

Shipping Hazardous Materials

Very specific considerations and requirements must be met in order to safely and legally transport, or offer for shipment in commerce, any materials that may pose a risk to safety, health, property or the environment. These apply to all modes of transportation, for domestic and international carriage, and include any material that may be categorized as a dangerous good, hazardous material, hazardous substance or hazardous waste by the United States Department of Transportation (DOT), United States Environmental Protection Agency (EPA), U.S. Nuclear Regulatory Commission (NRC), International Civil Aviation Organization (ICAO), International Air Transport Association (IATA) or similar authority with recognized jurisdiction.

Ordinary delivery or transportation methods such as use of the US Postal Service (USPS), United Parcel Service (UPS) or personal vehicles cannot normally be utilized for these shipments. Additionally, hazardous materials should not be transported by University personnel when this can be avoided. Acceptable alternatives such as purchasing supplies at field site locations or arranging for direct delivery of new stock to the use location will generally be less troublesome and more cost-effective.

Preparation for and procurement of packaging materials for these materials can take from a few hours to several weeks so, when these shipments must occur, as much advanced notice should be given to the authorized shipper as is possible.

These rules and laws can be difficult to interpret and vary by country and commercial carrier. For this reason, certified personnel must oversee this process and sign declaratory transport documentation. Penalties for failure to comply with these regulations can be severe. There has been increased scrutiny of hazardous material movements by state and federal agencies as well as continually vigilant surveillance and auditing programs. Several universities have been cited and fined for failure to comply with the requirements of these rules. EH&S has trained and certified personnel available to assist you with this process, please contact us at ehs@admin.fsu.edu or 644-6895 as far in advance of these shipments as is possible.

Specific Requirements

Biological Materials

Etiologic Agents

This category covers viable microorganisms or their toxins that cause, or may cause, disease in humans. It also includes Diagnostic Specimens or Biological Products that are reasonably believed to contain etiologic agents. Shipments of these materials must be done in accordance with 42CFR72. 42CFR72.3 contains a list of etiologic agents that are regulated.

Select Agents and Toxins

The U.S. Departments of Health and Human Services (HHS), Agriculture (USDA), Centers for Disease Control and Prevention (CDC) all are involved in regulating the possession, use, and transfer of select agents and toxins that have the potential to pose a severe threat to public health and safety. The CDC Select Agent Program oversees activities and registers all laboratories or other entities that possess, use, or transfer a select agent or toxin. Shipments of these materials require prior planning and attainment of proof of authorizations prior to shipments.

In order to comply with the regulations for biological materials transport or shipments, personnel planning to perform these actions must contact the FSU Biological Safety Office for assistance (644-5374, 644-9117, or 644-6895).

Chemicals

This is the most common category of hazardous material and dangerous goods shipments that occur. The bulk of the international, federal and state regulations are written specifically to cover the requirements for shipment or transportation of these materials in commerce, as well as the related personnel and environmental considerations. Care must be taken to ensure proper packaging is performed in order to minimize the potential for leakage, contain any products that might leak and prevent any contact between non-compatible chemicals or packing materials that could result in adverse reactions. Shipments of chemical wastes must be coordinated by EH&S since they require additional forms, manifests, and procedures to be followed.

Contact Chemical Safety Office personnel (644-7682, 644-0971, or 644-6895) for assistance with chemical shipments.

Controlled Substances

Controlled substances, prescription and legend drugs are regulated by the US Drug Enforcement Agency (DEA) and to a lesser extent other agencies such as the Florida Department of Health. These substances have very specific licensing and documentation requirements which must be followed from their production through their final use or disposal. This includes shipping and transportation protocols focused solely on maintaining security and quality of the product. These requirements are philosophically quite different from those for other materials covered by other Dangerous Goods and Hazardous Material transportation regulations. Errors in the process can also result in severe penalties and potential loss of licensure due to non-compliance with DEA instructions.

Any shipment or transportation of these types of DEA and DOH regulated materials, which is not being done as specifically authorized by these agencies under the direct supervision of a licensed medical or veterinary practitioner, shall not be performed without prior coordination and in conjunction with authorized EH&S Laboratory Safety personnel (644-8916, 644-0818, or 644-6895).

