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Training for Hazardous Materials
Transportation; Proposed Rule
HM-126F

Part III

Department of Transportation

Research and Special Programs Administration

49 CFR Parts 171 Through 177 Training for Hazardous Materials Transportation; Proposed Rule

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DEPARTMENT OF TRANSPORTATION

Research and Special Programs
Administration

49 CFR Parts 171 through 177

[Docket No. HM-126F, Notice No. 89-4]

RIN 2137-AB26

Training for Hazardous Materials
Transportation

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

ACTION: Notice of proposed rulemaking and notice of public hearing.

SUMMARY: RSPA is proposing to amend the Hazardous Materials Regulations to enhance training requirements for persons involved in the transportation of hazardous materials. Based on information provided to RSPA through its hazardous materials incident reporting system, human error is the probable cause of most transportation incidents, and associated consequences, involving the release of hazardous materials. By requiring enhanced training for persons involved in the transportation of hazardous materials, it is intended to increase awareness of safety consideration and regulatory requirements involved in transporting hazardous materials and, thus, reduce the occurrence of hazardous materials incidents caused by human error.

DATES: *Comments:* Comments must be received on or before November 24, 1989.

Public hearing: Public hearings will be held 9:30 a.m. to 5:00 p.m. on October 3, 1989 in Salt Lake City, Utah and October 11, 1989 in Washington, D.C. If the number of speakers warrants an extra day, the Salt Lake City hearing will be extended through October 4.

ADDRESSES: *Comments:* Address comments to Dockets Unit, Research and Special Programs Administration, Department of Transportation, Washington, DC 20590. Comments should identify the docket and be submitted, if possible, in five copies. Persons wishing to receive confirmation of receipt of their comments should include a self-addressed stamped postcard. The Dockets Unit is located in Room 8421 of the Nassif Building, 400 Seventh St., SW., Washington, DC 20590. Public dockets may be reviewed between the hours of 8:30 a.m. to 5:00 p.m., Monday through Friday, except holidays.

Public hearing: The October 3, and October 4 if necessary, 1989 public hearing will be held at the Doubletree

Inn, 215 W.S. Temple Street, Salt Lake City, Utah. The October 11, 1989 hearing will be held at the FAA Auditorium, Third floor, Federal Office Building 10A, 800 Independence Avenue, SW., Washington, DC.

Any person wishing to present an oral statement at the public hearing should notify the Dockets Unit, by telephone or in writing, at least two days in advance of the hearing date. Each request must identify the speaker; organization represented, if any; daytime telephone number; and the anticipated length of the presentation, not to exceed ten minutes. Written text or oral statements should be presented to the hearing officer prior to the oral presentation.

FOR FURTHER INFORMATION CONTACT: Carl V. Strombom or Delmer F. Billings, Standards Division, Office of Hazardous Materials Transportation, RSPA, Department of Transportation, 400 Seventh Street SW., Washington, DC 20590, Telephone: (202) 366-4488.

SUPPLEMENTARY INFORMATION:**I. Purpose and Objectives of This Rulemaking**

In this document, RSPA is proposing to amend the Hazardous Materials Regulations (HMR) to require that persons who perform functions involving the transportation of hazardous materials receive training concerning regulatory requirements applicable to those functions, and persons who work in proximity to hazardous materials receive training concerning hazardous materials awareness and safety procedures.

Although RSPA refers to the term "in proximity" throughout this notice, the term has not been defined. RSPA is especially interested in obtaining comments on this term. In particular, RSPA solicits comments on the following: (1) What types of workers would be covered by the term "in proximity"? (2) Is the term "in proximity" too vague? If so, how should "in proximity" be defined or clarified?

II. Background**A. Existing 49 CFR Training Requirements**

The HMR are codified in Title 49 of the Code of Federal Regulations (49 CFR, Parts 171-179). Currently, §§ 173.174.7, 175.20, 178.13 and 177.800 of 49 CFR contain general requirements for training. Section 173.1(b) states, in part, " . . . 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." In Part 174, which addresses carriage by rail, § 174.7 states "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 each applicable requirement of this part, and shall instruct its employees in relation thereto." (emphasis added). Similar general requirements to instruct employees are contained in §§ 175.20, 178.13 and 177.800 for carriage by aircraft, vessel and motor vehicle, respectively. 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.

In addition to these general requirements for training, the HMR also 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 insure 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.

B. CRS Report

On April 4, 1988, the Congressional Research Service (CRS) published a report entitled "Should DOT's Training Regulations Affecting Workers Handling, and Drivers Transporting, Hazardous Materials Be Strengthened". Although the CRS report recognized that the hazardous materials transportation industry has a good safety record, the report concluded that " . . . increased training could reduce the frequency of incidents, lives could be saved, the amount of property losses and the number of injuries could be reduced".

The following is the CRS report's analysis of DOT's current regulations which pertain to the training of workers handling and drivers transporting hazardous materials by highway:

1. DOT's general training regulations covering workers handling hazardous materials in highway transportation can, at best, be considered to be vague; and they do not specify the nature, content, objectives, or length of the required instruction, its desired frequency, or when new employees should be trained. In addition, DOT's regulations do not require a certification or a testing program designed to ensure that these workers have a basic understanding of and sensitivity

toward the hazardous properties of, and risks associated with, the chemical with which they are dealing; nor do they require testing of the driver's awareness and understanding of appropriate emergency response procedures pertinent to releases of hazardous materials. The DOT training concept is, in general, to simply require thorough instruction of employees, leaving much in the way of training specifics, techniques, and testing up to the carrier.

2. Unlike many other safety concerns that are governed by complex and detailed HMT regulations, the Department, for the highway mode, appears to have devoted little attention to regulations addressing the major role that human error is judged to play as the probable cause of most hazardous materials transportation incidents. DOT's HMT training regulations do not emphasize the importance of human error and human engineering factors.

3. Although DOT's training requirements for drivers can vary depending on the material being transported, they are not consistently based on the potential risks associated with the commodity being shipped. Fairly rigorous and detailed Federal training requirements exist for drivers transporting highway route controlled quantity radioactive materials and flammable cryogenic liquids in cargo tanks on a public highway. But, drivers transporting most other hazardous materials, such as liquefied petroleum gas, poisons, corrosives, and various regulated wastes, are generally not subject to the same detailed Federal driver training requirements. Some of these other hazardous materials, if released, can kill and just as can the release of certain active and flammable cryogenic materials. For example, from a technical and safety perspective, it makes little sense for DOT to have fairly detailed training regulations for drivers transporting liquefied natural gas, which is a flammable cryogenic, but not for drivers transporting liquefied petroleum gas. Both materials if improperly released, can result in catastrophic events.

4. DOT's training regulations for drivers are much more geared toward operational control of the vehicle than toward ensuring the recognition of, and appreciation for, the hazards of the materials being transported.

5. As previously discussed, most drivers transporting hazardous cargoes simply have to take, but not necessarily pass, a 68-question, open-book examination; must be certified on various driver qualification requirements, including a road test, and be "thoroughly instructed" on the regulations. The eight questions on DOT's written examination dealing with the HMT do not comprehensively test knowledge or understanding of these regulations. DOT's examination does not test whether someone is trained in, or has a basic understanding of, emergency response procedures appropriate to the job and responsibilities of being a driver of a truck transporting hazardous materials. A working knowledge of this information might be of life-saving benefit to emergency response personnel, such as police and fire fighters, and the affected community in the event of an incident. Numerous individuals who were interviewed for this report

pointed out the need to improve this examination.

