Introduction

The Occupational Safety and Health Administration's regulation for laboratory safety was finalized in 1990 for the purpose of protecting workers from chemical, biological, physical, and other safety hazards. The intent was to address hazards particular to laboratory practices and to fill in the gaps not covered by existing, specific OSHA standards for general industry.

Central to the OSHA Laboratory Standard are a written Chemical Hygiene Plan (CHP) and the designee responsible for its implementation and updating, the chemical hygiene officer (CHO). The CHP must be tailored to reflect the specific chemical hazards present in the laboratory where it is to be used. Distilled to its essentials, the CHP has five major elements that employers are required to address:

Source: http://www.labmanager.com/lab-health-and-safety/2018/03/how-to-understand-comply-with-and-stay-on-top-of-eh-s-regulations-for-laboratories

Chemical Hygiene Plan Major Elements

1. Identify hazards and develop standard operating procedures that include general and laboratory-specific protocols for work with hazardous chemicals.
2. Determine and implement exposure control measures and monitoring when appropriate, including engineering controls and personal protective equipment, to reduce workers' exposure to hazardous chemicals.
3. Determine and implement specific measures to ensure proper and adequate performance of protective equipment such as fume hoods, etc.
4. Provide information and training to ensure workers are apprised of all hazards in their work areas. Workers must receive training regarding the Laboratory Standard, the CHP, and other laboratory safety practices, including exposure detection, physical and health hazards associated with chemicals, and protective measures.
5. Provide for medical consultations and examinations when exposure to a hazardous chemical has occurred.

OSHA HazCom

The Occupational Safety and Health Administration's regulation for laboratory safety was first issued in 1983. This original standard requires assessing the potential hazards of chemicals, and communicating information concerning those hazards and appropriate protective measures to employees.

Similar to the Laboratory Standard, the OSHA HazCom standard also requires a written plan, or Hazard Communication Plan (HCP). Condensed to the basics, the HCP also has five principal requirements:

OSHA Hazardous

Hazard Communication Plan Principles

1. Develop and maintain an inventory of all hazardous chemicals kept and used in the workplace.
2. Ensure all containers of chemicals are properly labeled.
3. Collect and maintain current safety data sheets (SDSs) for all chemicals to which workers may be exposed.
4. Develop and implement worker training programs regarding hazards of chemicals to which they may be exposed and the appropriate protective measures to use when handling these chemicals.
5. Heed hazardous chemical warnings on container labels and in SDSs, which manufacturers and importers must provide to users.

RCRA: Managing Hazardous Wastes

As with the OSHA Laboratory Standard and HazCom, a very brief distillation of the main principles is presented below. However, given the breadth and complexity of RCRA, we strongly recommend consulting with knowledgeable and experienced professionals unless the specific expertise is available in-house.

Hazardous waste regulations under RCRA fall into four general areas:

Hazardous Waste Regulations 4 Areas

1. Identification and determination of all generated wastes. This is accomplished with knowledge of the specific process generating the waste, waste definitions, contaminant lists, and waste characteristics, as laid out in 40CFR Part 261.
2. Storage and labeling of waste. 40CFR Part 262 addresses proper containers, packaging, labeling, placarding, quantities, and accumulation times.
3. Transporting waste. All transporters of hazardous waste must be permitted and licensed by the EPA. Strict guidelines cover waste packaging, labeling, and placarding. A comprehensive manifest must be compiled and must accompany the shipment from its pickup at the generator to the final treatment and/or disposal site.
4. Disposal of waste. As with transporters, all treatment, storage, and disposal facilities must be permitted and licensed by the EPA. Each shipment manifest should be carefully checked. After final action, a manifest copy, signed by all, is returned to the generator to complete full documentation of cradle-to-grave handling.

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