

DEPARTMENT OF TRANSPORTATION

Research and Special Programs
Administration

49 CFR Parts 171-177

[Docket No. HM-126F; Amndt. No. 171-115, 172-126, 173-231, 174-70, 175-48, 176-31, 177-79]

RIN 2137-AB26

Training for Safe Transportation of
Hazardous Materials

AGENCY: Research and Special Programs Administration (RSPA), DOT.

ACTION: Final rule.

SUMMARY: In this final rule, RSPA is amending the Hazardous Materials Regulations (HMR) to enhance training requirements for persons involved in the transportation of hazardous materials. This action is necessary to comply with the Hazardous Materials Transportation Uniform Safety Act of 1990 (HMTUSA) mandating that DOT regulate, under the HMR, the training of all hazardous materials (hazmat) employees. Based on information provided to RSPA through its hazardous materials incident reporting system, human error has been determined to be the probable cause of most transportation incidents and associated consequences involving the release of hazardous materials. These enhanced regulatory requirements will increase a hazmat employee's awareness of safety considerations involved in the loading, unloading, handling, storing, and transportation of hazardous materials, and improve emergency preparedness for responding to accidents or incidents involving the transportation of hazardous materials. Thus, they will aid in reducing hazardous materials incidents caused by human error and mitigate the effects of incidents when they occur.

DATES: These amendments are effective on July 1, 1992. However, compliance with the regulations amended herein is authorized immediately.

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SUPPLEMENTARY INFORMATION:**I. The Hazardous Materials
Transportation Uniform Safety Act of
1990**

The Hazardous Materials Transportation Act (HMTA), 49 App. U.S.C. 1801 *et seq.*, gives the Secretary of Transportation the regulatory and

enforcement authority to protect the Nation against the risks to life and property which are inherent in the transportation of hazardous materials in commerce. Section 7 of the Hazardous Materials Transportation Uniform Safety Act of 1990 (HMTUSA), enacted November 16, 1990, amended Section 106 of the HMTA to require training for the safe handling and transportation of hazardous materials. Section 106(b) of HMTA requires the Secretary of Transportation to issue, by regulation, requirements for training to be given by all "hazmat employers" to their "hazmat employees" regarding the safe transportation of hazardous materials, including emergency response. Section 106(b) of HMTA requires the coordination of emergency response training regulations with other Federal agencies, to ensure that there are no conflicts with regulations issued by the Occupational Safety and Health Administration (OSHA) of the Department of Labor or the Environmental Protection Agency (EPA). Section 106(b) also requires the Secretary to specify dates for the commencement and completion of training, and requires employers to certify that their employees have been trained and tested. Section 103 of the HMTA provides definitions for "hazmat employer" and "hazmat employee". A "hazmat employer" is a person who uses one or more of its employees in connection with (a) transporting hazardous materials in commerce, (b) causing hazardous materials to be transported or shipped in commerce, or (c) reconditioning or testing containers, drums, or packagings represented for use in the transportation of hazardous materials. This term includes an owner-operator of a motor vehicle who transports hazardous materials in commerce. This term also includes any department, agency, or instrumentality of the United States, a State, a political subdivision of a State, or an Indian tribe engaged in an activity described above.

A "hazmat employee" is an individual who is employed by a hazmat employer and who in the course of employment directly affects hazardous materials transportation safety. The term includes an owner-operator of a motor vehicle who transports hazardous materials in commerce. The term also includes an individual who is employed by a hazmat employer and who, during the course of employment, (a) loads, unloads, or handles hazardous materials; (b) reconditions or tests containers, drums, or packagings represented for use in the transportation of hazardous materials; (c) prepares hazardous materials for transportation; (d) is responsible for the

safety of the transportation of hazardous materials; or (e) operates a vehicle used to transport hazardous materials.

II. Background*Existing 49 CFR Training Requirements*

Currently, §§ 173.1, 174.7, 175.20, 176.13 and 177.800 contain general requirements for training. It is the duty of each person who offers hazardous materials for transportation to instruct each of his officers, agents, and employees having any responsibility for preparing hazardous materials for shipment as to the applicable HMR. In addition to these general requirements for training, the HMR contain specific training requirements applicable to carriers and drivers who transport flammable cryogenic liquids (§ 177.816) and highway route controlled quantities of radioactive materials (§ 177.825) by motor vehicle. For these categories of hazardous materials, carriers must ensure that drivers receive written training which includes, in part, instruction concerning the requirements in the HMR which pertain to the material being transported and the properties and potential hazards of that material. The purpose of these training requirements is to ensure that persons involved with hazardous materials transportation are aware of their duties and responsibilities under the HMR.

RSPA Proposal

On July 26, 1989, RSPA issued a notice of proposed rulemaking (NPRM, 54 FR 31144) which contained proposals to amend the HMR to require persons who perform functions involving the transportation of hazardous materials to receive training concerning regulatory requirements applicable to those functions, and persons who work in proximity to hazardous materials to receive training concerning hazardous materials awareness and safety procedures.

In the NPRM, RSPA solicited comments in a number of areas including identifying those persons to whom the training requirements would apply, the relationship between DOT and OSHA regulations, and the use of a Commercial Driver's License (CDL) to satisfy proposed requirements for training. In addition to the comments requested in the NPRM, RSPA held public hearings on October 3, 1989, in Salt Lake City, Utah, and October 11, 1989, in Washington, DC, to give further opportunity to comment on the proposals.

III. Discussion of Comments Received on the NPRM

RSPA received over 90 comments in response to questions raised in the NPRM. Comments were received from a variety of organizations, including trade associations, training consultants, railroads, steamship lines, chemical companies, truck lines, power companies, and government agencies. Several organizations provided oral comments at RSPA's public hearings. Speakers at the hearings included representatives from several trade associations and labor unions as well as a member of the public who was a conductor on a train involved in a hazardous materials incident.

Most of the commenters supported the idea of enhanced training requirements, but some expressed reservations regarding certain aspects of RSPA's training proposals. Comments received responding to questions asked in the NPRM have been grouped into issue areas. Major and secondary issue areas are outlined in the following sections.

Major Issues

The three major issues addressed by commenters were: (1) Persons who are required to be trained, (2) Use of the CDL's hazardous materials endorsement to satisfy training requirements, and (3) Relationship between current and proposed regulations of DOT and other Federal agencies.

Persons Who Are Required To Be Trained

In the NPRM, RSPA proposed to amend the HMR to require that persons who perform functions involving the transportation of hazardous materials receive training. RSPA proposed that the requirements apply to all persons involved in the preparation, documentation, packaging, marking, labeling, shipping, handling, and transportation of hazardous materials. The proposed rule included persons who inspected or tested specification packagings or represented, marked, certified, sold, or offered packagings as meeting the requirements of the HMR or an exemption issued under the HMR. The proposed rule also included self-employed individuals. In addition, RSPA proposed that those persons working "in proximity" to hazardous materials receive training concerning hazardous materials awareness and safety procedures. Although RSPA referred to the term "in proximity" throughout the NPRM, the term was not defined. RSPA specifically requested comments on what types of workers would be covered by the term "in

proximity", and whether the term was too vague.

