Hazardous Materials and Waste Policy
Reviewed: April 2011

Applicability

This policy applies to employees, students and volunteers at all OHSU facilities who work with, generate or dispose of hazardous materials and waste.

Scope and Purpose

This policy describes the procedures for the appropriate handling, generation, minimization, storage, recycling and disposal of hazardous materials and waste.

Proper hazardous materials and waste management is important in order to provide healthy and safe working conditions, to protect the environment, and to ensure compliance with applicable federal, state, and local laws and regulations.

Laws and Regulations

In 1976, Congress enacted the Resource Conservation and Recovery Act (RCRA) to protect human health and the environment from improper hazardous waste management practices. OHSU falls under RCRA and other environmental laws and regulations, including the Toxic Substances Control Act (TSCA), Superfund Amendments and Reauthorization Act (SARA), Clean Water Act (CWA), Clean Air Act (CAA), Emergency Planning and Community Right-to-Know Act (EPCRA), and Oregon Occupational Safety and Health Standards (OR-OSHA). Thus, it is very important not to discard as ordinary trash any reagents, chemical solutions, chemical mixtures, industrial products, infectious wastes, contaminated rags, or any items containing or contaminated with substances which may be regulated under one or more of these programs.

It is the responsibility of OHSU personnel to follow the procedures in this policy. OHSU is subject to state and/or federal inspection at any time. OHSU and individuals can be cited for failure to comply with hazardous materials and waste regulations. Conviction can result in civil or criminal penalties, depending upon the seriousness of the violation.

Glossary

- Hazardous Waste: The Resource Conservation and Recovery Act (RCRA) defines Hazardous Waste as: a solid waste, or combination of solid wastes, which because of its quantity, concentration, physical, chemical, or infectious characteristics may:
    - Cause or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or
    - Pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.
- Universal Waste: RCRA defines a universal waste as a hazardous waste that can be recycled. Only four types of hazardous waste can be classified as Universal Waste: batteries, unused pesticides, mercury-containing devices and lamps.
- Toxic Use Reduction-Waste Minimization Plan: An EPA mandated program for waste generators designed to encourage the reduction of the use of toxic agents and the minimization of chemical wastes. These may be accomplished through product substitution, waste reclamation, recovery and recycling.
- Spill Prevention Control and Counter-Measures Plan: A plan designed to prevent, minimize or contain the leakage of oil and hazardous waste products to waterways.
- Recycling: Collecting and processing a resource so it can be made into new products. An example is collecting aluminum cans, melting them down, and using the aluminum to make new cans or other aluminum products.

Health and Safety

- Training Requirements and Responsibilities
    - Hazard Communication: Hazard awareness training is required for all employees who may be exposed to hazardous substances. General

information about the hazard communication program is included in new employee orientation offered to all employees. More detailed information and training can be provided upon request by EHRS, or by referencing the Hazard Communication Program Policy.

- Laboratory Safety and Waste Management: Laboratory Safety Manual: Applies to laboratories and describes the safe and prudent practices for working with hazardous substances and for experimenting with various processes within the laboratory setting. Laboratory Safety Training is available online in Big Brain.
- Infectious Substance Shipping: Rules for shipping of infectious substances are found in an on-line training course. Refer to online training in Big Brain for details.
- Emergency Preparedness: Online training is available to address emergency response procedures for OHSU Healthcare employees. Refer to online training in Big Brain for details.. Each department must ensure that employees understand department-specific requirements.
- Hazardous Waste Handlers/ Emergency Response Coordinators: In accordance with 40 CFR 265.16, OHSU Hazardous Waste Technician(s), and any OHSU employees whose personnel descriptions require them to clean up chemical spills, handle hazardous wastes, or otherwise respond to hazardous materials emergencies, are required to successfully complete accredited 40-hour HAZWOPR training, as well as on-the-job training specific to their duties at OHSU. This training must be completed within 6 months of the date of employment or assignment to a new position. Personnel staffing these positions must not work unsupervised until they have completed the training requirement. Annual refresher HAZWOPR training, and an annual review of on-the-job training are also required for hazardous waste handlers/emergency response coordinators. Records of completion of initial and continuing training for the Hazardous Waste Technician and any personnel designated as emergency response coordinators must be maintained for the duration of their employment and for 3 years thereafter by EHRS. In addition to training records, EHRS must maintain the following: 1) the job title for each position at OHSU related to hazardous waste management and the name of the employee filling each job, 2) a written job description for each position including requisite skills, education, or other qualifications, and the duties of the person assigned to each

position, and 3) a written description of the type and amount of both introductory and continuing training required.

- Personal Exposures

  Exposure to hazardous materials and waste will be monitored by EHRS staff. EHRS staff will advise on the appropriate method of minimizing exposure risk. Emergency eyewash stations and/or showers shall be installed in locations where there are "corrosive" or highly toxic chemicals and where there is a risk of splash exposure.