Radioactive Materials

Shipment and transportation of radioactive materials must typically be done in compliance with other specific state or federal licensing requirements and have to be coordinated in advance with EH&S Radiation Safety personnel. These packages often require special shielding, certification, forms, and descriptions to be utilized that are not typical for other dangerous good or hazardous material shipments.

Shipments of radioactive waste destined for disposal require advanced notification of governmental agencies to be performed via EH&S Radiation Safety personnel (644-8802 or 644-6895).

Other Regulated Materials (ORM)

Shipment of "Other Regulated Materials" (ORM) is covered under the same rules and regulations addressing other hazardous materials or dangerous goods but they are not as clearly defined and have proven to be easier to overlook. One material classified in this manner is "Dry Ice" or "Carbon Dioxide - Solid", often used to preserve or maintain the condition of shipped samples. Shipped samples may be non-regulated and not covered by other rules, they may be classified as a different type of dangerous goods or they may even be non-regulated materials for transportation purposes but that are not allowed to be exported to certain other countries.

Special attention is necessary while planning shipments containing ORM to ensure that the inclusion of these types of materials is not overlooked during the process.

Shipment or Transportation of Hazardous Materials Offered in Commerce

Training for Authorized Individuals

Any individual that prepares, ships, transports or receives hazardous or dangerous goods must be trained in appropriate areas relevant to the task(s) that they perform. All individuals that sign bill of lading, dangerous goods declarations, waybills or similar shipping documents must be fully certified in all aspects of preparation and shipping of these materials per the requirements of the DOT and other regulatory authorities. Recurring training is required at least every three years for personnel involved with domestic transport covered by DOT regulations and at least every two years for international shipment covered by ICAO/IATA regulations. Proof of training, including materials covered, tests and certifications must be kept by EH&S and be readily available for inspection by agencies such as the DOT, Federal Aviation Administration, Florida Department of Environmental Protection and DOH Bureau of Radiation Control. Additional training to meet other related regulatory obligations is also required.

Packaging

Materials used to package hazardous materials and dangerous goods must meet the regulatory requirements appropriate for the type and quantity of material and mode of transportation. This includes certification, when applicable. The adequacy of all components of the packaging must be verified by any person that signs for the shipment and proof of any required certification must be retained for future inspection for at least three years.

Marking and Labeling

Care must be taken to ensure that all required markings and labels are appropriate for the materials being shipped, the size and quality must be adequate and no extraneous markings or labels can be present on the packaging that would distract from those that are required to be present.

Shipping Papers

Shipping papers must be legible, complete and appropriate for the materials being shipped and signed by a certified and authorized individual. Copies must be forwarded to EH&S and retained for at least three years from the date of the shipment. This includes waybills, dangerous goods declarations, commercial or pro-forma invoices, packaging certification, emergency response guidance and any other required paperwork or additional information included with each shipment.

Licensing

Some shipments require a-priori proof that the intended recipient is duly authorized to receive the material being shipped. Examples are select agent or etiologic agent registrations for certain biological materials, DEA licenses for controlled substances, specific radioactive materials licenses, and import or export approvals for international shipments of certain materials. It is imperative for shippers to ensure that intended recipients provide proof of these authorizations before any of these materials are transferred.

Emergency Response Information

Hazardous material or dangerous good shipments that require shipper's declarations of the dangerous goods or materials also require 24 hour emergency contact information. This contact phone number must be provided for someone who is immediately available and knowledgeable of the specific shipment and emergency response actions for the shipped materials if damage or incidents occur during shipment or transportation. The individual that signs the declaration, waybill and/or manifest must be sure that the emergency response contact is immediately available at the number provided until the

shipment is received at its destination. EH&S usually contracts with CHEMTREC and sends them pertinent information about each covered shipment, to ensure that this important requirement is met.