A majority of the commenters discussed the use of the term "in proximity" and nearly all recommended the phrase not be used in the final rule. The commenters stated that the use of the term "in proximity" is vague and that no definition was offered in the preamble. Some commenters also suggested appropriate regulatory language. After reviewing the comments and in light of the HMTA amendments, RSPA agrees with the majority of commenters that the term "in proximity" is vague and may result in interpretive and enforcement problems. Therefore, the term "in proximity" is not used in this final rule.

Section 100(b) of the HMTA requires training for each "hazmat employee," as defined in section 103. RSPA is modifying the definition of "hazmat employee" in this final rule to clarify that it includes an individual who is self-employed and, as proposed in the NPRM, an individual who represents packagings as meeting the requirements of the HMR or an exemption by marking, certifying, selling, offering, testing, reconditioning, repairing, or modifying. Accordingly, RSPA will use the term "hazmat employee", as modified, to identify persons who are required to be trained. RSPA has made a corresponding clarification to the definition of "hazmat employer" to clarify who is responsible for ensuring that hazmat employees are trained.

Commercial Driver's License (CDL)

On July 15, 1988, the Federal Highway Administration (FHWA) issued a final rule (53 FR 27828) concerning commercial driver testing and licensing standards. Of particular interest in regard to this final rule is the FHWA requirement for specific endorsements to the CDL for hazardous materials drivers and (cargo) "tank vehicle" drivers. RSPA asked for comments in the NPRM on the use of the CDL and the required endorsements thereon to satisfy the HMTA training requirements. Several of the comments addressed the CDL, and most of those suggested it should satisfy RSPA's training proposals. The following comments from the Illinois Farm Bureau and the American Trucking Associations (ATA) are representatives of those received on this issue.

The Illinois Farm Bureau stated, "... the CDL hazardous materials and tank vehicle endorsements should be allowed to satisfy the training requirements proposed in this docket. Drivers who have received these endorsements should be excepted from

all of the training requirements proposed here. The proposed testing requirements for these CDL endorsements are adequate to meet the intent of this proposed rule in that they address the four categories of training targeted by RSPA: general awareness/familiarization, function-specific, safety and driver's training."

ATA offered similar comments. The ATA stated that "... once a driver has obtained his CDL and its endorsements for hazardous materials and tank vehicle, that driver should be excepted from the training requirements as proposed."

RSPA recognizes that compliance with the current requirements for a CDL with a tank vehicle or hazardous materials endorsement provides a driver with the general knowledge and skills necessary to safely operate a commercial motor vehicle with hazardous materials cargo and may satisfy the training requirements in § 177.816. As a hazmat employee, additional specialized training may be required based on the job function and material-specific requirements related to the handling of hazardous materials. The hazmat employer must determine the extent to which the CDL endorsement satisfies the training requirements in this final rule. It remains the responsibility of the hazmat employer to ensure that their hazmat employees are properly trained for each hazmat function in accordance with the requirements of this final rule. RSPA believes that the training requirements for hazmat employees who also drive commercial motor vehicles are supplemental to the licensing requirements of the CDL program. Accordingly, RSPA is not providing a blanket exception from this final rule for a hazmat employee who operates a commercial motor vehicle, with a tank vehicle or hazardous materials endorsement on a CDL.

Relationship to OSHA and EPA

On March 8, 1989, OSHA published a final rule entitled "Hazardous Waste Operations and Emergency Response", amending 29 CFR 1916.120 (54 FR 9294). That rule addresses the safety and health of employees involved in operations at certain hazardous waste sites and facilities, and in any emergency response to an incident involving hazardous substances. In particular, that rule provides specific standards for employee protection during initial hazardous waste site characterization and analysis, monitoring materials handling activities training, and emergency response.

On August 24, 1987, OSHA published a final rule modifying the Hazard Communication Standard (HCS), in 19 CFR 1910.1200 (52 FR 31852). The original HCS rule, which was published on November 25, 1983, covered employees exposed to hazardous chemicals in the manufacturing sector of the industry. The modified rule extended applicability of the existing standard from employees in the manufacturing industry sector (Standard Industrial Classification (SIC) codes 20 to 39) to also include employees in the nonmanufacturing industry sector, such as those covered by 40-series SIC codes for transportation. The HCS requires employers to establish hazard communication programs to transmit information on the hazards of chemicals to their employees by means of labels on containers, material safety data sheets, and training program. Generally, employers are required to establish written hazard communication programs that inform their employees about the hazardous chemicals present in the work place. Further, employers are also required to establish training programs which teach employees how to protect themselves from becoming exposed to the hazardous chemicals by using engineering controls and following safe procedures.

On June 23, 1989, the EPA issued a final rule (54 FR 26654) entitled "Worker Protection Standards for Hazardous Waste Operations and Emergency Response" to comply with the requirements of Title III of the Superfund Amendments and Reauthorization Act (SARA). The EPA final rule (40 CFR 311.1) states that the OSHA requirements of 29 CFR 1910.120 "apply to State and local government employees engaged in hazardous waste operations * * * in States that do not have a State plan approved under section 18 of the Occupational Safety and Health Act of 1970." Because no State has an approved plan, EPA effectively has extended OSHA requirements of 29 CFR 1910.120 to State and local employees in all 50 States.

Many of the commenters discussed two closely-related issues regarding the DOT/OSHA/EPA training requirements: (1) Whether the DOT/OSHA/EPA rules regarding training are duplicative requirements; and (2) Whether training provided for one agency's training requirements may be used to satisfy another agency's training requirements. The perception of some commenters was that the RSPA proposals would add another layer of training requirements for hazardous materials to an already

complex world of OSHA and EPA training requirements.

There were several statements throughout the preamble to the NPRM suggesting that training performed to satisfy another agency's requirements could help satisfy the RSPA training proposals. Despite these statements, commenters indicated that there was some confusion regarding when, or how, OSHA or EPA requirements satisfy RSPA proposals. Some organizations appeared to believe that OSHA or EPA training cannot satisfy RSPA proposals. Several major firms have requested that RSPA explicitly state that OSHA or EPA-required training is sufficient to satisfy RSPA proposals.

Section 106(b) of the HMTA, as amended by HMTUSA, specifies that the Secretary shall take actions, as may be necessary, to ensure that training requirements established by DOT do not conflict with requirements issued by OSHA relating to hazardous waste operations and emergency response contained in part 1910 of title 29 CFR (and amendments thereto) and the regulations issued by the EPA relating to worker protection standards of hazardous waste operations contained in part 311 of title 40 CFR (and amendments thereto). Section 106(b)(3) specifies, in part, that for purposes of section 4(b)(1) of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653(b)(1)), no action taken by the Secretary, with regard to Section 106, shall be deemed to be an exercise of statutory authority to prescribe or enforce standards on regulations affecting health or safety. It is clear that this language that a hazmat employee may be subject to DOT, OSHA, and EPA training requirements.

It is RSPA's position that training performed to satisfy another Federal agency's requirements may be used to satisfy the requirements of this final rule in whole or in part, depending on the nature and extent of that training. Duplicative training is not necessary when the requirements of § 172.704 are met by training received in response to OSHA or EPA requirements.

