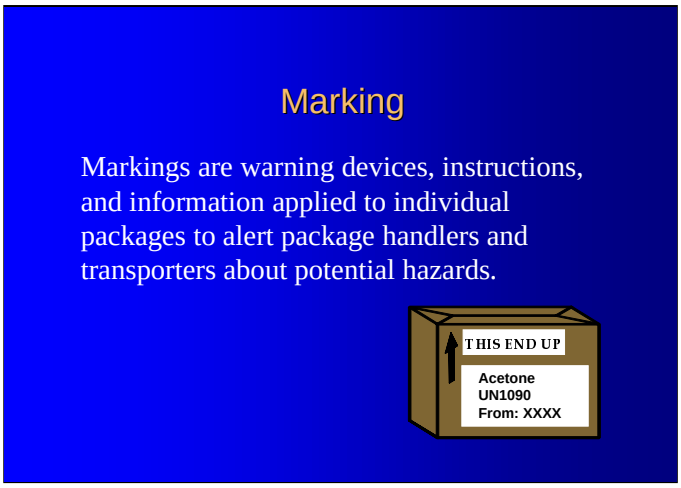


The Hazardous Materials Table (HMT) in 40 CFR 172 references authorized packaging for each hazardous material and includes “packing group” (i.e., whether the material is considered a great danger, medium danger, or minor danger.)

Labels provide easily recognized symbols to indicate operational instructions and potential hazards associated with the package. They are diamond-shaped, brightly colored warning devices, four square inches in size, that are placed on the outside of hazardous material packages. Each package, overpack, or freight container in which hazardous materials are shipped must be labeled (as appropriate) with information from the HMT in 49 CFR 172.101.

The HMT specifies the information that must be included on the label based on the proper shipping name, including hazard class, identification number of the chemical, the packing group, type of label required (e.g., "corrosive," "poison," etc.), any special provisions, packaging authorizations, and restrictions (if any) pertaining to particular modes of transportation.

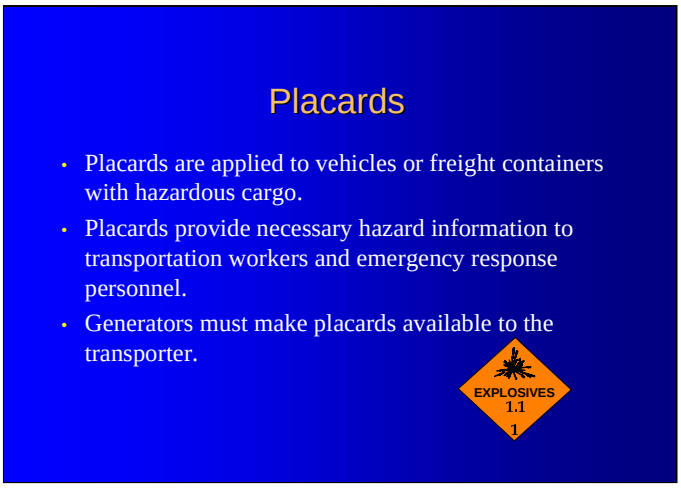
The information on the label includes the information on the hazardous waste manifest: proper shipping name, hazard class, and identification number.



Marking means “a descriptive name, identification number, instructions, cautions, weight, specification, or UN marks, or combinations thereof, required. . . on outer packagings of hazardous materials.” [49 CFR 171.8]

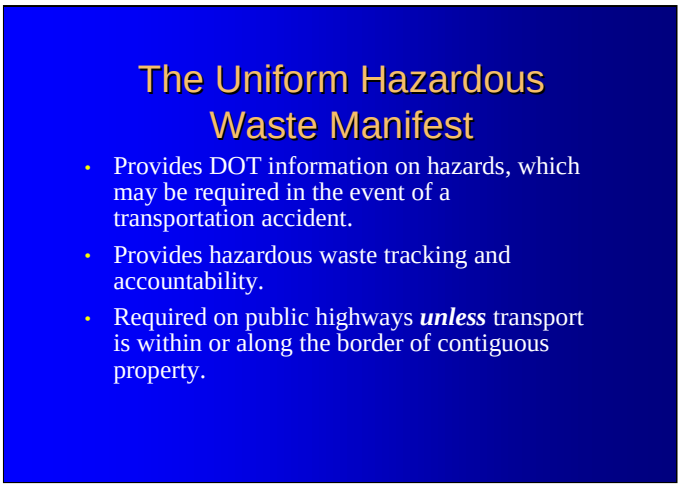
In addition to the proper shipping name and the material ID number, the regulations also require:

- consignee’s or consignor’s name and address,
- the reportable quantity (RQ),
- other identification such as the name of the hazardous substance,
- other hazard notification such as “Inhalation Hazard,”
- gross weight and type of packaging (if radioactive), and
- a label reading: “This Side Up” or “This End Up” (if liquid).