  If individuals are adversely impacted by a hazardous substance either inhaled or via exposure to the skin or eyes, they shall immediately notify their supervisor and should arrange for medical attention through OHSU Employee Health or the nearest Emergency Department. Public Safety will offer or arrange transportation if the individual is unable to ambulate on their own. Employees and students shall file a report of the incident by accessing the Worker and Student Injury Reporting System

- Personal Protective Equipment (PPE)

  Whenever hazardous materials, including hazardous wastes, are used or handled, use of proper personal protection equipment shall be considered to protect all potentially exposed personnel. PPE includes: safety glasses, chemical safety goggles, chemical gloves, face shields, aprons, lab coats designed to offer splash protection, fume hoods, and filtering face masks. It is advisable to train personnel in the use of PPE prior to initiation of activities involving any hazardous material, and to repeat the training whenever a significant change in use occurs. Consult EHRS for assistance involving PPE.

- Spill Response - Central Campus
  In the event of a chemical spill at the Central Campus, immediately call: 4-4444. Public Safety dispatch will require the following information:
  - injuries or illnesses
  - contact information
  - time spill occurred
  - specific spill location (building, room, area)

- nature of the spill
- chemical involved
- quantity

Public Safety will transmit this information to the on-call EHRS responder who will make a quick assessment of the necessary actions. Employees are obligated to evacuate the area if the spill is significant such that injuries and/or illnesses are experienced or the potential for harm is likely. Evacuation is suggested under the following circumstances:

- the existence of a large or uncontrolled spill
- spill that is spreading beyond the area and not contained
- release of a compressed gas
- spill of a large volume of flammable liquid
- spill of an extremely toxic substance regardless of volume
- any report of symptoms

Employees should not attempt to clean up spills if;

- they have not been specifically trained
- do not have appropriate spill clean-up materials
- evacuation (see above) is advised

Public Safety will coordinate traffic management and arrange for transportation and communication should the need for emergency medical attention be required.

EHRS staff will respond to chemical spills or will arrange for cleanup by a contract environmental remediation firm if spill is beyond the ability of the responder to mitigate.

An appropriate level of Incident Command may be activated in case of a spill with large impact.

- Spill Response - West Campus

  In the event of a large spill, call 503-494-4444, then 503 690-5390 to activate Emergency Response Personnel.

Waste Streams and Disposal

- Hazardous Chemical Waste
  - Satellite Accumulation of Hazardous Chemical Waste In accordance with regulation 40 CFR 262.3(c)(1) up to 55 gallons of hazardous chemical waste may be accumulated at the point of generation in a Satellite Accumulation Area, providing that the following conditions are met:
    • The waste is accumulated in leak-proof containers that are chemically compatible with the contents.
    • Waste containers are labeled with the words "Hazardous Waste" and a description, including hazard warning (i.e., flammable, carcinogen, etc.), of the contents.
    • Waste containers are kept tightly capped at all times, except when it is necessary to add additional waste material. Evaporation of hazardous chemical waste is not allowed.

    The generator is responsible for the management of all containers holding hazardous wastes. Whenever the use of a particular hazardous chemical is discontinued, any accumulated waste must be disposed of promptly. Arrangements for chemical collection shall be arranged with the Hazardous Waste Technician.

  - Disposal
    • Central Campus: Central Campus is currently classified as a large quantity generator and hazardous chemical wastes are disposed of through a waste contractor on a quarterly basis.
    • West Campus: West Campus is currently classified as a Conditionally Exempt Small Quantity Generator. EHRS is responsible for tracking hazardous waste in accordance with ODEQ and EPA regulations.

    For tracking purposes, chemicals are dated at the time of collection. Chemical wastes are stored in a segregated manner, with other compatible chemicals, and held until picked up by the disposal contractor. The wastes are shipped to appropriate facilities for destruction. The EHRS Hazardous Waste Technician maintains all

documents relative to transportation and destruction and prepares periodic reports as required by regulations.

Satellite and central waste storage areas receive an annual review to ensure compliance with these standards and to assure prudent chemical safety for the generators and to OHSU facilities.

Generators may refer to the list “Chemical Waste Drain Disposal” to determine what wastes are considered “hazardous”.

- Hazardous Waste Recycling and Universal Waste

  OHSU recycles various wastes including: mercury-containing lamps, switches, barometers, manometers, sphygmomanometers, Ni-Cad, alkaline and lead-acid batteries, used motor oil, and PCB-containing light ballasts.

  Universal Waste requirements are less stringent than requirements for Hazardous Chemical Waste to encourage recycling. Universal Waste includes: mercury-containing equipment, hazardous waste lamps, hazardous waste batteries, and hazardous waste thermostats.

  Refer to the Waste Stream Flow Chart for information about items recycled through the Universal Waste and Hazardous Waste Recycling Programs.