IV. Secondary Issues

Time Requirements for Completion of Initial Training

In the NPRM, RSPA proposed to require that training be received within 30 days of employment. RSPA proposed that this requirement would not restrict a new employee from performing hazardous materials job functions under proper supervision prior to the employee's receipt of training. RSPA also proposed to require that persons be

retrained within 30 days of a change in hazardous materials job functions.

Several commenters recommended an extension of the time frame required for initial training from 30 days to at least six months. These commenters argue that 30 days is not sufficient time to implement a training program. For example, Detroit Edison "believes that DOT has imposed a requirement which far exceeds those currently in place for other Federal programs. Under RCRA, which regulates hazardous waste disposal, new employees are allowed a six-month exemption for initial training, assuming they are appropriately supervised."

A similar comment was received from the Association of American Railroads (AAR). AAR wrote, "the regulated community must be given sufficient time to implement training programs. The effective date of this rule should be established at a point far enough in the future to permit companies to establish training programs."

Section 106(b)(4) of the HMTA requires each hazmat employer to begin training its current hazmat employees within six months after issuance of this final rule. Section 106(b)(5) of the HMTA requires the Secretary to establish the date by which the training of current hazmat employees shall be completed. The date must be within a reasonable period of time six months after the date of issuance of this final rule or, in the case of an individual employed as a hazmat employee after such six-month period, within a reasonable period of time after the date the individual is to begin carrying out duties as a hazmat employee.

The final rule provides that a current hazmat employee must have completed training by April 1, 1993. Thus, hazmat employers are provided more than 10 months from the date of publication of this final rule to complete training for current hazmat employees.

For a new employee (i.e., a person employed on or after November 15, 1992), this final rule provides that training must be completed within 90 days of employment. As proposed in the NPRM, this final rule provides that a new employee may perform hazardous materials duties prior to completion of training provided that those duties are performed under the supervision of a properly trained and knowledgeable hazmat employee.

For a hazmat employee who changes job functions, this final rule requires that hazardous materials training in the new job functions be completed within 90 days after the hazmat employee changes job functions. As is the case with a new

hazmat employee, this final rule requires that a hazmat employee who changes job functions be under the supervision of a properly trained and knowledgeable hazmat employee until the training in those new functions is completed.

Nothing in this final rule relieves a hazmat employer from the responsibility to ensure compliance with the HMR regardless of whether the required training has been completed. RSPA has added a statement to § 172.704 in this final rule to clarify the hazmat employer's responsibility.

Recurrent Training

As proposed in the NPRM, RSPA is requiring recurrent training at least once every two years. Comments regarding the training cycle were divided in support of a one-, two-, or four-year cycle.

Commenters who supported a one-year cycle argued that frequently changing Federal regulations make it necessary to train on an annual basis to keep employees abreast of current regulatory requirements. Commenters also noted that current Federal Aviation Administration (FAA) regulations in 14 CFR part 135 require hazardous materials training on an annual basis.

Other commenters suggested that RSPA's training cycle be closely aligned with the four-year testing cycle used by most States for the CDL. These commenters argued that alignment with a four-year CDL cycle is more cost-effective and avoids duplicative training.

Even though a number of commenters supported a one- or four-year time span, the majority of commenters supported RSPA's proposed two-year training cycle. RSPA believes the two-cycle, as a minimum, is necessary to ensure that hazmat employees are kept aware of the constantly changing regulatory requirements. In this final rule, therefore, a two-year training cycle is adopted in § 172.704(c).

Although RSPA adopts a two-year training cycle in this rule, it is important to note that when more frequent training is required due to other Federal requirements, such as the annual hazardous materials training required by the FAA in 14 CFR for air carrier personnel, that cycle of training would continue. Hazmat employees whose job functions are subject to more frequent Federal training regulations may satisfy some, if not all, of the requirements of this final rule with other training.

In addition to the comments on a two-year cycle, several commenters recommended that RSPA substitute the word "biennially" for the words "every two years." These commenters believed

that the term "every two years" would limit training to the two-year anniversary date of previous training with no latitude provided to vary a training schedule. RSPA's proposed language in § 172.704(c)(2) of the NPRM stated that training must be provided "at least" once every two years. It is RSPA's intent to allow training before the expiration of the two-year training period. RSPA believes this final rule provides employers sufficient latitude to adjust their training cycles to provide the required training within the two-year training cycle. Therefore, RSPA is retaining the phrase "at least once every two years" in § 172.704(c)(2).

Use of ICAO or IMDG Training To Satisfy RSPA Proposals

Some commenters suggested that training performed under international regulations be allowed to satisfy RSPA's training requirements. Specifically, these commenters recommended modification of the proposed rule text to expressly allow training in the International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Technical Instructions) or the International Maritime Dangerous Goods (IMDG) Code.

RSPA recently adopted many of the United Nations Recommendations on the Transport of Dangerous Goods (U.N. Recommendations) in a final rule issued under Docket HM-181, Performance-Oriented Packaging Standards (55 FR 52402, 12/21/90). RSPA agrees with commenters who suggested that training based on the U.N. Recommendations, as set forth in the IMDG Code and the ICAO Technical Instructions be accepted. Therefore, § 172.704 is modified to allow training based on either the ICAO Technical Instructions or the IMDG Code, as a substitute for that training directly required in the Hazardous Materials Regulations, when their use is authorized in 49 CFR 171.11 or 171.12 and such training complies with this final rule.

Federal-State Relationship

In the preamble to the NPRM, RSPA stated that it intended to restrict its preemption of State law to the minimum level necessary to achieve the objectives of the Hazardous Materials Transportation Act (HMTA) and the HMR. RSPA stated that it viewed the proposed training requirements as minimum requirements, and, in § 172.701, proposed to allow a State to impose more stringent training requirements on motor vehicle drivers only if its greater requirements do not directly conflict with the HMR

requirements and apply only to individuals domiciled in that State.

Several organizations with drivers "domiciled" in over 30 States contend that if 30 or more States each adopt non-conflicting, but different training requirements, the organizations could be required to develop over 30 different training programs. These organizations recommend that States have non-conflicting training requirements applicable only to intrastate drivers. Intrastate applicability could be consistent with current DOT regulations and would clearly communicate that State requirements are not applicable to interstate operators.

Similar comments were received from smaller organizations. These organizations believe that § 172.701 gives the individual States too much latitude in promulgating rules for "additional" training, and increases the possibility that RSPA would be inundated with requests for inconsistency rulings by allowing the States such broad power. Commenters strongly support maximum uniformity and predict that inconsistent State training requirements will not enhance safety and will, in fact, be counterproductive.

Although the preemption language does allow States to impose more stringent requirements on drivers of vehicles transporting hazardous materials by highway, it is not an unlimited authority. The language recognizes the traditional regulation by States of their own resident drivers, particularly through drivers' licensing requirements and procedures. However, the language does not authorize States to impose requirements on non-residents and also does not authorize other governmental agencies to impose requirements. Furthermore, State requirements are limited to those which do not conflict with the HMR. RSPA, therefore, is retaining the proposed language because it represents an appropriate balancing of the interests of the States and the transportation industry.

