

Hazardous Laboratory Waste Disposal Guide

Department of Physics

Introduction

It is inevitable during normal laboratory operations that some chemical waste will be generated. This waste may take a number of forms including chemicals, solvents, stock solutions and items contaminated with chemicals such as paper, filters and contaminated laboratory equipment.

The improper disposal of chemical waste can pose a number of potential hazards both to the environment and to the safety of staff and students.

What is a Hazardous Substances?

A hazardous substance is a substance that is assigned a hazard statement code when classified using the GB CLP Regulation.

This means it contains substances or has properties that might make it harmful to human health or the environment. This does not necessarily mean it is an immediate risk to human health, although some waste can be.

Substances that are hazardous to health will require all of the substances involved in the process or research/teaching activity to be assessed, and for the appropriate controls to mitigate the risks to be put into place. In some situations a formal detailed COSHH assessment will be required in addition to the process or activity risk assessment. **An SDS sheet is not a valid COSHH assessment.**

Please note: All chemical hazard labels must be compliant with the **new standard** (CLP 2015) as seen in the picture below. Any labels using the old pictograms (CHIP) can be relabelled following the manufactures SDS sheet. However relabelling to achieve compliance should not be done when a chemical is past its expiry date and/or has degraded in quality. It should be disposed of following the appropriate waste stream. **It is poor practice to keep and store chemicals that are more than 5 years old.**



Duty of Care

Under the Environmental Protection Act 1990 it requires all persons involved in the handling and production of waste to take reasonable care and appropriate measures to ensure that:

- Waste is only kept, treated, deposited or disposed of in accordance with a waste management license or other authorisation.
- Waste does not escape from the control of the holder.
- Waste is only transferred to authorised persons such as registered waste carriers or licensed disposal operators who are permitted to accept that type of waste.
- All transfers / movements of waste are accompanied by an adequate written description of the waste allowing it to be identified and subsequently handled correctly.

The duty of care begins with the **person who generates the waste** and it cannot be delegated to others. This duty is legally enforceable and breaches of it can lead to criminal prosecutions of both the individual and the University.

Segregation of Hazardous Waste

Hazardous chemical waste should be segregated with regard to chemical compatibility / properties in order to reduce the risk of adverse chemical reactions occurring during either storage or transport.

Chemical Waste Containers

Chemical waste should only be stored in suitable containers e.g. glass Winchester bottles, which should be clearly labelled with the contents, name of the individual who has produced the waste and its associated CLP hazards.

Before any container is used for waste it should be checked prior to use or disposal to ensure that it is clean and does not contain any residue that could react with the waste. The integrity of the container must also be checked before it is used.

Storage areas for chemical waste

Waste containers may be stored in laboratory areas as a temporary measure while they are being filled until they can be transferred to Physics External Store (P3).

Containers of chemical waste (including historical and other obsolete chemicals) **should not be allowed to accumulate** in laboratories and working areas. When waste containers are full or substances are identified as no longer being required they should be disposed of appropriately as soon as possible.

Fume cupboards should not be used for the long term storage of waste or for unwanted chemicals to prevent them from being cluttered which may make them dangerous to work in.

Hazardous Chemical Samples

Samples produced as part of research should not be **not be allowed to accumulate** in laboratories and working areas. Samples need to be identifiable for disposal purposes. Labels should detail a name or group who are responsible for producing the waste as well as any associated hazards.

Handover of Laboratory Spaces

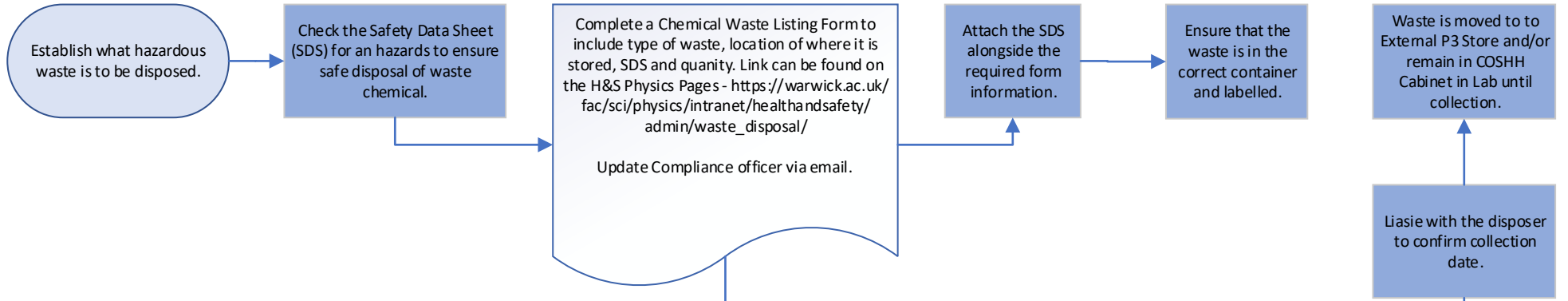
When vacating a laboratory space it should be left as it was found (clean and tidy). If you have any waste chemicals and/or samples stored the disposal of these needs to be organised **before vacating the laboratory**. It is not acceptable to leave waste or chemicals to accumulate in storage.

Process for disposing of hazardous chemical waste

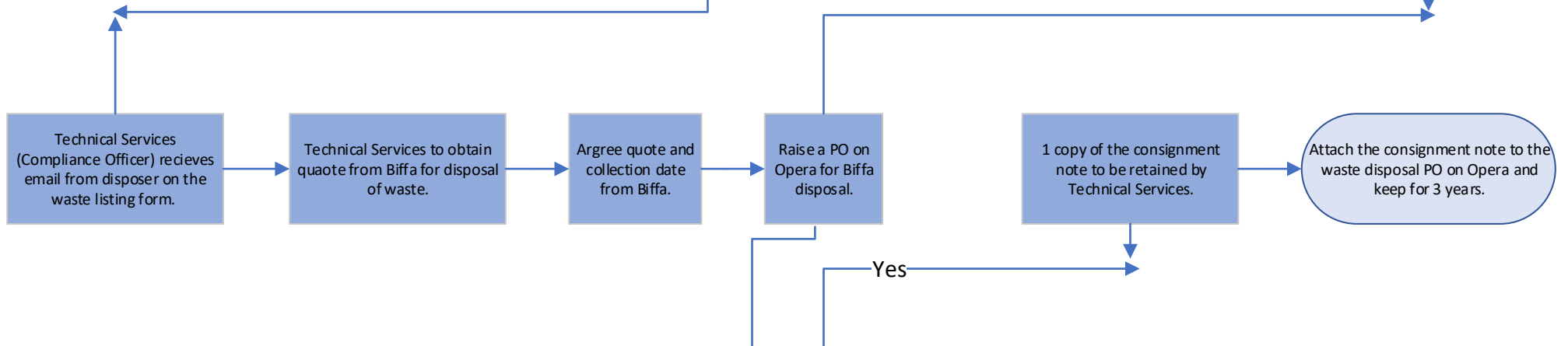
The attached flow chart explains the process for laboratory users (the 'disposer') when disposing of hazardous chemical waste in the department (Physics building, Millburn House and MAS).

Hazardous Waste Disposal Process - The Department of Physics

Disposer



Technical Services/Compliance



Waste Company