The placard is selected by the shipper based on the hazards present and the quantity of each hazard (49 CFR 172.504). The HMT lists the hazard class and the label(s) required.

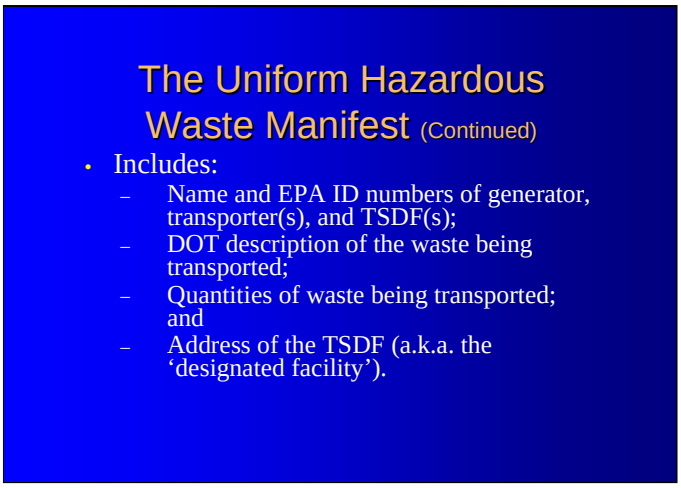
How do I track off-site shipments of hazardous waste?



Shipping papers communicate the information on the packages being shipped. The uniform hazardous waste manifest is the shipping paper for hazardous waste. Thus, the manifest provides both DOT shipping information and the basis for hazardous waste accountability under RCRA. The manifest controls tracking of hazardous waste from the generator to the designated facility. The manifest starts with the generator and circulates back to him/her through the transporter and the TSD facility. Each party signs the manifest and retains a copy. Signing the manifest acknowledges that the next party in the chain has received all of the wastes noted on the manifest from the previous party. It is the generator's responsibility to transport waste only using transporters with EPA identification numbers and to "designated facilities."

Until recently, the hazardous waste manifest was required for off-site transport, but was ***not*** required for on-site transport. EPA defines "on-site" as "the same or geographically contiguous property which may be divided by public or private right-of-way, provided the entrance and exit between the properties is at a cross-roads intersection and access is by crossing, as opposed to going along, the right-of-way. Non-contiguous properties owned by the same person but connected by a right-of-way which he/she controls and to which the public does not have access, is also considered on-site property " (40 CFR 260.10). Recent amendments (40 CFR 262.20 (f)) allow shipments of hazardous waste to travel on a public or private right-of-way within or along the border of contiguous property owned by the same person.

Notifications and certifications under the land disposal restriction (LDR) program that must accompany the manifest will be discussed in a later module.



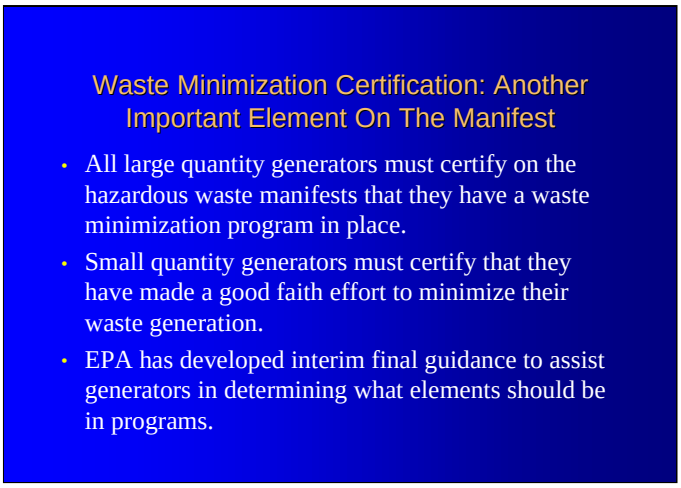
The manifest identifies responsibility for generation, transportation, and TSDF activities associated with the waste in a shipment.