- Medical, Pathological and Other Wastes

  - Infectious Waste

    Infectious Waste is disposed of in red bags or sharps containers. Pathological waste is disposed of in red bags then bulked in boxes for appropriate disposal. Other red bag waste is sterilized by autoclave and subsequently disposed of as solid waste. Rigid sharps containers and pathological waste are disposed of offsite through a contractor according to regulations.

The Bloodborne Pathogen Exposure Control Plan outlines safe procedures for handling infectious substances. These guidelines apply to anyone at OHSU working with infectious materials.

Collection and disposal of infectious waste at the West Campus can be arranged by calling EHRS at 503 690-5390. Collection and disposal of infectious waste is handled by Environmental Services and PHC on Central Campus. Infectious waste is disposed of by an outside contractor at the CHH.

If you work with biological hazards, such as recombinant DNA, or specific microbiological agents requiring special containment, refer to the Research Development and Administration Website.

- Animal Care Waste

  Animal carcasses, not containing hazardous materials, are incinerated appropriately. Items generated at the West Campus are contained and incinerated appropriately, except non-hazardous bedding that is disposed of as solid waste.

  Animal carcasses and waste products dosed with low-level hazardous materials are bagged and collected by a contractor for appropriate disposal.

- Chemotherapy Waste

  For information, refer to the Healthcare policy: Chemotherapy - Disposal of Medications and Related Equipment, Chemotherapy waste generated by research or other non-clinical labs, is collected by the Hazardous Waste Technician.

- Radiation Waste

  Refer to Radiation Safety - Waste Management for information.

- **Pollution Prevention: Toxic Use Reduction and Waste Minimization Programs**

Hierarchy of Pollution Prevention

OHSU promotes numerous activities related to pollution prevention, often referred to as toxic use reduction-waste minimization programs. The hierarchy image above depicts the order of preference for environmental decision-making.

OHSU is involved in long-term programs to further minimize and/or eliminate pollution. These include the following:

- Healthcare Without Harm
- Mercury Phase Out: OHSU has eliminated purchasing of and replaced mercury-containing products.
- Product Substitution/Elimination

Employees should seek ways to reduce the burden that chemical substances place on health and the environment, and on the cost of waste removal. The following strategies can be used to aid in reducing hazardous materials use:

- Minimize over-purchasing and over-stocking of chemicals.
- Minimize, through process change or altered work practices, excessive use of toxic substances or unnecessary generation of waste.
- Set up internal chemical sharing programs.
- Favor the use of less toxic substances over more hazardous ones.
- Specify in purchase agreements or contracts provisions that vendors provide products containing less toxic substances or that they recycle the by-products of the used articles, such as waste oil or used gas cylinders.
- Specify that contractors employ less toxic substances on the job.

- Emergency Contingency Plan: OHSU maintains a contingency plan to prevent environmental releases of large volumes of oil and other chemical substances. This plan is in compliance with the Resource Conservation and Recovery Act. EHRS maintains this plan.

- Other Regulations
    - SARA Title III: Community Right to Know: Annually, OHSU is required to submit information about threshold quantities of hazardous substances on site to the State Fire Marshall's Office. This information is accessible to the public and is used by state agencies to develop plans in the event of a significant release of hazardous substances affecting the community.
    - Clean Air Act: OHSU Central campus maintains a Title V Air Permit for its industrial boilers and an Air Contaminant Discharge Permit for its crematorium. Both forms of equipment are operating in compliance with their respective permits.
    - Clean Water Act: Both OHSU Central and West campuses perform independent periodic testing of effluent sources for the presence of specific chemical wastes.
    - Safe Drinking Water Act: The City of Portland is the supplier of Central Campus water and submits annual reports on source water quality.

- Responsibilities

  OHSU is responsible for complying with all applicable Federal, state and local rules and regulations pertinent to hazardous materials containment and protection of both employees and the environment.

  Environmental Health & Radiation Safety (EHRS) is responsible for setting policy, providing technical support, training, and providing hazardous waste disposal to all OHSU departments.

  Department Managers are responsible for ensuring the implementation of hazardous materials policies and procedures.

OHSU personnel are obliged to follow all EHRS policies as well as specific departmental procedures relative to hazardous materials.

History: Replaces revision of March 2008

References:

Oregon OSHA Hazardous Materials
EPA 40 CFR Part 260-299
DOT 49 CFR Part 172

Related Policies and Procedures:

Healthcare Environment of Care Program
Healthcare Infection Prevention and Control
Healthcare Care Emergency Management Program
Laboratory Safety Manual
OHSU Hazard Communication Program Policy
Chemical Waste Drain Disposal

Responsible Office:

Environmental Health & Radiation Safety
Facilities & Real Estate

Attachments:

Waste Stream Flow Chart

OHSU Hazardous Waste Disposal Grid