RCRA Hazardous Waste Container Labeling, Marking, and Placarding Requirements

BACKGROUND: Regulations implementing the Resource Conservation and Recovery Act (RCRA) include labeling, marking, and placarding requirements for hazardous waste containers. Some requirements apply to containers that are used to accumulate newly generated hazardous waste, but most of the requirements apply to off-site transport of hazardous waste, requiring that proper identifying and precautionary information be provided for the containers. To avoid establishing duplicative or conflicting hazardous material transport requirements, the RCRA regulations incorporate the U.S. Department of Transportation (DOT) Hazardous Materials Regulations (HMR) contained in Title 49 of the Code of Federal Regulations (CFR) by reference.

STATUTES:

REGULATIONS:
- 40 CFR Part 262, "RCRA Hazardous Waste Generator Standards"
- 40 CFR 263.10(a), "RCRA Hazardous Waste Transporter Standards, Scope"

REFERENCES:

Who is subject to labeling, marking, and placarding requirements?

Generators. A generator who is accumulating hazardous waste on-site in containers must ensure the containers are properly marked (40 CFR 262.34). Before transporting hazardous waste off-site, or offering hazardous waste for off-site transport, a hazardous waste generator must label (40 CFR 262.31) and mark (40 CFR 262.32) each package of hazardous waste, and must placard the waste or offer placards to the initial transporter (40 CFR 262.33). The regulations reference the DOT HMR in 49 CFR Part 172 for hazardous waste labeling, marking, and placarding requirements.

Transporters. The RCRA regulations require transporters to comply with the DOT HMR in 49 CFR Parts 171 to 179 while engaged in the off-site transport of hazardous waste (40 CFR 263.10). For most transporters, this means ensuring that the generator-
provided labels, markings, and placards remain with the hazardous waste containers during transport.

**Facility Owners or Operators.** Owners or operators of treatment, storage and disposal (TSD) facilities who initiate an off-site shipment of hazardous waste must comply with the same labeling, marking, and placarding requirements that apply to generators preparing containers for transport [40 CFR 262.10(h)]. Containers of hazardous waste subject to the land disposal restrictions must be labeled as specified in 40 CFR 268.50(a)(2)(i) while stored at a TSD facility. Few other labeling and marking requirements are included in the TSD facility regulations, however permits or other enforceable documents may have specific conditions that owners or operators must meet. It is also good management practice to be able to easily identify hazardous waste containers at a TSD facility (e.g., with labels or markings).

**What are the container marking requirements for generators who accumulate hazardous waste on-site?**

A generator who accumulates more than 100 kg of hazardous waste (or more than 1 kg of acutely hazardous waste) per month must clearly mark and have visible for inspection on each hazardous waste container the date upon which the period of accumulation began [40 CFR 262.34(a)(2)]. The generator must also label or mark each container with the words “Hazardous Waste” [40 CFR 262.34(a)(3)].

A generator may accumulate up to 55 gallons of hazardous waste (or one quart of acutely hazardous waste) in containers located near the point of waste generation (referred to as “satellite accumulation”). The generator must mark each hazardous waste container in a satellite accumulation area with the words “Hazardous Waste” [40 CFR 262.34(a)(3)].

**What labeling is required to transport hazardous waste containers?**

Before transporting hazardous waste containers off-site, they must be labeled in accordance with the applicable DOT HMR requirements (40 CFR 262.31). The labeling requirements are set forth in Subpart E of 49 CFR Part 172.

The term “label” as used in the HMR refers to a prescribed hazard warning notice. Labels are applied to the outside of containers to identify the primary and subsidiary hazards specific to the contents. While the HMR include detailed and specific labeling standards for each type of hazardous material and for many kinds of containers and packages, the following requirements are generally applicable to all labels:

- When two or more labels are required, they must be displayed next to each other [49 CFR 172.406(c)].
- Labels must be on a background of contrasting color or have a dotted or solid line outer border [49 CFR 172.406(d)].
- Labels may not be obscured by markings or attachments [49 CFR 172.406(f)].
- Labels must be durable, weather resistant, and able to withstand for 30 days deterioration or change from exposure to conditions incident to transportation [49 CFR 172.407(a)].
- Labels must be at least 100 mm (3.9 inches) on each side [49 CFR 172.407(c)].
- A label may be printed on or affixed to a tag or by other suitable means when the package contains no radioactive material and the label is larger than the package; or the package surface is such that a label cannot be affixed; or when the package is a cylinder [49 CFR 172.406(b)].