In addition, the Hazardous Materials Transportation Uniform Safety Act (HMTUSA) has imposed new requirements. Section 105(a)(4) of the HMTA, as amended by the HMTUSA, preempts any non-Federal (i.e., State, political subdivision, or Indian tribe) law or regulation concerning certain "covered subjects" unless the non-Federal requirement is "substantively the same" as the Federal law or regulation on that subject. The "covered subjects" are:

1. Designation, description, and classification of hazardous materials;
2. Packing, repacking, handling, labeling, marking, and placarding of hazardous materials;
3. Preparation, execution, and use of shipping documents pertaining to hazardous materials and requirements respecting the number, content, and placement of such documents;
4. Written notification, recording, and reporting of the unintentional release of hazardous materials in transportation;
5. Design, manufacturing, fabrication, marking, maintenance, reconditioning, repairing, or testing of a package or container which is represented, marked, certified, or sold as qualified for use in the transportation of hazardous materials.

In a February 28, 1991, final rule (56 FR 8616), RSPA added this new preemption standard to 49 CFR 107.202 to mirror the statute. Section 105(a)(5) of the HMTA, as amended by the HMTUSA, provides that if DOT issues a regulation concerning any of the covered subjects after the date of enactment of the HMTUSA (November 18, 1990), DOT must determine and publish in the Federal Register the effective date of Federal preemption. That effective date may not be earlier than the 90th day following the date of issuance and not later than two years after the date of issuance.

To the extent that the requirements of this final rule involve any covered subjects, States, political subdivisions, or Indian tribes may only establish, maintain, and enforce laws, regulations, or other requirements concerning such subjects if they are substantively the same as the requirements in this final rule. RSPA has determined that the effective date of Federal preemption for these requirements will be April 1, 1993.

Suggested Special Training for Drivers of Radioactive Materials

Representatives from several Western States requested that RSPA develop special training for drivers transporting radioactive materials in mountainous regions and during periods of inclement weather. The States were supportive of RSPA's proposed driver training requirements, but recommended that increased emphasis be developed for driving under unusual conditions.

The Western Interstate Energy Board offered a synopsis of what the States would like developed. The Board wrote, "drivers should not encounter their first steep mountain grade or blizzard while transporting radioactive or other hazardous materials. The [Board] believes that DOT's proposed amendments to the driver training rules

for hazardous materials should be expanded to require driver training in all types of terrain and in all types of weather conditions. Drivers should be trained to recognize when adverse conditions make it unsafe to continue driving and should know how to find a safe parking area to await improved conditions."

RSPA supports measures that will improve the safe transportation of hazardous materials. Accordingly, § 177.816(a)(3) is revised to include a provision that requires instruction on the dangers associated with conditions that a driver might encounter (e.g., blizzards, mountainous terrain, high winds).

Testing Requirements

In the NPRM, RSPA asked for comments regarding the need for testing requirements to ensure that persons covered by the provisions of this final rule were properly trained (54 FR 51147). RSPA received a number of comments in response to the testing question.

Although a few commenters suggested that training can be properly verified only through the use of a testing procedure, the vast majority of commenters supported RSPA's contention in the NPRM that the determination to administer a test is better left to the discretion of the employer. Section 106(b)(6) of HMTA requires that each hazmat employer certify that its hazmat employees are trained and have been tested in their respective transportation areas of responsibility. It is RSPA's position that the diversity of job functions covered by this final rule makes it impractical to develop specific requirements for testing all categories of employees to ensure they have been properly trained. There are no detailed testing procedures specified in this final rule. However, to satisfy section 106(b)(6) of HMTA, § 172.704(d)(5) of this final rule requires the employer to provide a record which includes certification that the hazmat employee has received training and has been tested.

Recordkeeping Requirements

Many comments were received regarding the proposal that a record of training, containing the name and signature of the person receiving the training and the name and signature of the individual providing the training, be maintained by the employer. Comments received indicate that a recordkeeping regulation requiring signatures would prevent the use of computerized recordkeeping systems maintained by many large companies.

Other comments addressed the proposed requirement that the training record be maintained for the duration of the employee's employment and for 90 days thereafter. Various organizations have suggested that only the most current record be retained and that records be maintained only for 90 days after an employee last worked in a hazardous materials job function.

After a review of the comments, RSPA agrees that the signature requirement proposed in the NPRM is not necessary to assure accurate records and could prohibit the use of computerized record systems. Accordingly, the requirements for signatures proposed in the NPRM for § 172.704(c) (1) and (4) are removed from this final rule. RSPA also agrees with commenters who suggested that only the most recent training record and certification be required to be kept. Section 172.704(d) is revised to require a record certifying each hazmat employee's current training, inclusive of the preceding two years, be created and retained by the hazmat employer for as long as the hazmat employee is employed by that employer under the definition in § 171.8 for hazmat employee, and for a period of 90 days thereafter.

Requests for Exclusion

The NPRM proposed that persons must be trained if they perform functions such as inspecting or testing specification packagings or representing, marking, certifying, selling or offering packagings as meeting the requirements of the HMR, or an exemption issued under the HMR. Several packaging manufacturers and trade associations commented on the proposed language in § 172.702(b)(10). Specifically, these commenters requested clarification of whether the proposed rule was meant to apply to container manufacturers, and some suggested that they be excluded from the training requirements.

Section 103 of the HMTA defines both "hazmat employee" and "hazmat employer". As discussed above, based upon these definitions and the NPRM, this final rule applies to a hazmat employee who repairs, modifies, reconditions, or tests containers, drums, or packagings represented for use in the transportation of hazardous materials. Therefore, RSPA has determined that container manufacturers are not excepted from the training requirements. However, this final rule does not require such employees to have safety training if they perform no other hazardous materials job function.

In addition to the packaging industry, requests for exclusion from this rule also

came from small quantity shippers, agricultural concerns, and some members of the maritime industry. RSPA has limited discretion under the HMTA. If an employer meets the definition of a "hazmat employer," that employer must train all of its employees who meet the definition of a "hazmat employee." In any case, RSPA does not believe exclusions are warranted. The small quantity shipper, agricultural employee, or maritime employee who handles hazardous materials has as much need to be trained as any other hazmat employee and, historically, has been required to be trained under the existing HMR training requirements.

Recommendations That a Supplemental Notice Be Developed

Several commenters, including the Steel Shipping Container Institute, IMC Fertilizer, Inc., the Hazardous Materials Advisory Council (HMAC), and PPG Industries, Inc., requested that RSPA develop a supplemental NPRM before proceeding to a final rule. These commenters based their requests on the large number of questions that RSPA asked in the preamble of Docket HM-126F and indicated a belief that some aspects of the NPRM, such as "in proximity" and the DOT/OSHA/EPA interface, were important enough to warrant further public consideration and comment. RSPA believes that the issues raised by and during this rulemaking have been adequately addressed in the NPRM, comments thereto, and in our evaluation of the merits of those comments, and that a supplemental NPRM is not warranted.

V. Provisions of this Final Rule

The purpose of this rulemaking is to ensure that each hazmat employer trains its hazmat employees regarding safe loading, unloading, handling, storing, and transporting of hazardous materials and emergency preparedness for responding to accidents or incidents involving the transportation of hazardous materials. After completion of training, each hazmat employer must certify, with appropriate documentation, that each hazmat employee received training and was tested on appropriate areas of responsibility. By requiring enhanced training, RSPA intends to increase a hazmat employee's awareness of safety considerations and regulatory requirements, thereby reducing the occurrence of hazardous materials incidents caused by human error.