6. Although DOT's specific requirements for drivers transporting certain radioactive materials and flammable cryogenics are fairly detailed, DOT does not require a formal test and demonstration of the required knowledge called for by these regulations. DOT simply states that the drivers transporting these materials must be given written training materials.

7. Although DOT inspectors have cited alleged violations of various training regulations, the Department has only occasionally pursued an enforcement case to the point of collection of a penalty assessment.

8. DOT's regulations do not provide the Department with any quantitative measures of how well drivers or workers have been trained. Currently, DOT must rely primarily on its infrequent inspections, supplemented with information from State and local inspections, to obtain insights into how well industry is complying with, or understanding, its regulations.

The CRS report recognized that many questions remain unanswered when considering the adopting of stronger training requirements such as what is an appropriate level of training, particularly in terms of cost effectiveness, and what areas of the regulations training should encompass, i.e., what technical subjects and which procedures should be included in a training program. The CRS report points out that: (1) it would be difficult to develop the numerous training courses necessary to effectively train large segments of the hazardous materials transportation industry on the HMT; (2) in many instances, the private sector may already be providing a sufficient and cost effective level of training; and (3) the development of regulations to implement some of the training concepts could prove to be difficult and time consuming and involve DOT in unproductive micromanagement.

C. DOD Petition for Rulemaking

In a petition for rulemaking dated May 9, 1986, the Military Traffic Management Command (MTMC), on behalf of the Department of Defense (DOD) requested that 49 CFR 177.816 be made applicable to all drivers of hazardous materials. Section 177.816 requires motor carriers that transport flammable cryogenic liquids in cargo tanks to provide written training to their drivers. The training must be given before a driver is permitted to transport the hazardous material, and repeated at least once every two years thereafter. The training program must include instruction pertaining to requirements in the HMT applicable to cryogenic liquids, requirements in the Federal Motor Carrier Safety Regulations (49 CFR Parts 383, 387, and 390 through 397) applicable

to drivers, the properties and potential hazards of the materials transported, safe vehicle operation including handling characteristics, emergency features and loading limitations, and procedures to be followed in case of accident or other emergency. The motor carrier must record the training in the driver's qualification file (required under 49 CFR 391.51), and the record must include the driver's name and operator's license number, the dates when training was provided and when next due, name and address of the person providing training, and a copy of the written training material. The MTMC proposal modified the language of § 177.816 to extend the scope of applicability to all drivers of motor vehicles transporting hazardous materials and to incorporate certain provisions currently found in § 177.825 for drivers of highway route controlled quantities of radioactive materials, which require that a driver have a certificate of training in his or her possession during transportation.

In support of its petition and proposed revision of § 177.816, MTMC states:

• • • The provisions in the proposal are essentially a synthesis of existing requirements, with the scope of applicability extended to cover more than the two exceptional groups (flammable cryogenics and radioactive materials). We suggest that it apply to all hazardous materials shipments.

A change of some sort is needed in 49 CFR 177.816, we feel, in part because the title of this section of rules misleads the reader to believe that these will be general training requirements rather than limited category-specific ones. Clearly there are needs in the Federal law for training requirements for drivers of hazardous material shipments. This section should provide what is expected and needed under the title "Training."

Our interest in this action stems from our role as one of the largest domestic shippers of hazardous materials. Initially, we considered submitting a petition to add to the rules a section similar to 177.816 that would apply to shipments of Class A and B explosives. Upon reflection, the recommendations described above and in the enclosure seem more complete and ultimately more useful in preventing or intelligently managing transportation accidents involving dangerous cargoes.

III. DOT Proposal

This notice of proposed rulemaking (NPRM) is generally responsive to the problems identified by CRS and DOD and RSPA's own evaluation of the need for enhanced training requirements in the HMT. RSPA agrees, for the most part, with the CRS assessment of existing training requirements in the HMT and believes that these requirements are deficient. Enhanced training requirements, as envisioned in

this proposal, should improve compliance with packaging, hazard communication and handling requirements and help assure that transportation workers are aware of procedures to take when exposed to unintentional releases of hazardous materials.

The requirement to instruct, in the previously mentioned sections of the HMR, applies solely to instruction concerning regulatory requirements. In this notice, it is proposed to expand this requirement to address four categories of training: General awareness/familiarization, function-specific, safety and drivers training. The first three categories would apply to all modes of transportation while the fourth category of drivers training would apply only to highway transportation and motor vehicle operators.

General awareness/familiarization training is intended to make persons aware of the HMR and the purpose and meaning of hazard communication provisions, such as labeling, marking, and placarding provisions. All persons who perform functions covered by the HMR or who work in a transportation facility in proximity to hazardous materials would receive this training.

Persons who perform functions covered by the HMR would be required to be trained in how to perform those functions. For example, a person responsible for executing hazardous materials shipping papers would receive training concerning the applicable requirements of Subpart C of Part 172 and any applicable modal requirements, such as those in § 174.25 for rail shipments or §§ 176.24 and 176.27 for water transportation. This type of training is essentially what is required under the HMR at present.

Persons who work in proximity to hazardous materials during the course of its transportation (e.g., drivers and warehouse workers) and their supervisors would receive safety training. This training is intended to provide information concerning the hazards of the materials to which the person might be exposed, appropriate personal protection measures, and, if applicable, how to use emergency response information, methods and procedures for accident avoidance, and procedures to be followed in the event of an unintentional release of hazardous materials. The proposal is not intended to satisfy the training needs and requirements for transportation workers whose primary responsibilities involve emergency response. These persons are subject to training requirements prescribed by the Occupational Safety and Health Administration (OSHA) of

the Department of Labor in 29 CFR 1910.120 which are discussed elsewhere in this preamble. Rather, the training is intended to address those transport workers who may have responsibilities for elemental emergency response, such as notifying others of the emergency, using fire extinguishers or other emergency control features, or otherwise mitigating the severity of release of materials. For example, a driver of a cargo tank containing hazardous materials would most likely not be expected to perform full emergency response services in the event of a leaking tank. However, the driver is responsible for notifying the appropriate authorities and may be assigned responsibility, by his employer, for using absorbent materials, diking a minor spill area, or as many similar immediate incident mitigation measures as possible.

Although all modes of transportation are covered by the requirements of this proposed rule, the final category of training being proposed is driver training for motor vehicle operators. Based on the merits of the CRS report and RSPA's own evaluation, improved hazardous materials training of drivers would likely have a significant beneficial impact on transportation safety. There are far more shipments of hazardous materials and, correspondingly, incidents involving the release of hazardous materials, in the highway mode of transportation than for rail, water and air combined. Improved training of drivers has the potential for making significant gains in accident avoidance and accident mitigation. Another incentive for RSPA's proposal is to continue the rulemaking effort begun by the Federal Highway Administration (FHWA) under Docket MC-120, discussed elsewhere in this preamble.

Drivers would be subject, in most instances, to general awareness/familiarization, function specific and safety training. In addition, it is proposed to require drivers training on the safe operation of the motor vehicle which they expect to operate and the applicable requirements of the Federal Motor Carrier Safety Regulations. At a later date, RSPA may consider more specific training requirements for operators of aircraft, trains, and vessels.