Domestic Shipments

These shipments are the most common and least difficult to perform. Most commercial aviation carriers (i.e. - FEDEX) require the use of the IATA regulations in order to utilize their services. The use of ICAO regulations is authorized by the DOT if any part of the shipment will be by air (per 49CFR171.11). ICAO is the governmental organization recognized by DOT, IATA is a manual of regulations for an association of member airlines and are compatible with ICAO. Slight differences may exist between IATA, ICAO and CFR regulations although there are active efforts to ensure harmonization between them. Shippers must have current copies of these rules available and must ensure that all appropriate regulations are followed.

Even when the ultimate goal is to ship materials to locations outside of the United States, the opportunity to transfer materials and the responsibility for transportation or shipment to another party domestically has proven to be the simplest and most effective method. FSU personnel should explore and promote this option when planning or negotiating with other involved parties or vendors that have more experience in international operations and may be able to provide logistical support.

International Shipments

These shipments are much more difficult due to issues not as clearly specified in standard regulations governing transportation. These additional issues include customs clearance (which may require the physical presence of the recipient or authorized broker), variable country specific requirements, duties and import taxes and fees, specific import and export controls or authorizations, incomplete carrier operating and coverage areas, transfers between carriers and additional forms or copies of forms beyond those normally required for similar domestic shipments. Before shipping Dangerous Goods internationally, it is imperative that the potential carrier be contacted to determine that these services are offered to the intended location and to gather the most up-to-date regulatory information available.

Shipment or Transportation of Hazardous Materials not Offered in Commerce

Many, but not all, materials transported by governmental agencies for official purposes that are not being offered in commerce are exempt from the formal requirements of the US Department of Transportation (DOT). However, the intent of the transportation regulations is to ensure the safety during such shipments as well as during responses to accidents involving transport vehicles containing these materials. Therefore, it is requisite that actions are taken to ensure an equivalent level of protection of health, property and the environment. This includes training of individuals involved in this process, packaging, and adequate documentation to providing identification of the materials that will be useful to potential emergency responders to accidents or emergencies that may occur.

Training

The formal regulatory obligations specified for shipments offered in commerce need not be met for this category of shipments. Documentation of training is not required nor is testing and certification. However, personnel involved with these shipments should still possess a working knowledge of the material being shipped or transported, including actions to take in case of an emergency. On-the-job and other informal training methods can be obtained from certified and knowledgeable experts on issues specific to the shipment or transport being conducted, contact EH&S for assistance. Other regulatory requirements for training such as HAZWOPER, Hazardous Waste Awareness, Right-to-Know, Biological or Radiation Safety training must still be met, as required, for anyone handling these materials.

Requirements and Recommendations

Individuals responsible for shipment or transportation of any hazardous materials exempted by the DOT rules should still ensure that equivalent protection to that afforded by full compliance with the regulations, is achieved. This means that the only requirements that should generally be relaxed are those for HAZMAT endorsed Commercial Drivers Licenses for vehicle operators, placarding of transport vehicles and preparation of specific waybills or dangerous goods declarations. Whenever possible these types of movements should only be performed by FSU employees utilizing state-owned vehicles. Movement of materials on contiguous Florida State University property is preferred and movement of materials across areas not owned by the FSU may be prohibited for certain materials, such as hazardous wastes. EH&S personnel should be contacted for help in establishing appropriate controls (644-6895).

Security

Written Security Plan

Security plans are required of any individual that offers for shipment in commerce any material that conforms to the conditions listed in 49CFR172.800. FSU is often involved in shipments that fall into one or more of these categories and EH&S has developed a written security plan as part of "Contingency, Emergency Response & Security Plans for The Florida State University Hazardous Waste Storage Areas". This document is maintained by FSU EH&S. Current versions are provided to FSUPD and other local primary emergency response agencies.

Items covered by the plan must include: en-route security, carrier selection and contractual agreements, personnel security and background checks, facility security and periodic review and evaluations.

Personnel shipping hazardous materials in commerce are responsible for determining if his or her particular shipment requires a security plan and either determining that it is covered by the current FSU Security Plan or amending/developing a plan to meet those needs.

Additional Security Training

Personnel involved in shipments that require a security plan must also have been provided security awareness training or in-depth security training as is required by current regulations such as 49CFR172.704.

Contact [EH&S for assistance](#).