

Arkansas State University (A-State) Program for Shipment of Hazardous Materials

1 Introduction

The federal hazardous materials transportation law (49 U.S.C. 5103 et seq.), is the basic statute regulating the transportation of hazardous materials (hazmat) in the United States. This law requires the training of all hazmat employees. A hazmat employee is anyone who directly affects hazardous materials (hazmat) transportation safety. This includes anyone who: loads, unloads, or handles hazmat; tests, reconditions, repairs, modifies, marks, or otherwise represents packaging as qualified for use in the transportation of hazmat; prepares hazmat for transportation; is responsible for safety of transporting hazmat; or operates a vehicle used to transport hazmat. The purpose is to increase a hazmat employee's safety awareness and be an essential element in reducing hazmat incidents.

The regulations for hazmat transportation by ground are written by the US Department of Transportation and are contained in 49CFR171-177. Hazmat shipping by air is governed by the Federal Aviation Administration and the International Civil Aviation Organization (ICAO); however, given the complexity of these regulations, the International Air Transport Association (IATA) writes interpretation of these regulations that are required to be followed when items will be shipped through a carrier in that organization. All national and international carriers are members of IATA, thus the IATA interpretations of the regulations are what must be followed when shipping hazmat by air.

2 Employer Responsibility

Employers of hazmat employees must train and test, certify, develop and retain records of current training (inclusive of preceding three years) for each hazmat employee (during the period of employment and 90 days thereafter).

3 Hazardous Material Definition

Hazardous material means a substance or material that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and has designated as hazardous under section 5103 of Federal hazardous materials transportation law (49 U.S.C. 5103). The term includes hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (see 49 CFR 172.101), and materials that meet the defining criteria for hazard classes and divisions in part 173 of subchapter C.

4 Training

The training required depends on how a hazardous material will be shipped. Unless a ground service is used, it should be assumed that at some point a hazardous material prepared for shipment will be transported by both ground and air. Training must include: general awareness/familiarization, function-specific instruction, safety and security awareness. In-depth security training is required if the regulations require a security plan. Driver training is also required for each hazmat employee who will operate a motor vehicle.

4.1 Initial Training

A new employee, or an employee who changes job functions, may perform hazmat job functions before completing training, provided: the employee does so under the direct supervision of a properly trained and knowledgeable hazmat employee; and the hazmat training is completed within 90 days of employment or change in job function.

4.2 Recurrent Training

Recurring training is required at least once every three years. The three-year period begins on the actual date of training completion. Relevant training received from a previous employer or other source may be used to satisfy the requirements, provided a current record of training is obtained from the previous employer or source (i.e., OSHA, EPA, and other Federal or international agencies.) Training must address components specified in 172.704(a) of the HMR to be considered applicable.

4.3 Training Records Training records must include: hazmat employee's name, completion date of most recent training, training materials (copy, description, or location), name and address of hazmat trainer and certification that the hazmat employee has been trained and tested.

4.4 Training Certification

Although transportation is **NOT** an Environmental Health and Safety (EHS) function, EHS has evaluated the available training and herein prescribes training required to be certified by Arkansas State University as qualified to ship hazardous materials. Employees wishing to pursue a training track not listed below may nominate an addition to this list by contacting EHS.

4.5 Types of Hazardous Materials and How They Are Listed in the HMT

The types of hazardous materials that have special requirements for shipping fall into three general categories, chemicals, biological hazards and radioactive materials.

4.5.1 Chemicals

Chemicals defined as hazardous materials are listed, by name, in the Hazardous Material Table (HMT) of 49CFR 172.101.

4.5.2 Biological hazards

Biological hazards are listed in the HMT as Infectious Substances, Biological Substances and Regulated Medical Waste. The shipper must classify the biological material per Department of Transportation (DOT) definitions. Biological agents are not specifically named on the HMT. Consequently, certification to ship biological materials requires additional training.

4.5.3 Radioactive Materials

Similar to biological hazards, radioactive materials are not listed by name. The shipper must classify radioactive materials per DOT definitions. Shipping of radioactive materials must be done by the radiation safety officer.

4.6 Training Courses That Meet the Requirements

Only persons (faculty, staff, students) who have completed the appropriate course from the following list, provided a copy of the completion certificate with a score of 80% or above to Environmental Health and Safety (EHS) and received a certification of training back from EHS are authorized to ship hazardous materials.

4.6.1 Training for Certification to Ship Chemical HazMat by Ground

4.6.1.1 2-day *UPS Dangerous Goods Seminar for 49CFR Requirements* (DOT); see website for schedule and cost (\$600).
<http://www.ups.com/content/us/en/resources/shipping/hazardous/seminar.html>

4.6.1.2 1-day *Environmental Resource Center Seminar DOT Hazardous Materials Training: The Complete Course*; see website for schedule and cost (\$429 webcast or \$449 for scheduled seminar).
<http://www.ercweb.com>

4.6.2 Training for Certification to Ship Radioactive HAZMAT by AIR or Ground (ONLY Radiation Safety Officer or assistant is

permitted to ship radioactive hazmat). Contact EHS for details.

4.6.3 Training for Certification to Ship Chemical HAZMAT by AIR

4.6.3.1 1-day *Environmental Resource Center Seminar Transportation of Dangerous Goods: Compliance with IATA Regulations*; see website for schedule and cost (\$559 webcast or \$579 for scheduled seminar).

<http://www.ercweb.com>

4.6.3.2 2-day *UPS Dangerous Goods Seminar for IATA Requirements*; see website for schedule and cost (\$600).

<http://www.ups.com/content/us/en/resources/shipping/hazardous/seminar.html>

4.6.4 Training for Certification to Ship Biological HazMat by AIR

4.6.4.1 IATA self-study course with online examination *Shipping Guidelines for Infectious Substances*; see website for purchase and cost (\$310).

<http://www.iata.org/training/courses/tcgp43.htm>

4.6.4.2 One of the courses required for chemical hazmat by air **plus** *SAF-T-PAK DVDROM*. See website for purchase and cost (\$465 to include reference manual; limited to 6 users and expires with calendar year).

<http://www.saftpak.com/Training/dvdtraining.aspx>

4.6.4.3 1-day *SAF-T-PAK Compliance Seminar*; see website for schedule and cost (\$290).

<http://www.saftpak.com/Training/seminartraining.aspx>

4.6.4.4 One of the courses required for chemical hazmat by air **plus** *SAF-T-PAK Online Course* (\$360 for three users, must be purchased in threes).

<http://www.saftpak.com/Training/InternetTraining.aspx>

5 Shipping Hazardous Materials

It is the responsibility of the shipper of hazardous materials to ensure that a package is properly prepared for shipment and to ensure that all of the appropriate paperwork is completed prior to the materials being shipped. EHS will offer assistance to any trained individual that wishes to ship hazardous materials, but the work must be completed by the individual shipping the material.

6 Transportation (as Opposed to Shipping) of Hazardous Materials.

6.1 Hand or Cart Carry between Buildings

Hazardous materials may be hand carried between laboratories and buildings on campus without restriction so long as common sense packaging is employed and the requirements of the Biological Safety Manual and the Chemical Hygiene Plan are met.

6.2 Transport in a Vehicle

Hazardous materials may **NOT** be transported off campus in a personal motor vehicle without specific, written permission from Environmental Health and Safety. Non-regulated hazardous material may be transported off campus in an A-State motor vehicle. Regulated hazardous material may only be transported off campus by EHS personnel, in an A-State vehicle without the aforementioned written permission.