RSPA's proposal addresses broad subject areas in which training is to be received. With the exception of cargo and portable tank operations, detailed content of training would not be specified. RSPA does not have the resources to develop specialized courses of instruction addressing every phase of hazardous materials transportation.

Furthermore, it is believed that an employer is better able to determine the training needs of its employees, particularly with regard to function specific, safety and driver training. For the same reason, no attempt has been made to specify the level and duration of training, which will vary with job duties and responsibilities. For example, training for a person who executes shipping papers might consist of a brief orientation on the general provisions of the HMR and written training on applicable shipping paper requirements in Subpart C of Part 172. It is believed that in most cases, an employee could receive an appropriate amount of training (to include general awareness, function specific and safety training) in a session of minimal duration.

The DOT recognizes that cargo and portable tank vehicle operations, and the qualifications and training of tank vehicle drivers, present special concerns. For example, in the FHWA's final rule on Commercial Drivers Licenses (CDL), statistics are cited for accidents involving tank vehicles, which includes both cargo and portable tanks in the FHWA definition (52 FR 27642). In 1986 there were 818 accidents reported to the Department involving tank vehicles transporting hazardous materials resulting in 136 fatalities, 761 injuries, and over \$17 million in property damage. The most important operating difference between driving a cargo tank motor vehicle or a vehicle containing a portable tank and a standard dry freight truck is liquid product surge. Other factors that may threaten vehicle stability and present a safety risk, include: sloshing liquids in various tank designs; various loading conditions; and the impact of liquids on driving maneuvers such as braking, backing, turning, and combined braking/steering maneuvers.

Because of the unique characteristics of cargo tank motor vehicles and vehicles containing a portable tank, and because of the potential for damage inherent in their cargoes, the RSPA regards special training and licensing requirements for their drivers as essential to the public safety. For example, the FHWA has already ruled (52 FR 27628) that drivers of tank vehicles carrying placardable hazardous materials must have not only a CDL but also two separate endorsements ("tank vehicle" and "hazardous materials"), each of which requires a specialized knowledge test. RSPA believes special emphasis should be placed on these types of vehicles. Therefore, the rule proposed herein sets forth additional

training requirements in § 177.816(b) for safety sensitive class of vehicles.

A has intentionally made the proposed requirements as broad as is practicable to accommodate training programs and materials currently used in both the public and private sectors. This approach provides latitude to both the private and public sectors for the development of training programs or materials.

It is proposed that training be received within 30 days of employment of a person to perform hazardous materials job functions subject to the requirements of the HMR. This requirement, however, would not restrict a new employee from performing their hazardous materials job functions under proper supervision prior to the employee's receipt of training. Persons would also be retrained within thirty days upon change of hazardous materials job functions and at least once every two years thereafter.

RSPA believes a two year cycle is necessary for an employee to remain adequately informed of the HMR because retention of certain kinds of information fades quickly if it is not frequently applied or reinforced through training, and because of periodic changes in the HMR. RSPA encourages comments on the two year cycle and whether it should be longer or shorter.

While responsibility for providing training would remain on the employer, the required training could be provided by company training programs or through the use of outside training firms or consultants. This is consistent with existing requirements in the HMR.

RSPA also proposes a requirement that employers create and maintain a record reflecting completion of required training for each employee. This requirement is believed necessary in order to verify compliance with the training requirements.

Considering the diversity of job functions of persons addressed by this proposal, RSPA does not believe it is practical to propose requirements for testing employees to ensure that they have been successfully trained.

Comments are solicited as to the need, if any, for regulatory requirements for testing, the scope and content of such testing requirements, and who should be responsible for administering them.

Enforcement of the proposed training regulations pertaining to carriers would remain the primary responsibility of the various modal administrations. For example, the FHWA plans to enforce the proposed training requirements for motor carriers.

It conducts safety and compliance reviews of individual motor carriers. If motor carriers are determined to be in

non-compliance with the training requirements, the FHWA will take remedial actions, which could result in penalties and fines.

The expansion of Federal training requirements proposed in this Notice inevitably requires consideration of the extent to which such requirements would preempt related or overlapping state training requirements. In accordance with Executive Order 12612, RSPA intends 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.

However, RSPA views these proposed training requirements, insofar as they apply to drivers engaged in the highway transportation of hazardous materials, as minimum requirements which a state may only exceed if its greater requirements do not directly conflict with the HMR requirements and apply only to individuals domiciled in that state. Thus, more stringent or more detailed state training requirements for drivers not in conflict with the HMR could be "consistent," and therefore, not preempted under section 112(a) of the HMTA (49 App. U.S.C. 1811(a)), so long as they applied only to drivers domiciled in that state. The foregoing principles are reflected in proposed § 172.701.

The following is an example of how this approach to preemption would operate with respect to hazardous materials endorsements to drivers licenses. The Commercial Motor Vehicle Safety Act of 1988 provides for a single commercial driver's license (CDL) for each driver of a commercial motor vehicle (CMV). Section 12009(a)(14) of that Act and an implementing FHWA rule, 49 CFR 383.73 (59 FR 27828, 27851, July 21, 1988), require states to extend reciprocity to CDL's issued by other states. Under the FHWA rule and the rule proposed in this Notice, a state may impose more stringent hazardous materials training requirements upon its own commercial motor vehicle drivers than do Federal regulations—but may not do so with respect to a driver holding another state's CDL with a hazardous materials endorsement thereon.

RSPA's proposed approach to this preemption issue is intended to avoid a chaotic and burdensome situation in which numerous states would apply separate and possibly inconsistent training requirements to drivers engaged in the highway transportation of hazardous materials.

In addition to the comments requested elsewhere in this notice, RSPA is especially interested in receiving

comments that concern estimates, by mode of transportation, of the cost of training with regard to each of the four categories of training proposed—in particular the cost of training not presently provided, estimates of the benefits to be derived from the various categories of training in terms of reduction or mitigation of property damage and personal injury, and comments concerning the adequacy of the proposed training for drivers and the possible need for additional training requirements for operators in other modes of transportation.

IV. Section by Section Summary of Proposals

A. Part 171; General Information, Regulations, Definitions

Section 171.8. The definition of crewmember would be revised to include those persons assigned to perform duties on aircraft during flight time, on a motor vehicle or a vessel during transportation, or in train or engine service.

B. Part 172; Hazardous Materials Table and Hazardous Materials Communications and Training Requirements

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

Section 172.700. A new § 172.700 would be added, identifying the purpose of the training requirements, which are generally to provide information and training in the functions a person performs, safety and accident preventative measures and proper handling of incidents involving hazardous materials. This section also defines "training" as a systematic program that ensures a person has knowledge of hazardous materials and the hazardous materials regulations that govern their transportation. For example, an employee may satisfy this requirement by on the job training, showing evidence of previous training in the functions which he/she performs, formal classroom training or by taking correspondence courses. However, successful completion of one or all of the above may be necessary before an employer is satisfied that the employee is adequately trained in accordance with the proposed training requirement. Much of this hazardous materials knowledge can be obtained through present industry and trade organization training programs as mentioned in the discussion of § 172.704 in this preamble.

