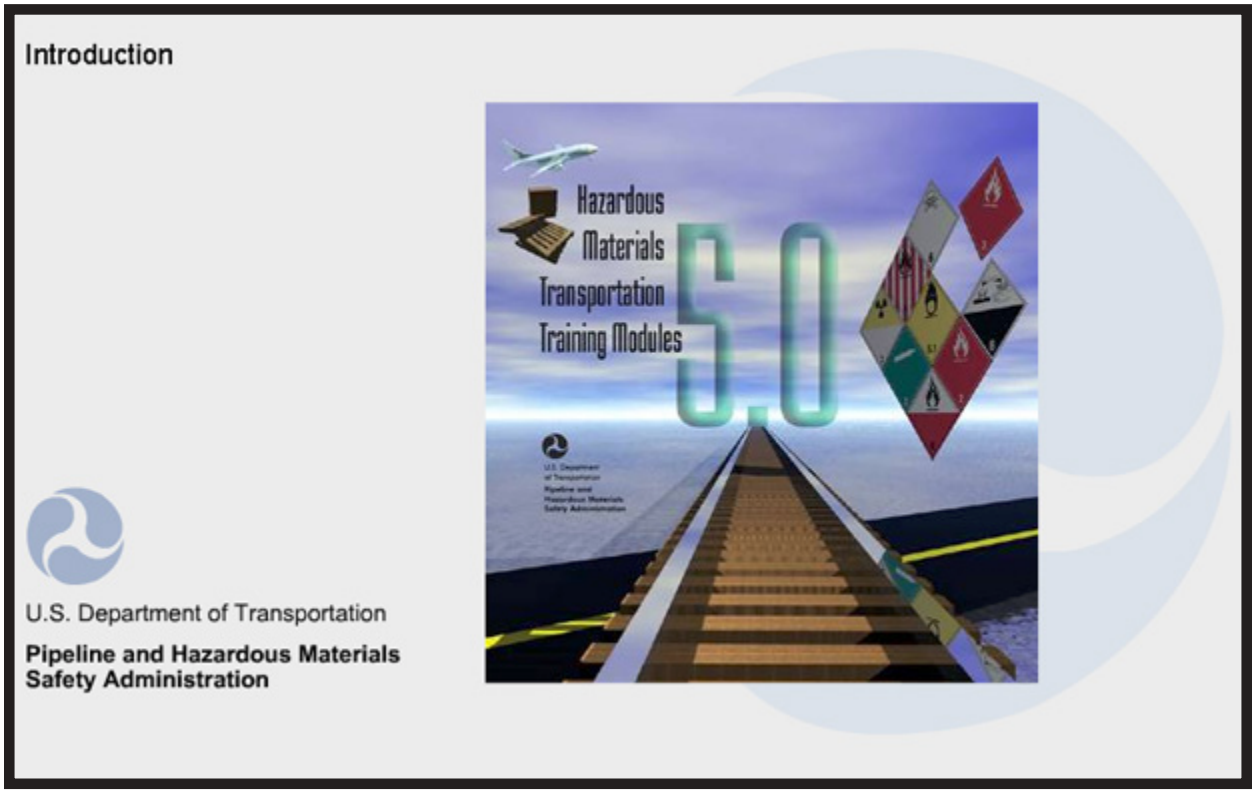
Hazardous Materials Transportation Training Modules

VERSION 5.0

STUDENT



INTRODUCTION MODULE

Script

Visual

Narrative

1

Welcome to the Hazardous Materials Transportation Training Modules. The Pipeline and Hazardous Materials Safety Administration of the United States Department of Transportation – PHMSA for short – has developed this program to help train employees who perform functions covered under the Hazardous Materials Regulations, or the HMR. This module will provide an overview of the entire set of Hazardous Materials Transportation Training Modules.

2

Upon completion of the Introduction module, you should be able to:

- Define the term hazardous materials;
- Navigate through the Hazardous Materials Regulations, to locate given sections of the HMR;
- Summarize who must comply with the Hazardous Materials Regulations, which packages and containers the HMR apply to, what training is required, and what the possible penalties are for violating the HMR.

3

More than four billion tons of hazardous materials are transported annually in the United States by air, highway, rail, and vessel. More than 800,000 hazardous materials shipments occur every day – 365 days a year. Commerce involving hazardous materials contributes more than $446 billion to the US economy annually. It is an important part of everyone's daily life. Persons involved in the packaging, marking, labeling, and transporting of hazardous materials must be familiar with the proper handling and safeguarding of hazardous materials as prescribed in the Hazardous Materials Regulations, or HMR. This course has been designed to help familiarize you with some of the provisions of the HMR.

