

<b>SUBJECT:</b> Hazardous Materials Shipping, Receiving, and Transportation	<b>Effective Date:</b> 6/11/12	<b>Policy Number:</b> FSP 2012 EHS0003	
	<b>Supersedes:</b> NA	<b>Page</b> 1	<b>Of</b> 6
	<b>Responsible Authority:</b> Director of Environmental Health and Safety		

**APPLICABILITY/ACCOUNTABILITY:**

This policy applies to all faculty members, visiting scholars, staff members, students, volunteers, and affiliates who ship, receive, or transport regulated hazardous materials or dangerous goods.

**POLICY STATEMENT:**

The Department of Environmental Health and Safety (EHS) is the designated authority for compliance with hazardous materials and dangerous goods shipping regulations. Individuals acting on behalf of the University are responsible for safe and secure shipping, receipt, and transportation. Individuals must be properly trained and follow the shipping regulations as described in this policy. Failure to follow these regulations may result in accidents, injuries, regulatory violations, fines, loss of grant funding to the University, criminal penalties, and/or imprisonment.

**DEFINITIONS:**

**Dangerous Goods (DG)** - Articles or substances which are capable of posing a risk to health, safety, property, or the environment; which are shown in the International Air Transportation Association (IATA) list of dangerous goods; or which are classified according to the IATA regulations.

**Dangerous Goods Regulations** - IATA regulations governing air shipments of regulated materials

**Hazardous Material (HM)** - A substance or material which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported by vehicle on a public roadway or by rail. All hazardous wastes are hazardous material under this definition. A list of hazardous materials can be found in U.S. Code of Federal Regulations (CFR) Title 49 part 172. 101.

**Hazardous Material Employee** - A person who, in the course of full time, part time, or temporary employment, directly affects hazardous materials transportation safety. A person who loads, unloads, handles, or prepares (identifies, classifies, packages, marks, labels, or documents) hazardous materials packages, including the preparation of shipping papers; who tenders

hazardous materials into commerce; or who otherwise transports hazardous materials shipments. This does not include persons not directly employed by the University.

**Hazardous Materials Regulations (HMR)** - Department of Transportation (DOT) regulations governing the transportation of hazardous materials in commerce, as found in 49 CFR parts 171 through 180. The DOT has established regulations for domestic transport (within the United States) of hazardous materials by rail, air, vessel (ships), and motor carrier (ground).

**Materials of Trade** –a hazardous material, other than a hazardous waste, that is carried on a motor vehicle:

- For the purpose of protecting the health and safety of the motor vehicle operator or passengers;
- For the purpose of supporting the operation or maintenance of a motor vehicle (including its auxiliary equipment); or
- By a private motor carrier (including vehicles operated by a rail carrier) in direct support of a principal business that is other than transportation by motor vehicle.

Materials of Trade are exempted from a portion of the 49 CFR. There are limitations on quantity and type of material that can be included in this exemption. (See appendix A for all restrictions and requirements for Materials of Trade.) Materials of Trade should only be carried on a State-owned motor vehicle in direct support of University-related business.

Examples:

- A maintenance worker who carries pesticides or small amounts of gasoline for gas-powered equipment;
- A welder who carries acetylene and oxygen cylinders for use when welding in small amounts;
- A laboratory worker who carries prepared samples or reagents needed for a field experiment in to a field site.

## **PROCEDURES:**

### **General:**

All hazardous materials employees must receive function-specific training. Basic training may be provided by EHS, or EHS will provide a list of training vendors to departments with employees requiring more comprehensive training.

State-owned motor vehicles must be used for any transportation of hazardous materials by individuals acting on behalf of the University. Transporting chemicals in personal vehicles, either on campus or to off-site research locations for University business, is prohibited. Use of campus shuttles and other public transit is prohibited. Any transportation, on private or public roadways, of regulated hazardous wastes by individuals other than trained EHS personnel or licensed waste vendors is prohibited.

### **1. Receipt of shipments of HM/DG.**

Examples:

- Central Receiving personnel who load or unload HM/DG packages;
- Administrative or laboratory personnel who receive or return orders of HM/DG packages from a carrier such as Federal Express or United Parcel Service.

Individuals involved in the receipt of HM/DG packaging must be trained in general DOT awareness and security measures. Training is required within 90 days of hire and recurrent every three years.

### **2. Transport of HM/DG on contiguous University property or public roadways.**

Examples:

- Forwarding orders of HM/DG packages received at Central Receiving to an on-campus or Research Park facility;
- Moving Materials of Trade from campus building to building, from campus to campus, or from campus to field location via State-owned motor vehicle;
- Moving small amounts of chemicals from one lab to another lab via campus walkways or private roadways;
- Shops or labs moving materials to a field location for use on projects.

Individuals involved in the transportation of hazardous materials on contiguous University property or over public roadways must be trained in Hazard Communication, or DOT Awareness, Security Measures, and Spill Response procedures, and in general vehicle loading practices. Training is at the time of assignment requiring transport of hazardous materials.