Employers with employees who have demonstrated hazardous materials knowledge by obtaining a hazardous materials endorsement to their commercial drivers licenses (CDL), a cargo tank endorsement to the CDL, a USCG license that requires hazardous materials knowledge, or through participation in any other job training or licensing program, may accept such demonstration of knowledge to satisfy the appropriate requirements of this notice such as general awareness/familiarization training or other required training. However, all such training would still be subject to the two year frequency requirements of this notice.

Section 172.701. A new § 172.701 would be added to emphasize that OHMT's training requirements are minimum requirements. The section would also authorize a state to impose more stringent training requirements on drivers so long as those requirements do not conflict with the HMR and apply only to drivers domiciled in that state.

Section 172.702. The proposals contained in this section identify those persons to whom the training requirements apply. Generally, these requirements would apply to all persons involved in the preparation, documentation, packaging, marking, labeling, shipping, handling, and transporting of hazardous materials. Further, those individuals working in proximity to hazardous materials would be required to be trained in certain aspects of the regulations, such as labelling, placarding, and marking provisions of the HMR.

Although employers would be responsible for ensuring that their employees are properly trained, it would be acceptable for an employer to use the services of an employee on loan from another company, a transfer employee, or any other employee that had received the required hazardous materials transportation training from another source provided that training could be verified. Retraining would not be necessary as long as all required training for the job functions performed had occurred during the two year frequency requirement proposed by this notice.

Section 172.704. This section identifies the three degrees of training that would be required. Generally, everyone subject to these training requirements would be required to be provided general awareness and familiarization training. This training would include training in such areas as the various hazard classes and hazard communication requirements and their meaning.

Those persons performing specific tasks subject to the HMR, such as

packaging or shipping paper documentation, would be required to be provided function specific training designed in such a fashion so as to assure that they are able to perform their task in compliance with the requirements of the HMR. Additional safety training would be required, identifying the hazards of the materials, proper protection from exposure, use of emergency response information, and the methods and procedures for accident avoidance.

Although a specific level, duration, and content of the training provided is not specifically identified, such training would be required to be presented so that those involved could properly perform their specific functions and be knowledgeable in the requirements of the HMR. Periodic training would be required. RSPA does not believe that this would cause an undue burden on employers, especially since many employers have established training programs. For instance, rail carriers are required by the Federal Railroad Administration (FRA) to periodically instruct their employees on the meaning and application of the railroad's operating rules. In addition, rail carriers are required to be familiar with operating timetables. Both the timetables and the operating rules contain information on hazardous materials. Present rail carrier training on the rules and timetables would help the rail industry comply with the requirements of the proposed rule.

Professional and trade associations also provide training that could help meet the requirements of this section. The American Trucking Association provides training through its state organizations and through the sale of items such as the publication, *Handling Hazardous Materials*, which describes the hazardous materials regulations in layman's terms, and a slide program that consists of different modules on specific hazardous materials requirements, such as shipping papers or marking or labeling. The National Tank Truck Carriers, Inc., has produced and sells a slide program and accompanying manual for tank truck drivers on flammable liquids, the most commonly transported hazard class carried by its members.

In addition to the various trade organizations, some trucking companies provide hazardous materials training for their own personnel or utilize the resources of various consulting firms to train company employees. Present training performed in this manner could also help meet the requirements of this proposal.

This notice proposes that recurrent training be provided at least once every two years, that persons who change hazardous materials job functions be trained in those new functions within thirty days of their job change, and that new employees be trained within thirty days after being hired to perform a function subject to the HMR. However, the requirements of this section do not preclude the use of an employee who requires training in a hazardous materials job function if that employee is under the supervision of a properly trained and knowledgeable employee.

Further, a record of the training would be required to be maintained by the employer for the duration of the employee's employment and for 90 days thereafter. The record of training would contain the name and signature of the person receiving the training, the date it was presented, a copy of the training material presented or a description of the training given, and the name and signature of the individual presenting the training.

RSPA encourages readers to submit comments regarding the requirement for a training record. RSPA is particularly interested in comments that address the following questions:

1. Is the record of training proposed in this notice the best method to certify completion of required training? If not, what method would be better?

2. Would self certification by an employer be an acceptable method to ensure completion of required training? What documentation should be maintained?

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

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

D. Part 714—Carriage by Rail; Part 175—Carriage by Aircraft and Part 176—Carriage by Vessel

Sections 174.7, 175.20, and 176.13, respectively. These respective sections would be revised to specifically require employers to provide the training as required by the new Subpart H of Part 172. Section 176.13 would also require the record of training required by § 172.704(c) to be kept on board any vessel with crewmembers.

E. Part 177—Carriage by Public Highway

Section 177.800. The last sentence of paragraph (a) would be deleted and a new § 177.800a would be added.

Section 177.800a. This new section would be added to specify that employers provide the training as required in Part 172 and the additional driver (operator) training required by this Part.

Section 177.818. This section would be revised to specifically identify the additional training that would be required to be presented to drivers of motor vehicles. This section would require: Drivers be provided training in the requirements of the Federal Motor Carrier Safety Regulations, 49 CFR Parts 383, 387, and 390 through 399; the 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 proposed § 172.704, the requirements for a separate special training record for the drivers of vehicles that contain flammable cryogenic liquids would not be necessary and would be removed. A discussion regarding the implementation of § 177.818 appears later in this notice.

Section 177.825. In § 177.825, paragraph (d) would be revised to eliminate unnecessary duplication of the proposed training requirements. Paragraph (d)(1) would be changed to refer the reader to the proposed training requirements found in Subpart H of Part 172 and § 177.818. For drivers of highway route controlled quantities of radioactive materials, paragraph (d)(2) would be revised to remove the requirement for employers to place a copy of the record of training in the driver's qualification file as this would be a duplication of the requirements in proposed § 172.704. For these drivers, the requirements of paragraph (d) (2) and (3) to have a copy of the record of training and a route plan in the driver's possession would remain unchanged.

V. Relationship to Other Agencies' Existing or Proposed Rules

1. FHWA

On May 13, 1986, FHWA published a notice of proposed rulemaking in the

Federal Register (51 FR 17572; Docket No. MC-120, Notice No. 86-3) in response to section 208 of the Motor Carrier Safety Act of 1984. The notice proposed revisions to driver qualification requirements in the Federal Motor Carrier Safety Regulations to insure that drivers who operate either commercial motor vehicles transporting certain categories of hazardous materials or cargo tank commercial motor vehicles requiring placards meet additional or more stringent qualification requirements. In the preamble to Docket No. MC-120, FHWA stated the following:

Upon leaving a shipper's facility or a motor carrier's terminal, a driver operating a commercial motor vehicle laden with hazardous materials is, for all intents and purposes, on his/her own. In the event of an accident involving that motor vehicle, a driver having certain knowledge of the hazardous materials being transported can greatly assist emergency response personnel and can mitigate potential catastrophic occurrences. Further, basic knowledge of the hazardous materials requirements can help keep accidents and incidents from occurring. With this in mind, the FHWA proposes to require a driver, who will be operating a commercial motor vehicle used to transport Table 1 hazardous materials or operating a cargo tank commercial motor vehicle which must be placarded, to receive certain basic hazardous material training. We believe that the driver must have a functional knowledge of the Hazardous Materials Regulations addressing: (1) Shipping papers, (2) package marking requirements, (3) package labeling, (4) packaging requirements, (5) commercial motor vehicle placarding, and (6) the loading and storage of H/M. Further, the driver must have a functional knowledge of the requirements contained in Part 397 of the FMCSR pertaining to: (1) Vehicle attendance; (2) vehicle parking; (3) route selection; and (4) smoking by the driver.