4

Hazardous materials are an integral part of your daily life, from the products used in your homes to keep them clean and welcoming; to the products used on your yards, in your pools, or stored in your garages; to the products used to raise food in your gardens and the crops raised on the farms that feed the world; to maintain the operating condition of your cars and other motor vehicles, to the products used in industry to keep Americans working, and to keep America's economy strong, hazardous materials play an important role in your every day life. It's hard to imagine life today without these hazardous materials being present. Yet, these materials are potentially dangerous if improperly handled and transported. This set of training modules will focus on the proper handling, packaging, marking, labeling, placarding, and transport of these hazardous materials.

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The Secretary of Transportation defines hazardous materials as those materials and substances that are capable of posing an unreasonable risk to health, safety, and property when transported in commerce. In simple terms, this means that a hazardous material is any material that, because of its chemical properties, may cause injury, loss of life, or property. Hazmats can even compromise the environment, posing a threat to any or all of these three areas of concern.

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More than four billion tons of hazardous materials are shipped each year in the United States. While roads and waterways are the mode of transport for approx. 95% of those shipments, they only account for a little more than 84% of the hazmat incidents. When these incidents occur however, hazardous materials are released. These releases can damage property and the environment – or worse, cause injuries and casualties.

7

Title 49, Code of Federal Regulations, Parts 100 through 185, govern the transportation of hazardous materials. The Hazardous Materials Regulations or HMR are found in Parts 171 through 180 of Title 49, CFR, and in Part 107, which deals with registration of persons who offer or transport hazardous materials (among other topics). Persons involved in the transportation of hazardous materials must be familiar with, and have current knowledge of the HMR. The U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, has the responsibility for developing, issuing, and enforcing the Hazardous Materials Regulations, with the exception of highway routing. The Federal Motor Carrier Safety Administration, the Federal Aviation Administration, the United States Coast Guard, and the Federal Railroad Administration provide enforcement within their respective modes of transportation.

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The Hazardous Materials Regulations set forth standards for classification, packaging, hazard communication, emergency response information, training of hazmat employees, transportation, incident reporting, and security.

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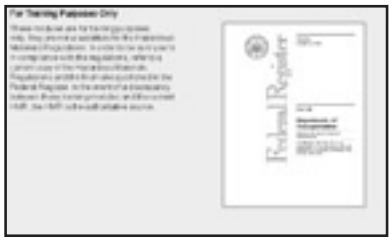

In this series of training modules, the Hazardous Materials Regulations are referred to as the “HMR” or “the regulations.” These modules are for training purposes only; they are not a substitute for the Hazardous Materials Regulations. Although the modules are updated periodically, they may not reflect the most recent regulatory changes. To be sure that you are in compliance with the latest regulations; refer to a current copy of the Hazardous Materials Regulations and the latest rules published in the Federal Register.

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For instance, the 2005 transportation law replaces DOT exemptions with DOT special permits, in many cases. But since the details of implementing this change were in process as this CD was developed, the frequent mentioning of exemptions in these modules have not been expanded to note the new terminology. For the purposes of these training modules, the material covered applies to both exemptions and special permits, where exemptions are mentioned. For the most current information, however, you must consult a current HMR, and/or applicable final rules published in the Federal Register.

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The shipper or their agent is responsible for having their hazardous material cargo in compliance with all the regulations at the time the shipment is offered for transportation. The carrier's responsibility is to determine that the shipper, in fact, has complied with the regulations before the carrier transports the cargo. A shipper may not offer, and a carrier may not accept, hazardous materials for transportation unless it is prepared in accordance with the HMR. A person offering or accepting a hazardous material for transportation in commerce or in furtherance of a business enterprise must comply with the HMR.

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Packagings and containers used for shipping hazardous materials must meet the requirements of the HMR. It is a violation of the HMR to represent packages or containers as meeting U.S. DOT requirements when they do not.

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The Hazardous Materials Regulations require hazmat employers to certify the training of those employees who perform functions covered in the HMR. See 49 CFR §171.1; §172.700; and §172.704 for details. Training must include general awareness and familiarization, function-specific, safety, security awareness, and in-depth security, if the employer is required to develop a security plan. This program may be used to meet the requirements for general awareness/familiarization training, or as a basis for developing function-specific training. All employees who handle or ship hazardous material must be instructed in these requirements and be certified by their employer to perform those duties, except during an initial 90-day period, during which the employee must be under the direct supervision of trained personnel. Refresher – or "recurrent" - training is required every three years. The U.S. Department of Transportation does not certify hazmat employees, or endorse any private sector training program or certification. Rather, the hazmat employer must choose what training constitutes appropriate training for its employees under the HMR, and certify that its employees are appropriately trained. So, there is no certificate provided on this CD, although test results can be printed out and retained as a record, verifying that you have completed a given module.

