Hazardous Waste Disposal Protocol

Category: Human Resources;

Established on: December 14, 2005;

Amendments: February, 2008; July, 2010; September, 2012, 2015; October 2020, January 2024.

This document is available in alternate format on request.

1. Purpose

To outline Lakehead University's procedures pertaining to the disposal of hazardous waste. Hazardous wastes are an unavoidable by-product of maintenance, research, and teaching activities at Lakehead University and require proper management to safeguard staff, students, the general public, property and the environment. All hazardous waste disposal for the Thunder Bay campus (chemical, biohazardous, and radioactive) is arranged through the Health and Safety Office. Hazardous waste disposal at the Orillia Campus is coordinated by the Human Resources Office - Orillia. Arrangements are made for disposal of hazardous waste materials through qualified, certified hazardous waste disposal carriers.

2. Definitions

Hazardous wastes include the following substances:

- corrosive substances;
- oils and other petroleum products;
- explosives;
- compressed gases;
- oxidizers and organic peroxides;
- radioactive materials;
- broken glass;
- sharps (needles, blades, etc.);
- biohazardous agents;
- pyrophoric materials.

- pesticides and herbicides;
- materials that will leach toxic materials, e.g., contaminated soils;
- toxic agents including drugs, chemicals, natural and synthetic products;
- flammable materials including flammable liquids, finely divided metals or powders, and flammable solids;

3. Procedure

3.1 Chemical Waste

All chemical waste must be appropriately contained, and properly labeled and disposed of. Labels must identify:

- the date (or range of dates) the waste was generated;
- the type of waste, i.e., liquid, acid, solvent, solid, gas, etc.;
- if the waste is a mixture, the approximate percentage of ingredients must be noted;
- known hazards of the waste;
- the full name of the supervisor whose lab generated the waste, e.g., researcher or department;
- incompatibility of waste to other chemicals and/or substances.

Containers suitable for waste are:

- Designed to hold chemical waste and meet Transportation of Dangerous Goods requirements
- Reused or the original supplier container for the chemical to be disposed, reused containers must be in good condition
- Hold a maximum of 20L liquids waste (permission to use larger containers may be approved by special request to the Office of Human Resources - Health and Safety

Chemical Waste Requests must be made using the Llumin hazardous materials tracking system. Each chemical container must have a separate waste tracking number assigned by Llumin.

3.2 Used Chemical Reagent Containers

These bottles may contain a harmful chemical residue. Before disposing of these containers, they must be rinsed with an appropriate solvent. The rinsings must be collected as hazardous waste. Once decontaminated, the labels must be defaced and the bottle can be disposed of as regular waste.

For broken chemical reagent bottles, or other glassware that cannot be decontaminated, see Section 3.4 below for direction.

3.3 Biohazardous and Pharmaceutical Waste

Biohazardous wastes are defined as hazardous pathological waste pursuant to the provisions of the Ontario Environmental Protection Act. This waste is to be stored in specific containers supplied or approved by the waste carrier and available from the Health & Safety Office.

Biologically contaminated waste that has been effectively sterilized by autoclave and poses no other physical hazard (e.g. sharp, chemical, radioactive) may be disposed of in the regular garbage. Once autoclaved, the waste must be:

- placed in a black garbage bag
- tied closed
- left for pickup by Housekeeping staff

Biologically contaminated waste that cannot be decontaminated by autoclave or other acceptable means, shall be disposed of as follows:

- Pharmaceutical waste is to be stored separately from biohazardous waste in specific containers supplied or approved by the waste carrier and available from the Health & Safety Office.
- Contact the Health & Safety Office to arrange disposal.

3.4 Sharps

i) Sharps (Biological or chemical)

Sharps refers to all sharp objects such as but not limited to razor blades and needles, *including* those contaminated with **biological and chemical** materials. This waste is to be deposited into approved "sharps" containers. When full, sharps containers are to be placed in biohazardous waste containers supplied or approved by the waste carrier and available from the Health & Safety Office.

Contact the Health & Safety Office to arrange disposal.

ii) Chemically Contaminated Glassware

Chemically contaminated, broken glassware is to be deposited into a sealed non-breakable container, such as a large plastic pail. This waste must be separated to ensure non-compatible chemicals are not mixed. Once sealed, these containers must be disposed of as solid chemical waste and a waste request created in Llumin.

As with all chemical waste, chemically contaminated glassware must be appropriately contained, and properly labeled and disposed of.
Labels must identify:

- the date the waste was generated;
- ingredients of contamination must be noted;
- known hazards of the waste;
- full name of the person who generated the waste, i.e., researcher or department;
- incompatibility of waste to other chemicals and/or substances.

Chemical Waste Requests must be made using the Llumin hazardous materials tracking system.

iii) Broken Glass (Non-contaminated)

Broken glass poses a physical hazard to our Housekeeping staff and must be disposed of properly in an approved Broken Glass Box. These boxes consist of a cardboard shell lined with a plastic bag and a self-sealing lid. When full, the bag must be secured from opening and the self-sealing lid taped securely to the box. For disposal, the box should be marked "garbage" and a work order generated for its removal by Housekeeping staff.

Designated broken glass boxes are available at the Health and Safety Office.

3.5 Radioactive Waste

All radioactive waste requires special handling, containment and labeling to ensure compliance with the requirements of the Canadian Nuclear Safety Commission (CNSC). If you have or expect to generate radioactive wastes please contact the Health & Safety Office for guidance on waste disposal. Arrangements for disposal are made with a qualified radiation safety consultant as required.

4 Evaluation

This procedure shall be reviewed by the Manager, Health, Safety and Wellness every five years.

Review Period: Every five years, or as needed, by the Associate Vice-President (Human Resources);
Related Policies and Procedures: Laboratory Safety Policy; Biosafety Policy.