Individuals who will be operating cargo tank commercial motor vehicles required to be placarded in accordance with § 177.823 of this title must, in addition to the training described above, be trained in the: (1) Operation of the emergency control features of the cargo tank; (2) operation of the emergency equipment required by § 393.96; and (3) proper loading and unloading of the cargo tank, including vehicle attendance requirements.

The FHWA believes a driver who is knowledgeable on these areas can help insure that shipping papers are properly prepared and that hazardous materials packages carried on the vehicle are in fact listed on the shipping papers. Such a trained driver can also identify improper packaging and labeling during the loading process and insure that the vehicle is properly placarded for the hazardous materials classes being transported. This functional knowledge will provide an additional measure of safety to highway transportation.

Comments to Docket No. MC-120 generally supported the proposed additional training and driver qualification requirements. However, because of similar proposals contained in RSPA's present rulemaking and a rulemaking action of the FHWA discussed below, FHWA has decided that further action under Docket MC-120 is unnecessary and has withdrawn the docket (54 FR 7191, Feb. 17, 1989).

On December 11, 1987, FHWA published a notice of proposed rulemaking in the Federal Register (52 FR 47328; Docket No. MC-87-18) concerning commercial driver testing and licensing standards. A final rule (FR) was issued on July 15, 1988 (53 FR 27628). The FR establishes standards for commercial driver licensing and testing procedures to be used by the States; knowledge, skills and abilities which drivers of different types of commercial motor vehicles must possess; and the information to be contained on the commercial driver's license (CDL) issued by the States. Of interest to the present discussion is that the FHWA rule requires specific endorsements to the CDL for hazardous materials drivers and (cargo) "tank vehicle" drivers. When requirements for the CDL are fully implemented, an applicant for a CDL will have to pass a knowledge test pertaining to safe operations regulations, safe vehicle control, vehicle inspections and certain other areas, and a driving skills test pertaining to basic vehicle control skills and safe driving skills. An applicant for a hazardous materials endorsement will have to pass an additional knowledge test pertaining to the HMR, hazardous materials handling, operation of emergency equipment and emergency response procedures. Also, a driver who applies for renewal of a hazardous materials endorsement will be retested. An applicant for a tank vehicle endorsement will have to pass a knowledge test pertaining to cargo tank safety.

RSPA has attempted to align the training requirements proposed in this NPRM with the testing and knowledge requirements adopted by the FHWA in Docket No. MC-87-18 and believes that this has been accomplished. If a driver has successfully obtained the hazardous materials and tank vehicle endorsements to the CDL, these endorsements may be used to satisfy some, if not all, of the training requirements proposed in this notice, especially the awareness and general knowledge portions. However, it would remain the responsibility of the employer to insure that their drivers are

properly trained. The responsibility to train would also cover other employees subject to training, including drivers that are not required to have CDL endorsements such as drivers of vehicles that do not require placards.

To ascertain what role, if any, CDL endorsements might play in satisfying proposed training requirements of this notice, RSPA solicits comments on the following questions:

1. To what extent should the CDL hazardous materials and tank vehicle endorsements be allowed to satisfy the training proposals in this notice?

2. Should drivers who have received these endorsements be exempted from some or all of the training requirements proposed in this NPRM?

3. This notice proposes that training be performed every two years. Although the FHWAA does not specify a time limit for the CDL, most states allow a four year time span before the CDL expires and retesting of HM drivers is required. Should RSPA's proposed training requirements be closely aligned with current CDL licensing practice for drivers and be required every four years, or should RSPA's required training be on a two year or more frequent basis?

B. FRA

On June 22, 1986, the 100th Congress enacted Pub. L. 100-342 to amend the Federal Railroad Safety Act of 1970 (45 U.S.C. 431). Commonly known as the Rail Safety Improvement Act of 1986, Pub. L. 100-342 has provided the FRA with numerous statutory amendments, some of which concern training requirements.

For instance, the 1986 Act amended section 202 to require the development of rules, regulations, orders, and standards as necessary to establish a program requiring the licensing or certification of any operator of a locomotive. The Act further specifies that any program developed must provide minimum training requirements and shall also require a comprehensive knowledge of applicable railroad operating practices and operating rules. Rules concerning the 1986 Act are presently under development by the FRA.

In addition to the requirements of the Rail Safety Improvement Act of 1986, the 49 CFR Part 217 currently requires each railroad to file a copy of their operating rules, timetables, and timetable instructions with the FRA. These rules and timetables contain information on railroad operating practices, including the rail transportation of hazardous materials. Each railroad is required to instruct its

employees in the operating rules and must periodically conduct operational tests and inspections to determine the extent of compliance with its code of operating rules, timetables, and any timetable special instructions. In this manner, carriers can determine if their employees understand how to apply the hazardous materials information contained within the operating rules.

RSPA believes the training requirements of this NPRM will not conflict with the rail industry's current training on operating rules and timetables. In addition, the training standards contained in this proposed rule are written in a manner that should supplement any future rulemaking by the FRA regarding the requirements of the Rail Safety Improvement Act of 1986. However, to ensure that the proposed training requirements of this NPRM are compatible with present rail training programs, RSPA solicits comments concerning the following question: Would RSPA's proposed training requirements complement, or conflict with, present rail industry training efforts?

C. USCG

The International Maritime Dangerous Goods (IMDG) Code is recognized as the worldwide standard for the carriage of packaged hazardous materials by vessel. It is incorporated by reference in the HMR as an optional alternative for carriage of hazardous materials on vessels. Nearly all of the international hazardous materials trade by vessel now moves in conformance with the IMDG Code. Consequently, crews of vessels and personnel at port facilities will encounter IMDG Code classed, marked, labeled, placarded, packaged, stowed, and segregated shipments as the norm rather than the exception.

The U.S. Coast Guard requires persons seeking licenses which authorize service as master or mate of a vessel to successfully complete examinations which include material on hazardous materials cargo handling and stowage, loading and discharging operations, and the HMR. Section 176.57 of the HMR requires all hazardous materials handling and stowage aboard a vessel to be under the direction and observation of a qualified person specifically assigned to this duty. Except for limited domestic voyages, where the qualified person may be an employee of the carrier, this function must be carried out by a licensed officer. In addition, Coast Guard regulations require the master of a vessel to conduct weekly emergency drills in which all assigned crewmembers are exercised in their assigned response duties. RSPA

understands that these drills often include exercises that may satisfy some of the proposed training requirements. For example, shipboard firefighting drills could satisfy the emergency response requirements of § 172.704(a)(3)(ii) or (iv).

In view of the widespread use of the IMDG Code, the supervisory roles of the master and other licensed officers, and the existing emergency drills required aboard vessels, RSPA and the Coast Guard are especially interested in comments concerning the vessel transportation of hazardous materials in the following areas:

1. Should training in the maritime mode be based on the IMDG rather than the HMR? Should training on the IMDG Code be accepted as an alternative to training on the HMR, or should training be required in both the IMDG Code and the HMR?