To achieve these requirements, there are four categories of training. The first three categories apply to all modes of transportation while the fourth applies

only to highway transportation and motor vehicle operators.

1. General Awareness/Familiarization Training

General awareness and familiarization training is intended to raise a hazmat employee's awareness of the HMR and the purpose and meaning of hazard communication requirements. Recognizing and identifying hazardous materials in the work place will be the result. In the case of employees who recondition or test packagings, such training will increase their awareness of the importance of the functions they perform. All hazmat employees must receive this training.

2. Function-specific Training

Function-specific training is intended to teach the necessary knowledge, skills, and abilities for an individual's job function. For example, a hazmat employee responsible for executing hazardous materials shipping papers will receive training on Subpart C of Part 172, including any applicable modal shipping paper requirements.

3. Safety Training

Safety training is for hazmat employees who handle or transport packagings containing hazardous materials during the course of transportation (e.g., packers and warehouse workers) and persons who have the potential for exposure to hazardous materials as a result of a transportation accident (e.g., drivers or members of a train crew). This training provides information concerning the hazards posed by materials in the work place, under normal conditions or in likely accident scenarios, and includes appropriate personal protection measures and, if applicable, how to use emergency response information, methods, and procedures for avoiding accidents, and any remedial actions necessary after a release of hazardous materials. This training is not intended to satisfy the training needs and requirements for hazmat employees whose primary responsibilities involve emergency response (see 29 CFR 1910.120). Rather, it is intended to address those employees who may have limited responsibilities for emergency response, such as notifying others of the emergency, using fire extinguishers, or taking immediate actions to mitigate the effects of an unintentional release of hazardous materials.

4. Driver Training

There are far more shipments of hazardous materials by motor vehicle and, correspondingly, more incidents

involving the release of hazardous materials in the highway mode of transportation than for the rail, water, and air modes combined. Improved training of drivers has the potential for making significant gains in accident avoidance and accident mitigation. Consequently, drivers must be given not only general awareness/familiarization, function-specific and safety training, but also training on the safe operation of the motor vehicle which they operate or intend to operate and the applicable requirements of the Federal Motor Carrier Safety Regulations.

This final rule addresses broad subject areas in which training is to be received. With the exception of cargo tank and portable tank operations, detailed content of training is not specified. RSPA has intentionally made the requirements in this final rule as broad and objective as is practicable to accommodate training programs and materials currently used in both the public and private sectors. This approach provides the necessary latitude to both sectors for the development of effective training programs and/or materials. It is RSPA's position that responsible hazmat employers, either individually or through industry associations, are better able to determine the training needs of their employees. The responsibility for ensuring that the level of training is adequate and appropriate for each hazmat employee is that of the employer; therefore, no attempt has been made to specify the level and duration of training or testing. In addition, it is important to note that DOT does not intend to review or certify training programs for pre-approval purposes.

Because of the unique characteristics of cargo tank motor vehicles and motor vehicles transporting portable tanks, and because of the potential risks involved in transporting bulk cargos, RSPA regards special training requirements for drivers engaged in such operations as essential to the public safety. Therefore, this final rule requires in-depth training for drivers of this safety-sensitive class of vehicles that includes the safe operation of motor vehicles and the applicable requirements of the Federal Motor Carrier Safety Regulations. RSPA recognizes that compliance with the current requirements for a CDL with a tank vehicle endorsement may satisfy these special training requirements for this class of vehicle.

While responsibility for providing training would remain with the employer, the required training could be

provided by company training programs, outside training firms or consultants, Federal or State agencies, colleges and universities, or any other type of organization offering training that meets the objective requirements of this final rule. Examples of available training courses are provided later in this preamble.

RSPA is also requiring that employers develop and maintain a record which reflects the beginning and end of the required training for each employee. This requirement is necessary to verify compliance with training requirements.

Enforcement of the proposed training regulations pertaining to carriers will remain the primary responsibility of the various modal administrations. Each modal administration plans to ascertain compliance with training requirements when it conducts safety and compliance reviews of individual carriers. If it is determined that a carrier is not in compliance with the training requirements, appropriate action will be taken.

VI. Training Sources

Training material and instruction that may be used to satisfy some or all of the requirements of this final rule are available from a variety of sources. In the following sections we have listed examples of some common training sources. The sources listed are examples only and are not all-inclusive, nor are they required to be used to satisfy the requirements of this final rule.

International Organizations

Under § 172.702 of this final rule, employees in air transportation may be trained in the ICAO Technical Instructions if their functions are covered wholly by the ICAO regulations. Any training that meets the requirements set forth in § 172.704 of this final rule is acceptable.

As an aid to users of the ICAO Technical Instructions, ICAO has developed a dangerous goods training program that consists of six booklets that are arranged on a functional basis. Functional training areas covered include shippers and packers, cargo agents, operator's cargo acceptance staff, load planners and cargo handlers, flight crewmembers, and passenger handling staff and flight attendants. These training booklets are available from ICAO through various worldwide offices.

RSPA believes that the development of a training program requiring the use of the ICAO booklets would, for certain employees, satisfy some, if not all, the requirements of this final rule.

Federal Government

A number of Federal agencies offer training in hazardous materials transportation to eligible persons. Available training sources include in-residence schools, on-site instruction, and training materials that are available to the general public.

The Department of Defense offers many training courses to Federal employees and eligible civilian contract personnel. Schools such as the Army's Defense Ammunition School in Savannah, Illinois, the Transportation School at Ft. Eustis, VA, and the Joint Military Packaging Training Center at Aberdeen Proving Ground, Maryland, all offer specialized hazardous materials transportation training courses.

RSPA offers extensive hazardous materials transportation training. Its Transportation Safety Institute in Oklahoma City, OK, offers both resident and remote hazardous materials training for Federal, State and local government employees, and industry in all modes of transportation.

RSPA has also developed a number of training modules that are available to the general public in all 50 States, the Commonwealth of Puerto Rico, and U.S. territories. These modules consist of workbooks and audio/visual presentations that cover different subject areas of the HMR and can be used to help satisfy the requirements of this final rule. The first six modules cover the basics of the HMR, and include:

The Hazardous Materials Table
Shipping Papers
Packaging
Marking and labeling
Placarding
Carriers

For information on obtaining training modules from private sources call RSPA's electronic bulletin board, the Hazardous Materials Information Exchange (HMIX), on 1-800-PLANFOR or via data line on 708-872-3275. Additional modules are being developed to address specialized areas such as cargo tanks and hazardous wastes.

State and Local Governments

Various State and local governments provide, to eligible personnel, hazardous materials training that can help satisfy the requirements of this final rule. Like their Federal counterparts, State and local trainers provide both resident and remote instruction. For example, the State of Maryland, through its Department of Transportation, offers hazardous materials training to State and other eligible employees. The Port

Authority of New York and New Jersey offers similar classes.

On a more localized level, organizations such as the Contra Costa County, California, Office of Emergency Services and the Bucks County, Pennsylvania, Emergency Services Training Center offer hazardous materials transportation training. Training is also available from various colleges and universities throughout the United States.