In addition to these modules, you can get information about Hazardous Materials Transportation Security Training at http://hazmat.dot.gov.

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The U.S. Department of Transportation and other federal and state agencies strictly regulate the transport of hazardous material. Failure to comply with these laws risks the lives and safety of everyone who drives, rides, flies or sails, and those involved with the transport of hazardous materials. Violations of the Hazardous Materials Regulations may result in civil penalties ranging from $250 to $100,000 per violation, and criminal penalties of $250,000 to $500,000 in fines and up to ten years in prison. The table in Appendix A to Subpart D of Part 107 in the HMR displays a list of penalties by type of violation. Hazmat training is the law.

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The Department of Transportation's Hazardous Materials Transportation Training Modules consist of nine training modules plus the introduction module. Each module focuses on a particular aspect of hazardous materials transportation.

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The toolbar resources button is your link to a list of references you should find helpful as you learn more about the proper handling, shipping, and transportation of hazardous materials. Among the resources contained there, are Parts 171 through 180 of the 49 CFR, which includes the Hazardous Materials Table; the DOT publication titled, *How to Use the Hazardous Materials Regulations;* and other references deemed applicable for this training. If you are not familiar with the HMR, the *How to Use the Hazardous Materials Regulations* provides an overview of how the HMR are organized and used. If using the regulations seems difficult, you may want to review and print this document before proceeding further. You can do this by selecting the *How to Use the Hazardous Materials Regulations* link. Once the document is open, select the Printer icon and indicate a page range, then click OK. Close this document by clicking the X or Close button located in the upper right corner of the window. Finally, close the Resources window by clicking the X or Close button located again in the upper right corner of the window.

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The Express Lane serves two functions. First, it acts as an expedited navigation tool. Normal navigation is accomplished by clicking the Next button once to advance forward one screen, or clicking the Back button once to move back one screen. Selecting one of the links on the Express Lane will allow the user to jump forward or backward multiple screens. The Express Lane also indicates the completion status for a given grouping of instructional content. Yellow text and underlining indicates your current location. Bold text and underlining indicates that all instructional content included within a grouping has been visited and that you have scored 100% on each Knowledge Check exercise contained within. If the Express Lane link is not shown in bold text, you have failed to satisfactorily complete at least one Knowledge Check. Finally, the link to the end-of-module test is not enabled until you complete all of the training content and have achieved 100% correct on each of the Knowledge Checks.

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The CFR Reference icon is located in the lower right corner of most instruction screens and resembles the front cover of 49 CFR, Parts 100 to 185. Listed next to this icon are one or more links to references that directly support the instructional material being presented or tested. Clicking the CFR reference link will take you to a document opened with Adobe Reader. These references may be read on-screen or printed. Click the “X” or “close” button to close the window and return to the screen that you started from.

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Each module contains several review questions called “Knowledge Checks.” These questions will appear as multiple-choice, concentration matching, multiple-choice with graphics, fill-in-the-blanks, and drag and drop exercises. The instructions for each Knowledge Check are printed in blue text at the top of each screen. You will have two chances to correctly answer each question. The two traffic cones act as indicators for whether you have had any strikes or incorrect responses yet on that Knowledge Check. The full HMR, including the HM Table, is always available under the Resources button. A text feedback window pops up each time you record a response, indicating whether your response is correct or incorrect. On the first incorrect response, you are encouraged to try again. You must close the feedback window before you are allowed a second chance at answering the question. On the 2nd incorrect response, you will be provided the correct answer. Again, you must close the feedback window before you are allowed to continue. It is important to remember that you only get credit for having successfully completed a block of instruction when you have visited each screen and correctly answered each Knowledge Check, so you must click on the correct answer to each Knowledge Check in order to finish the section.

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You'll notice a character in the corner of the Knowledge Check screens: Meet Professor Fed. Professor Fed will appear on each Knowledge Check throughout this series of hazardous materials training modules, acting as your mentor. He'll let you know whether you answered the question correctly or incorrectly, and provides feedback and encouragement. Get a few right in a row, and he can become especially – well – animated.

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When you have completed the end-of-module test your overall percentage correct for the test and an individual percentage correct for each learning objective will be displayed. The overall score will be saved in the database as part of your Hazardous Materials training record. Each end-of-module test question is listed here along with a green checkmark to indicate that you got the question correct, or a red X to indicate that you got the question incorrect, and a link back to the first screen where that question and multiple answer choices was first presented. You may choose to repeat any module over again if you want; return to the Main Menu to select another module; or exit the training program, altogether. This completes the Introduction module. You should now be ready to select another module and get started with your hazardous materials training. Click the Exit button on the menu bar at the top of the screen to return to the module selection screen.