2. Licenses authorizing service as master or mate are renewed every five years, provided the holder has recent service under the license, without further examination on hazardous materials subjects. Is the proposed two year retraining requirement appropriate for these personnel?

3. Would currently required emergency drills, as noted in the vessels log, be an adequate substitute for the proposed training and record keeping?

D. OSHA

On November 25, 1983, OSHA published a Hazard Communication Standard (48 FR 53280) which required that manufacturers have hazard communication programs for their employees exposed to hazardous chemicals. This standard was amended on August 24, 1987, with publication of a final rule entitled "Hazard Communication" (52 FR 31652). This amendment extended applicability of the existing standard from employees in manufacturing industry (SIC Codes 20 to 39) to also include employees in the non-manufacturing industry sector, such as those covered by 40-series SIC Codes for transportation. Under the amended standard, virtually all employers are required to inform their employees about the hazardous chemicals which are present in the work place. Generally, employers are required to establish for their employees 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 the hazardous chemicals to which they may be exposed by using

engineering controls and following safe operating procedures.

In the amended standard, OSHA recognized that there were various types of work situations in the non-manufacturing sector where it was not feasible to comply with these requirements; therefore, OSHA exempted certain work places and facilities from its requirement for a written hazard communication program. Specifically, paragraph (b)(4) of § 1910.1200 of the OSHA standard exempts "work operations where employees only handle chemicals in sealed containers which are not opened under normal conditions of use (such as are found in marine cargo handling, warehousing, or retail sales)". This exception applies to many transportation facilities. However, employers must ensure that their employees are provided with information and training to the extent necessary to protect them in the event of a spill or leak of a hazardous chemical from a sealed container.

RSPA issued a final rule on June 27, 1989, addressing emergency response communication standards (Docket HM-126C; 54 FR 27138). The rule requires that facilities and vehicles involved in hazardous materials transportation maintain certain emergency response information regarding the hazardous materials which are present. It is possible to comply with this information requirement by having a copy of DOT's Emergency Response Guidebook (ERG), material safety data sheets, or similar emergency response document. The RSPA training requirements now being proposed which pertain to hazard communication and the handling of hazardous materials incidents have a direct correlation to, and complement, the information requirements adopted in Docket HM-126C. Conformance with the information and training requirements proposed in this notice and those adopted in Docket HM-126C should fulfill the intent of OSHA's final rule pertaining to hazard communication.

On December 19, 1986 (51 FR 45554), OSHA published an interim final rule on hazardous waste operations and emergency response that was required by Congress in the Superfund Amendments and Reauthorization Act of 1986 (SARA; Pub. L. 99-499). On August 10, 1987, OSHA published an NPRM in the Federal Register (52 FR 29820) that proposed to amend the OSHA standards for hazardous waste and emergency response in 29 CFR 1910.120. On March 6, 1989 a final rule was published in the Federal Register (54 FR 9294). When the final rule becomes effective on March 6, 1990 the

interim final rule of December 19, 1986 will be revoked. The interim OSHA rule will remain in effect until then.

The interim OSHA rule covers workers involved in operations covered by the Comprehensive Environmental Response, Compensation and Liability Act of 1980 as amended (CERCLA; 42 U.S.C. 9601 *et seq.*), in certain hazardous waste operations conducted under the Resource Conservation and Recovery Act of 1970 as amended (RCRA; 42 U.S.C. 8001 *et seq.*), and in any emergency response to incidents to incidents involving hazardous substances. The standard provides for employee protection during initial site characterization and analysis, monitoring activities, materials handling activities, training, and emergency response.

Of interest to the present discussion are certain provisions that impact on transportation workers, particularly with regard to training. Section 1910.120(f) (1) of the March 6, 1989 OSHA final rule addresses emergency action plans which comply with 29 CFR 1910.38(a). Under § 1910.38(a), emergency action plans are used to establish evacuation procedures to be used in emergency circumstances. Employers must review with employees those parts of the plan which the employee must know to protect the employee in the event of an emergency. In RSPA's proposal, § 172.704(a)(3)(iv) would require that employees receive training concerning "immediate procedures to be followed in the event of an unintentional release of a hazardous material, an accident, or other emergency, including any emergency response procedures for which the person is responsible, operation of emergency equipment, and personal protection procedures to be followed if exposed to the release of a hazardous material". This RSPA proposed provision could be used to satisfy, at least in part, the OSHA provision with respect to transportation workers.

In 29 CFR 1910.120(e)(7), OSHA requires training for employees who are engaged in responding to hazardous emergency situations at hazardous waste clean up sites. OSHA requires that these employees are trained in how to respond to such emergencies. Section 1910.120(p)(8)(iii) of OSHA's March 6, 1989 final rule requires completion of training for emergency response employees before they are called upon to perform in real emergencies. Generally, these employees are required to receive training in the elements of the emergency response plan, standard

operating procedures the employer has established for the job, the personal protective equipment to be worn and procedures for handling emergency incidents. The training of emergency response personnel is beyond the scope of RSPA's proposal. RSPA proposes to include a note at the end of paragraph (a) of § 172.704 to advise persons of OSHA requirements for emergency responders. However, it should be noted that the training required under this portion of the OSHA proposal could be used to satisfy RSPA requirements in proposed § 172.704. Further, there are certain categories of workers who are exempted from the OSHA requirement for complete emergency response training for whom the training required by RSPA may be used to satisfy other OSHA training requirements. For example, employees that do not have responsibility to control the emergency, but may first respond to an incident, are exempted from various aspects of the training if they have sufficient awareness training to recognize that an emergency response situation exists and are instructed to summon fully-trained emergency responders and not attempt to control activities for which they are not trained (see 29 CFR 1910.120(p)(8)(iii)(A)). A second exception provided in 29 CFR 1910.120(p)(8)(iii)(A) wherein certain employees need only be trained to have sufficient awareness training to recognize the emergency and call a designated fully-trained emergency response team. For both of these aforementioned categories of workers, RSPA's proposed training requirements could be used to satisfy OSHA requirements.

In addition to the OSHA requirements of 29 CFR Part 1910, there are specific OSHA training requirements for marine terminal personnel found in 29 CFR Parts 1917 and 1918. In particular, 29 CFR Part 1917 are regulations for marine terminals and apply to "employment within a marine terminal, including the loading, unloading, movement or other handling of cargo, ship's stores or gear within the terminal or into or out of any land carrier, holding or consolidation area, or any other activity associated with the overall operation and functions of the terminal, such as the use and routine maintenance of facilities and equipment." Section 1917.28 outlines standards for hazard communications and includes requirements for container labeling and other forms or warning, material safety data sheets and employee training. Identical requirements to Part 1917 are also

contained in 29 CFR 1918.90 and apply to longshoremen and others (not including vessel crew members) involved in cargo handling operations aboard the vessel while it is in port.

Training performed to satisfy either OSHA or RSPA requirements could be used to satisfy, at least in part, the other agencies' hazardous materials training requirements. Although there is a certain amount of overlap in the RSPA proposal and OSHA final rule of March 6, 1989 due to differing statutory considerations, RSPA believes that the overall provisions are complementary and will not result in duplicative requirements.