Private Sources

In addition to governmental training sources, a number of private organizations offer training courses to the general public. Some of these private firms provide training through seminars in cities across the United States. Others provide consulting services and training in-house at company facilities.

The Hazardous Materials Advisory Council (HMAC) is an international, non-profit membership organization involved in promoting safety and regulatory compliance in the transportation of hazardous materials. HMAC offers the community a wide variety of publications and special reports, each dealing with critical regulatory, legislative, and safety issues affecting hazardous materials transportation. Regular conferences and special programs present leading experts to speak about domestic and international hazardous materials transportation regulations and emerging issues. Additionally, HMAC's training programs provide a thorough understanding of U.S. and international regulations governing the transportation of hazardous materials. The expertise of the HMAC and its members was utilized in the development of the DGT Hazardous Materials Transportation training modules.

Most of these private training firms and their schedule of presentations are listed in various trade magazines. RSPA's electronic bulletin board, the Hazardous Materials Information Exchange (HMIX), lists training offered by private organizations. The HMIX list may be accessed by calling the data telephone number 708-872-3275 or for assistance 1-800-PLANFOR.

VII. Section-by-Section Review

A. Part 171: General Information, Regulations, Definitions

Section 171.8 Definitions are added for "hazmat employee" and "hazmat employer."

B. Part 172; Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements

Part 172. A new Subpart H—Training, including §§ 172.700 through 172.704, is added and the title of part 172 is revised to reflect training requirements.

Section 172.700. Section 172.700 is added, identifying the purpose of training requirements.

Section 172.701. Section 172.701 is added to emphasize that RSPA's training requirements are minimum requirements. The section also authorizes a State to impose more stringent training requirements on drivers if those requirements do not conflict with the HMR and apply only to drivers domiciled in that State.

Section 172.702. The requirements contained in this section apply to persons meeting the definition of a "hazmat employee." Although employers are responsible for ensuring that their employees are properly trained, it is acceptable for an employer to use the services of an employee on loan from another company, a transfer employee, or any other employee who had received the required hazardous materials transportation training from another source provided that the employer verifies that training has been received. Retraining is not necessary if required training for the job functions performed has occurred during the preceding two-year cycle required by this final rule.

Section 172.704. This section specifies the kinds of training required; specifies the training period for current employees, new employees, and employees who change hazardous materials job functions; and specifies recurrent training be provided at least once every two years. A current record of each employee's training, inclusive of the preceding two years, must be maintained by the employer for the duration of the employee's employment in each applicable hazardous materials job function and for 90 days thereafter. The record of training must contain the name of the person receiving the training, the completion date of the training, a copy or location of the training material presented or a description of the training given, and the name of the person presenting the training. A current record of relevant training received from a previous employer or source may be used to satisfy training requirements.

C. Part 173—Shippers—General Requirements for Shipments and Packagings

Section 173.1. In § 173.1, paragraph (b) is revised to reflect the new requirements for training of persons involved in the shipment and transportation of hazardous materials.

D. Part 174—Carriage by Rail; Part 175—Carriage by Aircraft; and Part 176—Carriage by Vessel

Sections 174.7, 175.20, and 176.13. These sections are revised to specifically require employers to provide the training as required by the new subpart H of part 172. Section 176.13 also requires that the record of training of a crewmember of a vessel who is also a hazmat employee be kept on board the vessel while the crewmember is in service on board the vessel, as required by § 172.704(d).

E. Part 177—Carriage by Public Highway

Section 177.800. Section 177.800 is revised for clarity and to specify that employers must provide the training required in part 172 and the additional driver (operator) training required by part 177.

Section 177.816. This section is revised to specifically identify training, in addition to that required by subpart H of part 172, that must be provided to drivers of motor vehicles. Drivers must be provided training in requirements of the Federal Motor Carrier Safety Regulations (49 CFR parts 383, 387, and 390 through 399); operation of the motor vehicle that the driver will be operating, including vehicle characteristics; proper procedures regarding tunnels, bridges, and railroad crossings; vehicle controls, including safety and emergency equipment; requirements for attendance and parking; and any other aspect relative to the safe operation of the motor vehicle. In addition, specialized training requirements for cargo tank motor vehicle operators and drivers of motor vehicles containing portable tanks are contained in this section. To avoid duplication of the requirements of § 172.704, the requirement proposed in the NPRM for a separate special training record for drivers of vehicles that contain flammable cryogenic liquids has been removed.

Section 177.825. In § 177.825, paragraph (d) is revised to eliminate unnecessary duplication of training requirements. Paragraph (d)(1) is changed to refer the reader to the training requirements found in subpart H of part 172 and § 177.816. The requirement for employers of drivers

transporting highway route controlled quantities of radioactive materials to place a copy of the record of training in the driver's qualification file has been removed so as not to duplicate the requirements in § 172.704. For these drivers, the requirements of paragraphs (d) (2) and (3) to have a copy of the record of training and a route plan in the drivers' possession remain unchanged.

Rulemaking Analysis and Notices

A. Executive Order 12291 and DOT Regulatory Policies and Procedures

RSPA has determined that this final rule is not a "major rule" under Executive Order 12291. However, it is a significant rule under DOT's Regulatory Policies and Procedures (44 FR 11034) because of public interest and safety implications. This final rule does not require a Regulatory Impact Analysis, or an environmental impact statement under the National Environmental Policy Act (42 U.S.C. 4321 et seq.). A regulatory evaluation is available for review in the Docket.

B. Executive Order 12612

This action has been analyzed in accordance with the principles and criteria in Executive Order 12612, and it has been determined that this final rule does not have sufficient Federalism implications to warrant the preparation of a Federalism Assessment. The Hazardous Materials Transportation Act provides that State and local requirements concerning certain "covered subjects" are preempted. This final rule implements the specific statutory mandate at the minimum level necessary to achieve the objectives of the statute. Furthermore, provision has been made for States to impose additional training requirements for motor vehicle drivers as long as these requirements do not conflict with the Federal regulations and are imposed only upon "drivers" domiciled in that State.

C. Regulatory Flexibility Act

The existing regulations require employers to train their employees. This final rule merely specifies in greater detail the frequency and content of the training and requires a record of training. These additional requirements should have minimal impact on hazmat employers, some of whom are small entities. Based on limited information concerning size and nature of entities affected by this final rule, I certify this regulation will not have a significant economic impact on a substantial number of small entities.

D. Paperwork Reduction Act

Under section 106(b)(7) of the HMTA, the information management requirements of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*) do not apply to this final rule.

List of Subjects**49 CFR Part 171**

Exports, Hazardous materials transportation, Hazardous waste, Imports, Incorporation by reference, Reporting and recordkeeping requirements.

49 CFR Part 172

Hazardous materials transportation, Hazardous waste, Labeling, Packaging and containers, Reporting and recordkeeping requirements.

49 CFR Part 173

Hazardous materials transportation, Packaging and containers, Radioactive materials, Reporting and recordkeeping requirements, Uranium.

49 CFR Part 174

Hazardous materials transportation, Radioactive materials, Railroad safety.

49 CFR Part 175

Air carriers, Hazardous materials transportation, Radioactive materials, Reporting and recordkeeping requirements.

49 CFR Part 176

Hazardous materials transportation, Maritime carriers, Radioactive materials, Reporting and recordkeeping requirements.