The generator is responsible for following-up with the transporter and/or TSDF if the waste does not arrive at it's destination. Specifically, if 35 days pass from the date on which the waste was accepted by the initial transporter and the generator has not received an executed copy of the manifest from the designated facility, the generator must contact the transporter and/or the designated facility to determine the status of the waste. If 45 days pass and the manifest has still not been received, the generator must submit an Exception Report to the Regional Administrator/authorized State. The report must describe all efforts to locate the waste and the results of those efforts. Small quantity generators who do not receive a copy of the signed manifest from the designated facility within 60 days must explain the exception on a copy of the original manifest or on an attached sheet of paper and send it to the Regional Administrator.

The Hazardous Materials Table (49 CFR 172.101) designates specific materials as hazardous for the purpose of transportation. It also identifies each material's proper shipping name, hazard class, and DOT Identification Number. Although not required by EPA, under DOT shipping description regulations for each hazardous waste that qualifies as hazardous material, generators must also include the packing group. Packing groups (PGs) indicate the degree of danger presented by a material.

Shipping descriptions (i.e., proper shipping name, hazard class or division, DOT ID No., and PG) must be shown in proper sequence with no additional information interspersed. An example of an appropriate shipping description is as follows: "Gasoline, 3, UN1203, PG II." In this example, "Gasoline" is the proper shipping name; "3" is the hazard class and stands for Flammable and Combustible Liquid; "UN1203" is the DOT Identification Number; and "PG II" is packaging group II.

For hazardous waste whose hazardous materials description does not include the word "waste," the proper shipping name shall include the word "Waste" preceding the proper name of the material. For example: "Waste acetone, 3, UN1090, PG II." If the proper shipping name for a hazardous waste that qualifies as a DOT hazardous substance does not identify the hazardous substance by name, generators shall enter one of the following in parenthesis, along with the basic shipping description: the waste stream number (e.g., F001); or for characteristic hazardous wastes the letters "EPA" followed by either: (1) ignitability, (2) corrosivity, (3) reactivity, or (4) toxicity or the corresponding "D" number (e.g., D001, D018, etc.) , as appropriate.



EPA published its interim final guidance on May 28, 1993 (58 *FR* 31114) pursuant to section 3002(b), which requires that generators have in place a program to reduce the volume or quantity and toxicity of hazardous waste to the extent economically practical. The purpose of this approach is to reduce the dependence on "end-of-the-pipe" management of hazardous waste by minimizing its generation.

EPA's guidance describes the elements that a program should contain to qualify as a "program in place:"

A. Top management support: Waste minimization should be part of the organization's policy. All departments and individuals should be encouraged to identify opportunities to reduce waste. In addition, management should set explicit goals for waste minimization and/or designate a waste minimization coordinator responsible for implementing effective waste reduction practices.

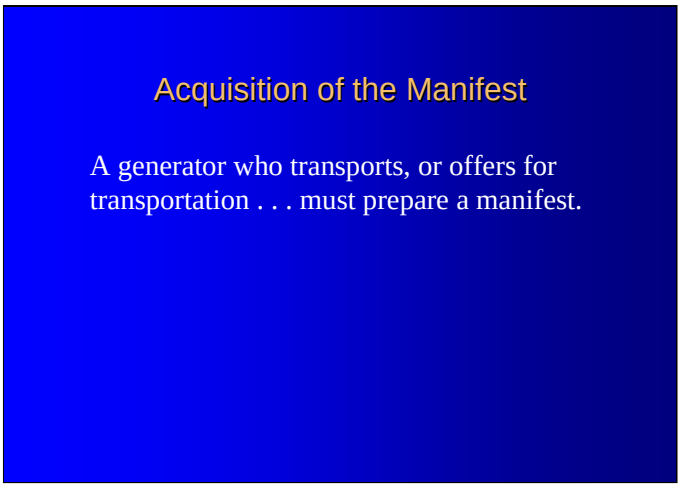
B. Characterization of waste generation and waste management costs: Organizations should develop a waste accounting system to track types and amounts of wastes, the amounts of hazardous constituents in waste, and the dates and rates of generation.

C. Periodic waste minimization assessments: Organizations should identify opportunities at all points in a process where materials can be prevented from becoming a waste and should analyze waste minimization opportunities based on the true costs associated with waste management and cleanup.

D. Cost allocation system: Organizations should allocate the true costs of waste management to the activities responsible for generating the waste rather than charging costs to "overhead."

E. Encourage technology transfer: Organizations should explore methods already in use elsewhere.

F. Program Implementation and Evaluation: Organizations should conduct a periodic review of program effectiveness.



EPA has established a hierarchy setting forth the source from which generators (including TSDFs functioning as generators) must obtain the manifest forms. EPA codified this hierarchy under 40 CFR 262.21 as follows:

- If the consignment State supplies the manifest and requires its use, then the generator is obligated to obtain the manifest from that State;
- If the consignment State does not require the use of their manifest, but the generator State does supply the manifest and requires its use, then the generator is obligated to obtain the manifest from the generator State; or
- If neither the consignment State nor the generator State supplies the manifest, then the generator may obtain the manifest from any source available.
- By adopting this scheme, states that are interested in obtaining additional information on the manifest are afforded the opportunity to obtain it more easily and in a format of their choosing.