To help determine the actual training burden that OSHA's rules and RSPA's proposed training requirements may cause, RSPA encourages readers of this NPRM to respond to the following questions:

1. Some employees may be covered by both OSHA and DOT training requirements. Are RSPA's proposal compatible with OSHA's? Could training required by OSHA help satisfy RSPA's proposed training? How much of an additional training burden will RSPA's proposals cause for those employees that are covered by both OSHA's and RSPA's training requirements?

2. In some cases organizations may have distinct groups of employees who perform different responsibilities. Some of these workers may be covered by only OSHA training requirements, while other employees of the same organization are subject to RSPA training requirements. How much of an additional training burden on employers will RSPA's proposals cause in this case?

VI. Administrative Notices

A. Executive Order 12291

The RSPA has determined that this proposed rule (1) is not "major" under Executive Order 12291; (2) is "significant" under DOT's regulatory policies and procedures (44 FR 11034); (3) will not affect not-for-profit enterprises or small governmental jurisdictions; and (4) does not require an environmental impact statement under the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*). A preliminary regulatory evaluation is available for review in the Docket.

B. Executive Order 12812

This proposed action has been analyzed in accordance with the principles and criteria in Executive Order 12812 and, based on the information available to it at this time, RSPA does not believe that the

proposed rule would have sufficient Federalism implications to warrant the preparation of a Federalism Assessment. RSPA is proposing minimum standards and is not requiring states to adopt them. Furthermore, states would be able to impose more stringent requirements to highway transportation—so long as they did not conflict with the Federal regulations or interfere with the rights of other states (e.g., each state's right to impose its own training requirements on employees domiciled in the state, including its own commercial driver's license (CDL) requirements within FHWA prescribed parameters). Thus, under proposed § 172.101, a state would be permitted to impose its more stringent highway requirements only upon "persons" domiciled in that state.

C. Impact on Small Entities

RSPA is aware that amendments of such broad applicability may produce an economic impact on industry segments, a substantial number of which may be small enterprises. These enterprises may include hazardous materials shippers, carriers, warehousemen, freight forwarders, manufacturers of hazardous materials containers, and other transportation organizations that have small numbers of employees and limited gross revenues. Based on limited information concerning size and nature of entities likely affected by this notice, I certify this regulation will not have a significant economic impact on a substantial number of small entities. A regulatory evaluation is available for review in the Docket.

D. Paperwork Reduction Act

The collection of information in this notice of proposed rulemaking is being submitted to the Office of Management and Budget for review in accordance with the Paperwork Reduction Act of 1980 (44 U.S.C. 3504(h)). Comments on the collection of information should be sent to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, attention: Desk Officer for the Department of Transportation. All comments must reference the title for this notice, "Training for Hazardous Materials Transportation".

The collection of information requirements of this notice are found in § 172.704(c), Recordkeeping. The record would be required by the Department of Transportation to assure compliance with the training requirements proposed in Subpart H of this notice. The likely respondents and recordkeepers are hazardous materials transportation

concerns of all types including, but not limited to, shippers, trucking companies, railroads, operators of water vessels, air freight companies, warehousemen, freight forwarders, etc.

List of Subjects

49 CFR Part 171

Hazardous materials transportation, Matter incorporated by reference.

49 CFR Part 172

Hazardous materials transportation, Training.

49 CFR Part 173

Hazardous materials transportation, General requirements.

49 CFR Part 174

Hazardous materials transportation, Carriage by rail.

49 CFR Part 175

Hazardous materials transportation, Carriage by aircraft.

49 CFR Part 176

Hazardous materials transportation, Carriage by vessel.

49 CFR Part 177

Hazardous materials transportation, Carriage by highway motor vehicle.

In consideration of the foregoing, 49 CFR Parts 171 through 177 would be amended to read as follows:

PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS

1. The authority citation for Part 171 would continue to read as follows:

Authority: 49 U.S.C. 1802, 1803, 1804, 1808; 49 CFR Part 1, unless otherwise noted.

2. In § 171.8, the definition for "crewmember" would be revised to read as follows:

§ 171.8 Definitions and abbreviations.

"Crewmember" means a person assigned to perform duty in an aircraft during flight time, on a motor vehicle or a vessel during transportation, or in train or engine service.

PART 172—HAZARDOUS MATERIALS TABLES AND HAZARDOUS MATERIALS COMMUNICATIONS AND TRAINING REQUIREMENTS

3. The authority citation for Part 172 would continue to read as follows:

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

4. The title to Part 172 would be revised to read as set forth above. A new Subchapter H would be added to Part 172 to read as follows:

Subpart H—Training

Sec.

172.700 Purpose and scope.

172.701 Preemptive effect.

172.702 Applicability and responsibility for training.

172.704 Training requirements.

Subpart H—Training

§ 172.700 Purpose and scope.

(a) This subpart prescribes training requirements concerning—

- (1) The risks of hazardous materials;
- (2) The requirements of this subchapter which apply to functions that persons perform;
- (3) Safety and accident avoidance; and
- (4) Handling hazardous materials incidents.

(b) "Training" as used in this subpart means a systematic program that ensures a person has knowledge of hazardous materials and the hazardous materials regulations. Such knowledge may be obtained through the use of traditional industry training, instruction, testing or other means of training that would normally be tailored to an employee's specific job functions.

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

§ 172.701 Preemptive effect.

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) It is the responsibility of each employer of a person subject to the requirements of this subpart to ensure that each employee is properly trained in accordance with the minimum requirements prescribed in this subpart.
- (b) The requirements of this subpart apply to each person who—
 - (1) Classifies hazardous materials;
 - (2) Packages hazardous materials;
 - (3) Marks and labels packages containing hazardous materials;

(4) Prepares shipping papers for hazardous materials;

(5) Offers or accepts hazardous materials for transportation;

(6) Handles hazardous materials (e.g., loads, unloads, secures, or stores in transit);

(7) Marks or placards transport vehicles, bulk packagings or freight containers;

(8) Operates or crews transport vehicles, aircraft, or vessels;

(9) Is employed in a transportation facility and performs functions in proximity to hazardous materials which are in transportation; or

(10) Otherwise performs functions subject to the provisions of this subchapter, such as inspecting or testing specification packagings or representing, marking, certifying, selling or offering packagings as meeting the requirements of this subchapter or an exemption issued under Subchapter B of this chapter.

(c) For purposes of this subchapter, a person who performs any function in proximity to a hazardous material during the course of its transportation (e.g., in warehouses and terminals) is considered to be performing a function related to the transportation of hazardous materials, even though that person may not be involved directly in handling the hazardous material.

(d) A person (including a self-employed person) who performs any function subject to the requirements of this subchapter may not perform that function unless that person has been trained in accordance with the requirements prescribed in this subpart.

§ 172.704 Training requirements.

(a) Persons subject to the requirements of this subpart shall be provided the following training:

(1) *General awareness/familiarization training.* Each person shall be provided training designed to provide familiarity with the general provisions of this subchapter, such as the hazard communication requirements of Subparts C, D, E, and F of this part and the various classes of hazardous materials.

(2) *Function specific training.* Each person shall be provided detailed training concerning requirements of this subchapter which are specifically applicable to the functions the person performs.