**What marking is required to transport hazardous waste containers?**

Before transporting hazardous waste containers off-site, they must be marked in accordance with the applicable DOT HMR requirements (40 CFR 262.32(a)). The marking requirements are set forth in Subpart D of 49 CFR Part 172.

The term “marking” as used in the HMR refers to the required information on the outside of a hazardous waste container. This includes a proper shipping name, identification number, specifications, plus any required information, instructions and/or cautions. The HMR also include the following marking requirements in 49 CFR 172.304(a):

- All markings must be durable, in English, and printed on or affixed to the surface of the container or on an attached label, tag or sign.
- Markings must be displayed on a background of sharply contrasting color.
- Markings must be unobscured by labels or attachments.
- Markings must be located away from any other markings that could substantially reduce their effectiveness.
In addition, hazardous waste containers of 110 gallons or less must be marked with the following words and information, displayed in accordance with the requirements of 49 CFR 172.304 [40 CFR 262.32(b)]:

**HAZARDOUS WASTE — Federal Law**
Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.
Generator’s Name and Address ..........................
Manifest Document Number ..........................

The proper shipping name marked on a container of hazardous waste is not required to include the word "waste" if the container bears the hazardous waste marking noted above [49 CFR 172.301(a)(2)].

**What placarding is required to transport hazardous waste containers?**

Before off-site transport, each bulk package, freight container, transport vehicle, or rail car used to transport hazardous waste containers must be placarded in accordance with the applicable DOT HMR requirements (40 CFR 262.33). The placarding requirements are set forth in Subpart F of 49 CFR Part 172. There are two placarding tables in 49 CFR 172.504(e). When determining which placards must be used and what options are available, both placarding tables must be considered. It is important to keep the two placarding tables separate when determining placarding requirements.

Placards are placed to alert the public of the potential dangers of the product being transported and to guide emergency responders in the event of an incident or accidental release. Placards must be displayed on each end and each side of a bulk packaging, freight container, unit load device, transport vehicle, and rail car containing any quantity of a hazardous waste unless the HMR says otherwise (exceptions are specified in 49 CFR 172.504).

Placards may be made of any plastic, metal or other material capable of withstanding, without deterioration or a substantial reduction in effectiveness, a 30 day exposure to open weather conditions [49 CFR 172.519(a)]. In addition, 49 CFR 172.516(c) requires that placards:

- Be securely attached or affixed.
- Be located clear of appurtenances and devices.
- Be located away from any marking that could substantially reduce its effectiveness.
- Be maintained in a condition so that format, legibility, color, and visibility will not be substantially reduced due to damage, deterioration, or obscurement by dirt or other matter.
- Be affixed to a background of contrasting color, or have a dotted or solid line outer border which contrasts with the background color.
- Have the words or identification number (when authorized) displayed horizontally, reading from left to right.

**Do additional requirements apply to radioactive mixed waste?**

In addition to the labeling and marking requirements applicable to hazardous waste, other DOT requirements designed to minimize potential for radiation exposures of the public, transporter, or emergency responders may apply to radioactive mixed waste containers. These additional requirements occur principally at 49 CFR 172.310(a), 172.403, and 172.406(e)(2).

**Are there any other special labeling or marking requirements for hazardous waste containers?**

Unique labeling and marking requirements are specified for certain hazardous wastes, waste materials, or containers. A complete list is not included here, but examples include:

- Labpacks and overpacks (e.g., 49 CFR 173.12);
- Universal wastes [e.g., 40 CFR 273.14, 273.15(c), 273.34, 273.35(c)];
- Used oil [e.g., 40 CFR 279.22 (c)].

Generators and TSD facility owners or operators are responsible for knowing what additional requirements apply and how to comply with them.

**EH-43 Information Briefs** are based on established Federal environmental regulatory requirements, policies, and guidance. These documents do not institute new DOE policy or address issues requiring DOE policy decisions. Please refer any questions concerning the subject material covered in this Information Brief to:

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