In addition to the exemption discussed on page 11 of this module (i.e., the exemption for shipments of hazardous waste that travel on a public or private right-of-way within or along the border of contiguous property owned by the same person), EPA has issued two exemptions from manifesting requirements.

One of these exemptions is available to small quantity generators operating under a batch tolling agreement. (40 CFR 262.20(e)) The second exemption is part of EPA's effort to streamline the requirements for "universal wastes."

On May 11, 1995 [60 Federal Register (FR) 25492], EPA published the final Universal Waste Rule. Wastes that qualify as universal wastes -- certain batteries, pesticides, and thermostats -- are subject to a simplified set of requirements set forth in a new part 273 of the 40 CFR. In States that adopt these regulations, off-site shipments of universal waste, do not need to be manifested. Moreover, the waste is not considered "hazardous waste" by DOT. Therefore, shippers should not describe the shipment using the DOT shipping names "hazardous waste, liquid, n.o.s." or "hazardous waste, solid, n.o.s." Also, the word "Waste" should not precede the material's proper shipping name.

Shippers offering for off-site transport universal waste that qualifies as (or contains a material that qualifies as) a DOT hazardous material (e.g., Sulfuric acid, spent-UN1832; Dieldrin-NA2761) must comply with all applicable DOT regulations. These include proper packaging, labeling, marking, and placarding each shipment, as well as preparing shipping papers, which may be in any form (e.g., bill of lading, log, invoice), but must include the following information:

Name and address of each shipper/recipient;

The quantity of each type of universal waste shipped/received; and

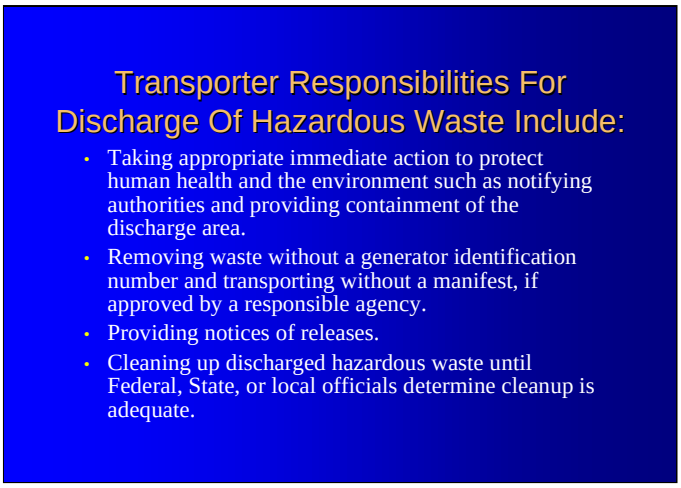
The date of shipment/receipt.

Tracking records of each shipment must be maintained for three years from the date of shipment/receipt. Be aware that the Universal Waste Rule does not become effective in States possessing RCRA authorization until individual states adopt the new regulations.


What responsibilities fall on the transporter?

Transporter Responsibilities in 40 CFR 263

- 40 CFR 263.10 excludes on-site transport from the scope of these requirements.
- Transporters must have EPA identification numbers (40 CFR 263.11).
- Transporters must comply with manifest and recordkeeping requirements established in 40 CFR 263 Subpart B.



40 CFR 263 Subpart C imposes requirements for transporters to respond to discharges of hazardous waste that occur during transport. 40 CFR 263.30 requires containment of the discharge and notification of responsible agencies. Notification may be required to the National Response Center or the Coast Guard (if the release occurs into waters within their jurisdiction). A written report to the Director, Office of Hazardous Materials Regulations, Materials Transportation Bureau, DOT, is required. A transporter must clean up the discharge until a Federal, State, or local official with jurisdiction over the release determines that the release no longer poses a threat to human health and the environment.

RCRA/DOT Partnership In Transportation Accountability

- RCRA ensures accountability for wastes transported by requiring:
  - use of the hazardous waste manifest,
  - EPA identification number for transport, and
  - coordination with DOT requirements.
- DOT imposes requirements for adequate packaging, labeling, placarding, and shipping information that minimize the potential for releases during transport and ensure adequate response to releases that might occur.