(3) *Safety training.* Each person who performs any function in proximity to a hazardous material, and each first line supervisor of that person, shall be provided training concerning safety information applicable to the hazardous

material and their job function, including—

(i) Emergency response information required by this part, and how to use it;

(ii) General dangers presented by the various hazard classes of hazardous materials and how persons can protect themselves from exposure to those hazards, including the use of personal protective clothing and equipment;

(iii) Methods and procedures for accident avoidance, such as proper use of package handling equipment; and

(iv) The immediate procedures to be followed in the event of an unintentional release of a hazardous material, including any emergency response procedures for which the person is responsible and personal protection procedures to be followed if exposed to a hazardous material. (Note: In addition to any applicable requirements of this subchapter, training requirements are prescribed in 29 CFR 1910.120 for employees for whom there exists the reasonable possibility of responding to emergencies.)

(b) *Initial and recurrent training.*

Training shall be received within 30 days, except that persons employed prior to [Insert effective date of rule] shall receive training prior to [Insert date 30 days from effective date of rule]. Employees requiring training may be used in their hazardous materials job functions while they are being trained if they are under the supervision of a properly trained and knowledgeable employee. A person shall be retrained:

- (1) upon change to a job function subject to this subpart, within 30 days; and
- (2) at least once every two years.

(c) *Recordkeeping.* A record of the training provided as required by this subpart and § 177.816 of this subchapter, shall be created and retained by the employer for as long as the person is employed and for 90 days thereafter. The record shall include—

- (1) The person's name and signature;
- (2) The date the person was provided the training;

(3) A copy of the training material, a reference indicating the location of a readily available copy thereof, or a description of the training given; and

(4) The name and signature of the person providing the training.

PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGING!

6. The authority citation for Part 173 would continue to read as follows:

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

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

§ 173.1 Purpose and scope.

(b) A shipment that is not prepared for shipment in accordance with this subchapter may not be offered for transportation by air, highway, rail, or water. It is the duty of each person who offers hazardous materials for transportation to instruct each of their officers, agents and employees having any responsibility for preparing hazardous materials for shipment in the applicable regulations as specified in Part 172, Subpart H of this subchapter.

PART 174—CARRIAGE BY RAIL

8. The authority citation for Part 174 would continue to read as follows:

Authority: 49 U.S.C. 1803, 1804, 1805, 1806; 49 CFR Part 1, unless otherwise noted.

9. Section 174.7 would be revised to read as follows:

§ 174.7 Responsibility for compliance and training.

(a) Unless this subchapter specifically provides that another person must 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 instruct its employees in relation thereto.

(b) Each employer of a person subject to the requirements of this subpart shall provide that person with the training required by Subpart H of Part 172 of this subchapter.

(c) A carrier may not transport a hazardous material by rail unless each train crewmember receives the training required by Subpart H of Part 172 of this subchapter.

PART 175—CARRIAGE BY AIRCRAFT

10. The authority citation for Part 175 would continue to read as follows:

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

11. Section 175.20 would be revised to read as follows:

§ 175.20 Compliance and training.

(a) Unless this subchapter specifically provides that another person must perform a particular duty, each operator shall comply with all applicable requirements in Parts 107, 171, 172, 173, and 175 of this subchapter and shall thoroughly instruct employees in

relation thereto. (See also 14 CFR 121.135, 121.401, 121.433a, 135.323, 135.327 and 135.333.)

(b) Each employer of a person subject to the requirements of this subpart shall provide that person with the training required by Subpart H of Part 172 of this subchapter.

(c) An aircraft operator may not transport a hazardous material by aircraft unless each crewmember receives the training required by Subpart H of Part 172 of this subchapter.

PART 176—CARRIAGE BY VESSEL

12. The authority citation for Part 176 would continue to read as follows:

Authority: 49 U.S.C. 1803, 1804, 1805, 1806(b), 1808; 49 CFR Part 1, unless otherwise noted.

13. Section 176.13 would be revised to read as follows:

§ 176.13 Responsibility for compliance and training.

(a) Unless this subchapter specifically provides that another person must 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 instruct employees in relation thereto.

(b) Each employer of a person subject to the requirements of this part shall provide that person with the training required by Subpart H of Part 172 of this subchapter.

(c) A carrier may not transport a hazardous material by vessel unless each crewmember receives the training required by Subpart H of Part 172 of this subchapter.

(d) A record of training required by § 172.704(c) must be kept on board any vessel with crewmembers subject to the training requirements of this subchapter.

PART 177—CARRIAGE BY PUBLIC HIGHWAY

14. The authority citation for Part 177 would continue to read as follows:

Authority: 49 U.S.C. 1803, 1804, 1805; 49 CFR Part 1, unless otherwise noted.

§ 177.800 [Amended]

15. In § 177.800, the last sentence of paragraph (a) would be removed.

16. Section 177.800a would be added, to read as follows:

§ 177.800a Responsibility for compliance and training.

(a) Unless this subchapter specifically provides that another person must perform a particular duty, each carrier, including a connecting carrier, shall perform the duties specified and comply

with each applicable requirement of this part and shall instruct employees in relation thereto.

(b) Each employer of a person subject to the requirements of this subpart shall provide that person with the training required by Subpart H of Part 172 of this subchapter.

(c) A carrier may not transport a hazardous material by motor vehicle unless each driver and crewmember receives the training required by this part and Subpart H of Part 172 of this subchapter.

17. Section 177.816 would be revised to read as follows:

§ 177.816 Driver training.

(a) In addition to the training prescribed in Subpart H of Part 172 of this subchapter, each driver shall receive training concerning the applicable requirements of 49 CFR Parts 383, 387, 390 through 399 and the procedures necessary for the safe operation of the motor vehicle which the driver operates or intends to operate. 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 and handling, and vehicle characteristics such as those related to vehicle instability, effects of braking and curves on stability, effects of speed on vehicle control, dangers associated with maneuvering through curves such as on and off ramps, and high center of gravity;
- (4) Procedures for navigating tunnels, bridges, and railroad crossings; and
- (5) Requirements pertaining to attendance of vehicles, parking, smoking, routing and incident reporting.

- (6) Loading and unloading of materials, including—
 - (i) Mixed load cargo compatibility and segregation;
 - (ii) Package handling methods;
 - (iii) Load securement.

(b) Specialized requirements for cargo tanks and portable tanks. No person may operate a cargo tank, or a vehicle carrying a portable tank with a capacity of 1000 gallons or more, unless that person receives training on appropriate practices and procedures and the applicable requirements of Subchapter C and has the appropriate state issued license as required by Part 383. In addition to the requirements of paragraph (a) of this section, training shall include the following:

(1) Operation of emergency control features of the cargo tank or portable tank;

(2) Special vehicle handling characteristics to include: high center of gravity, fluid load subject to surge, effects of possible product 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;

(5) Retest and inspection requirements for cargo tanks, and:

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

must conform to the requirements of § 172.704 of this subchapter with regard to the frequency of training and recordkeeping.

18. In § 177.825, paragraph (d) would be revised to read as follows:

§ 177.825 Routing and training requirements for radioactive materials.

(d) No person may transport a package of highway route controlled quantity radioactive materials as defined in § 173.403(1) of this subchapter, on a public highway unless:

(1) The driver has received training as required by Subpart H of Part 172 and § 177.818.

(2) The driver has in his immediate possession a copy of the record of training required by § 172.704.

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

Issued in Washington, DC on July 20, 1989 under authority delegated in 49 CFR Part 106, Appendix A.

Alan L. Roberts,

Director, Office of Hazardous Materials Transportation.

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