Materials of Trade rules and regulations apply to transportation over public roadways. (See Appendix A.)

### 3. Shipments of HM/DG.

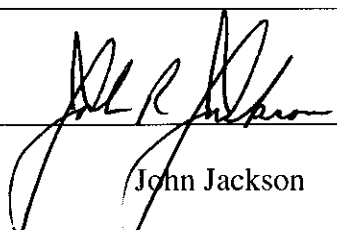
Examples:

- Laboratory relocation;
- Forwarding orders of HM/DG received at Central Receiving to facilities not located on contiguous University property or adjacent private roadways;
- Shipping an HM/DG off campus, out of state, or out of the U.S. via a carrier;
- Carrying an item with you when you travel on an airplane.

Individuals wishing to ship HM/DG are responsible for the accurate description of the materials. This may involve developing a Material Safety Data Sheet for otherwise uncharacterized research compounds.

The shipments must be properly classified, described, packaged, marked, and labeled. DOT or IATA training on each of these topics is required within 90 days of hire and is recurrent every three years (two years for certain IATA shipments).

Because of the training necessary and the continual changes in the regulations, EHS staff members have been trained to be in regulatory compliance and are available to help with your shipments. If a department needs to ship regulated materials frequently, EHS can provide information for department staff to receive compliance training.

Approved By:	Date Approved:
 John Jackson Interim Director	6/11/12
Environmental Health and Safety	

## **Appendix A**

### **Materials of Trade: Rules and Regulation**

When transported by motor vehicle, Materials of Trade must conform with 49 CFR 173.6; Material of Trade is not subject to any other requirements of 49 CFR besides those set forth or referenced in this section.

(a) *Materials and amounts.* A Material of Trade is limited to the following:

(1) A Class 3, 8, 9, Division 4.1, 5.1, 5.2, 6.1, or ORM-D material contained in a packaging having a gross mass or capacity not over --

(i) 0.5 kg (1 pound) or 0.5 L (1 pint) for a Packing Group I material;

(ii) 30 kg (66 pounds) or 30 L (8 gallons) for a Packing Group II, Packing Group III, or ORM-D material;

(iii) 1500 L (400 gallons) for a diluted mixture, not to exceed 2 percent concentration, of a Class 9 material.

(2) A Division 2.1 or 2.2 material in a cylinder with a gross weight not over 100 kg (220 pounds), or a permanently mounted tank manufactured to ASME standards of not more than 70 gallon water capacity for a non-liquefied Division 2.2 material with no subsidiary hazard.

(3) A Division 4.3 material in Packing Group II or III contained in a packaging having a gross capacity not exceeding 30 mL (1 ounce).

(4) This section does not apply to a hazardous material that is self-reactive (see § 173.124), poisonous by inhalation (see § 173.133), or a hazardous waste.

(b) *Packaging.* (1) Packaging must be leak-tight for liquids and gases, sift-proof for solids, and be securely closed, secured against movement, and protected against damage.

(2) Each material must be packaged in the manufacturer's original packaging, or a packaging of equal or greater strength and integrity.

(3) Outer packagings are not required for receptacles (e.g., cans and bottles) that are secured against movement in cages, carts, bins, boxes or compartments.

(4) For gasoline, packaging must be made of metal or plastic and conform to the requirements of this subchapter or to the requirements of the Occupational Safety and Health Administration of the Department of Labor contained in 29 CFR 1910.106(d)(2) or 1926.152(a)(1).

(5) A cylinder or other pressure vessel containing a Division 2.1 or 2.2 material must conform to packaging, qualification, maintenance, and use requirements of this subchapter, except that outer

packagings are not required. Manifolding of cylinders is authorized provided all valves are tightly closed.

(c) *Hazard communication.* (1) A non-bulk packaging other than a cylinder (including a receptacle transported without an outer packaging) must be marked with a common name or proper shipping name to identify the material it contains, including the letters "RQ" if it contains a reportable quantity of a hazardous substance.

(2) A bulk packaging containing a diluted mixture of a Class 9 material must be marked on two opposing sides with the four-digit identification number of the material. The identification number must be displayed on placards, orange panels or, alternatively, a white square-on-point configuration having the same outside dimensions as a placard (at least 273 mm (10.8 inches) on a side), in the manner specified in § 172.332 (b) and (c) of this subchapter.

(3) A DOT specification cylinder (except DOT specification 39) must be marked and labeled as prescribed in this subchapter. Each DOT-39 cylinder must display the markings specified in 178.65(i).

(4) The operator of a motor vehicle that contains a material of trade must be informed of the presence of the hazardous material (including whether the package contains a reportable quantity) and must be informed of the requirements of this section.

(d) *Aggregate gross weight.* Except for a Material of Trade authorized by paragraph (a)(1)(iii) of this section, the aggregate gross weight of all materials of trade on a motor vehicle may not exceed 200 kg (440 pounds).

(e) *Other exceptions.* A material of trade may be transported on a motor vehicle under the provisions of this section with other hazardous materials without affecting its eligibility for exceptions provided by this section.