49 CFR Part 177

Hazardous materials transportation, Motor carriers, Radioactive materials, Reporting and recordkeeping requirements.

In consideration of the foregoing, 49 CFR parts 171 through 177 are amended as follows:

PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS

1. The authority citation for part 171 continues to read as follows:

Authority: 49 App. U.S.C. 1802, 1803, 1804, 1805, 1808, 1818; 49 CFR part 1.

2. In § 171.8, the following definitions are added, as indicated, in appropriate alphabetical order to read as follows:

§ 171.8 Definitions and abbreviations.

Hazmat employee means a person who is employed by a hazmat employer and who in the course of employment directly affects hazardous materials

transportation safety. This term includes an owner-operator of a motor vehicle which transports hazardous materials in commerce. This term includes an individual, including a self-employed individual, employed by a hazmat employer who, during the course of employment:

- (1) Loads, unloads, or handles hazardous materials;
- (2) Tests, reconditions, repairs, modifies, marks, or otherwise represents containers, drums, or packagings as qualified for use in the transportation of hazardous materials;
- (3) Prepares hazardous materials for transportation;
- (4) Is responsible for safety of transporting hazardous materials; or
- (5) Operates a vehicle used to transport hazardous materials.

Hazmat employer means a person who uses one or more of its employees in connection with transporting hazardous materials in commerce; causing hazardous materials to be transported or shipped in commerce; or representing, marking, certifying, selling, offering, reconditioning, testing, repairing, or modifying containers, drums, or packagings as qualified for use in the transportation of hazardous materials. This term includes an owner-operator of a motor vehicle which transports hazardous materials in commerce. This term also includes any department, agency, or instrumentality of the United States, a State, a political subdivision of a State, or an Indian tribe engaged in an activity described in the first sentence of this definition.

PART 172—HAZARDOUS MATERIALS TABLE, SPECIAL PROVISIONS, HAZARDOUS MATERIALS COMMUNICATIONS, EMERGENCY RESPONSE INFORMATION, AND TRAINING REQUIREMENTS

3. The heading of part 172 is revised to read as set forth above.

4. The authority citation for part 172 continues to read as follows:

Authority: 49 App. U.S.C. 1803, 1804, 1805, and 1808; 49 CFR part 1, unless otherwise noted.

5. A new subpart H is added to part 172 to read as follows:

Subpart H—Training**Sec.**

- 172.700 Purpose and scope.
172.701 Federal-State relationship.
172.702 Applicability and responsibility for training.
172.704 Training requirements.

Subpart H—Training**§ 172.700 Purpose and scope.**

(a) *Purpose.* This subpart prescribes requirements for training hazmat employees.

(b) *Scope.* Training as used in this subpart means a systematic program that ensures a hazmat employee has familiarity with the general provisions of this subchapter, is able to recognize and identify hazardous materials, has knowledge of specific requirements of this subchapter applicable to functions performed by the employee, and has knowledge of emergency response information, self-protection measures and accident prevention methods and procedures (see § 172.704).

(c) *Modal-specific training requirements.* Additional training requirements for the individual modes of transportation are prescribed in parts 174, 175, 176, and 177 of this subchapter.

§ 172.701 Federal/State relationship.

This subpart and the parts referenced in § 172.700(c) prescribe minimum training requirements for the transportation of hazardous materials. For motor vehicle drivers, however, a State may impose more stringent training requirements only if those requirements—

(a) Do not conflict with the training requirements in this subpart and in part 177 of this subchapter; and

(b) Apply only to drivers domiciled in that State.

§ 172.702 Applicability and responsibility for training.

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

(b) A hazmat employee who performs any function subject to the requirements of this subchapter may not perform that function unless trained in accordance with the requirements prescribed in this subpart. It is the duty of each hazmat employer to comply with the applicable requirements of this subchapter and to thoroughly instruct each hazmat employee in relation thereto.

(c) Training may be provided by the hazmat employer or other public or private sources.

§ 172.704 Training requirements.

(a) Hazmat employee training shall include the following:

- (1) *General awareness/familiarization training.* Each hazmat employee shall receive general awareness/familiarization training designed to provide familiarity with the requirements of this subchapter and to

enable the employee to recognize and identify hazardous materials consistent with the hazard communication standards of this subchapter.

(2) *Function-specific training.* (i) Each hazmat employee shall receive function-specific training concerning requirements of this subchapter which are specifically applicable to the functions the employee performs.

(ii) Training conducted by hazmat employers, as necessary, to comply with, and when subject to, the requirements of the ICAO Technical Instructions or the IMDG Code, as authorized in §§ 171.11 and 171.12 of this subchapter, respectively, may be used, when appropriate, to the extent they serve as a substitute for the requirements of this section.

(3) *Safety training.* Each hazmat employee shall receive safety training concerning—

(i) Emergency response information required by subpart G of part 172;

(ii) Measures to protect the employee from the hazards associated with hazardous materials to which they may be exposed in the work place, including specific measures the hazmat employer has implemented to protect employees from exposure; and

(iii) Methods and procedures for avoiding accidents, such as the proper procedures for handling packages containing hazardous materials.

(b) *OSHA or EPA Training.* Training conducted by employers to comply with the hazard communication programs required by the Occupational Safety and Health Administration (OSHA) of the Department of Labor (29 CFR 1910.120) or the Environmental Protection Agency (EPA) (40 CFR 311.1); to the extent that training addresses the training specified in paragraph (a) of this section, may be used to satisfy the training requirements in paragraph (a) of this section, in order to avoid unnecessary duplication of training.

(c) *Initial and recurrent training.*—(1) *Initial training.* Each hazmat employer shall train each hazmat employee as follows:

(i) Training for a hazmat employee employed on or before November 15, 1992, shall be completed prior to April 1, 1993.

(ii) Training for a hazmat employee employed after November 15, 1992, shall be completed within 90 days after employment.

(iii) A hazmat employee who changes hazardous materials job functions shall complete training in the new job function(s) within 90 days after the change.

(iv) A hazmat employee described in paragraph (c)(1) (ii) or (iii) of this

section, may perform new hazardous materials job functions prior to the completion of training provided the employee performs those functions under the supervision of a properly trained and knowledgeable hazmat employee.

(2) *Recurrent Training.* A hazmat employee shall receive the training required by this subpart at least once every two years.

(3) *Relevant Training.* Relevant training received from a previous employer or other source may be used to satisfy the requirements of this subpart provided a current record of training is obtained from hazmat employees' previous employer.

(4) *Compliance.* Each hazmat employer is responsible for compliance with the requirements of this subchapter regardless of whether the training required by this subpart has been completed.

(d) *Recordkeeping.* A record of current training, inclusive of the preceding two years, in accordance with this subpart shall be created and retained by each hazmat employer for each hazmat employee for as long as that employee is employed by that employer as a hazmat employee and for 90 days thereafter. The record shall 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, as required by this subpart.

(e) *Limitation.* A hazmat employee who repairs, modifies, reconditions, or tests packages as qualified for use in the transportation of hazardous materials, and who does not perform any other function subject to the requirements of this subchapter, is not subject to the safety training requirement of paragraph (a)(3) of this section.

PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS

6. The authority citation for part 173 continues to read as follows:

Authority: 49 App. U.S.C. 1803, 1804, 1805, 1806, 1807, 1808; 49 CFR part 1, unless otherwise noted.

7. In § 173.1, paragraph (b) is revised to read as follows:

§ 173.1 Purpose and scope.

(b) A shipment of hazardous materials that is not prepared in accordance with this subchapter may not be offered for transportation by air, highway, rail, or water. It is the responsibility of each hazmat employer subject to the requirements of this subchapter to ensure that each hazmat employee is trained in accordance with the requirements prescribed in this subchapter. It is the duty of each person who offers hazardous materials for transportation to instruct each of his officers, agents, and employees having any responsibility for preparing hazardous materials for shipment as to applicable regulations in this subchapter.

PART 174—CARRIAGE BY RAIL

8. The authority citation for part 174 continues to read as follows:

Authority: 49 App. U.S.C. 1803, 1804, 1808; 49 CFR 1.53(e), 1.53, App. A to part 1.

9. Section 174.7 is revised to read as follows:

§ 174.7 Compliance and training.

(a) Unless this subchapter specifically provides that another person is to perform a particular duty, each carrier, including a connecting carrier, shall perform the duties specified and comply with all applicable requirements of this part and shall thoroughly instruct hazmat employees in relation thereto.

(b) A carrier may not transport a hazardous material by rail unless each of its hazmat employees involved in that transportation is trained as required by subpart H of part 172 of this chapter.

PART 175—CARRIAGE BY AIRCRAFT

10. The authority citation for part 175 continues to read as follows:

Authority: 49 App. U.S.C. 1803, 1804, 1807, 1808; 49 CFR part 1.

11. Section 175.20 is revised to read as follows:

§ 175.20 Compliance and training.

(a) Unless this subchapter specifically provides that another person shall perform a particular duty, each operator shall comply with all applicable requirements in parts 106, 171, 172, and 175 of this chapter and shall ensure each of its hazmat employees receive training in relation thereto. (See also 14 CFR 121.135, 121.401, 121.433a, 135.323, 135.327 and 135.333.)

(b) A carrier may not transport a hazardous material by aircraft unless

each of its hazmat employees involved in that transportation is trained as required by subpart H of part 172 of this subchapter.

PART 176—CARRIAGE BY VESSEL

12. The authority citation for part 176 continues to read as follows:

Authority: 49 App. U.S.C. 1803, 1804, 1805, 1806; 49 CFR 1.53, App. A to part 1.

13. Section 176.13 is revised to read as follows:

§ 176.13 Responsibility for compliance and training.

(a) Unless this subchapter specifically provides that another person shall perform a particular duty, each carrier shall perform the duties specified and comply with all applicable requirements in this part and shall ensure its hazmat employees receive training in relation thereto.

(b) A carrier may not transport a hazardous material by vessel unless each of its hazmat employees involved in that transportation is trained as required by subpart H of part 172 of this subchapter.

(c) The record of training required by § 172.704(c) of this subchapter for a crewmember who is a hazmat employee subject to the training requirements of this subchapter must be kept on board the vessel while the crewmember is in service on board the vessel.

PART 177—CARRIAGE BY PUBLIC HIGHWAY

14. The authority citation for part 177 continues to read as follows:

Authority: 49 App. U.S.C. 1803, 1804, 1805; 49 CFR part 1.

15. Section 177.800 is revised to read as follows:

§ 177.800 Purpose and scope of this part and responsibility for compliance and training.

(a) *Purpose and scope.* This part prescribes requirements, in addition to those contained in parts 171, 172, 173, 178 and 180 of this subchapter, that are applicable to the acceptance and transportation of hazardous materials by private, common, or contract carriers by motor vehicle.

(b) *Responsibility for compliance.* Unless this subchapter specifically provides that another person shall perform a particular duty, each carrier, including a connecting carrier, shall

perform the duties specified and comply with all applicable requirements in this part and shall ensure its hazmat employees receive training in relation thereto.

(c) *Responsibility for training.* A carrier may not transport a hazardous material by motor vehicle unless each of its hazmat employees involved in that transportation is trained as required by this part and subpart H of part 172 of this subchapter.

16. Section 177.816 is revised to read as follows:

§ 177.816 Driver training.

(a) In addition to the training requirements of § 177.800, no carrier may transport, or cause to be transported, a hazardous material unless each hazmat employee who will operate a motor vehicle has been trained in the applicable requirements of 49 CFR parts 383, 387, 390 through 399 and the procedures necessary for the safe operation of that motor vehicle. Driver training shall include the following subjects:

- (1) Pre-trip safety inspection;
- (2) Use of vehicle controls and equipment, including operation of emergency equipment;
- (3) Operation of vehicle, including turning, backing, braking, parking, handling, and vehicle characteristics including those that affect vehicle stability, such as effects of braking and curves, effects of speed on vehicle control, dangers associated with maneuvering through curves, dangers associated with weather or road conditions that a driver may experience (e.g., blizzards, mountainous terrain, high winds), and high center of gravity;
- (4) Procedures for navigating tunnels, bridges, and railroad crossings;
- (5) Requirements pertaining to attendance of vehicles, parking, smoking, routing, and incident reporting; and
- (6) Loading and unloading of materials, including—
 - (i) Compatibility and segregation of cargo in a mixed load;
 - (ii) Package handling methods; and
 - (iii) Load securement.

(b) *Specialized requirements for cargo tanks and portable tanks.* In addition to the training requirement of paragraph (a) of this section, each person who operates a cargo tank or a vehicle with a portable tank with a capacity of 1,000 gallons or more must receive training applicable to the requirements of this

subchapter and have the appropriate State-issued commercial driver's license required by 49 CFR part 383. Specialized training shall include the following:

- (1) Operation of emergency control features of the cargo tank or portable tank;
- (2) Special vehicle handling characteristics, including: high center of gravity, fluid load subject to surge, effects of fluid-load surge on braking, characteristic differences in stability among baffled, unbaffled, and multi-compartmented tanks; and effects of partial loads on vehicle stability;
- (3) Loading and unloading procedures;
- (4) The properties and hazards of the material transported; and
- (5) Retest and inspection requirements for cargo tanks.

(c) The training required by paragraphs (a) and (b) of this section:

- (1) May be satisfied by compliance with the current requirements for a CDL with a tank vehicle or hazardous materials endorsement; and
- (2) Must conform to the requirements of § 172.704 of this subchapter with respect to frequency and recordkeeping.

17. In § 177.825, paragraph (d) is revised to read as follows:

§ 177.825 Routing and training requirements for Class 7 (radioactive) materials.

(d) No person may transport a package of highway route controlled quantity of Class 7 (radioactive) materials, as defined in § 173.403(l) of this subchapter, on a public highway unless:

(1) The driver is trained as required by subpart H of part 172 of this subchapter and § 177.816.

(2) A copy of the record of training required by § 172.704 of this subchapter is in the immediate possession of the driver.

(3) The route plan required in paragraph (c) of this section is in the immediate possession of the driver and the motor vehicle is operated by the driver in accordance with the route plan.

Issued in Washington, D.C., on May 11, 1992, under authority delegated in 49 CFR Part 1.

Travis P. Dungan,
Administrator, Research and Special
Programs Administration.

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