

## DEPARTMENT OF ELECTRONIC AND ELECTRICAL ENGINEERING

# **Hazardous Waste Management Plan**

### 1. Introduction

Hazardous waste is a substance or material which has reached the end of its lifecycle which harmful (or contains substance or material that is harmful) to humans or the environment. This can be a solid, liquid or vapour including mixtures and examples include fuels and compressed gasses.

The Hazardous Waste Management Plan documents the responsibilities of the producer of the waste (the department) and the procedures on how to handle the waste from production up to the point where responsibility is handed over to the main UCL waste management plan and waste management contractors.

The plan does not cover the following areas of waste management as these are managed under separate UCL procedures:

- Domestic non-hazardous full information at Stay in the Loop
- UCL waste (rather than departmental waste)
  - o IT equipment (UCL assets only) Disposal IT equipment UCL login required
  - Reusable items and furniture Warp It
- Asbestos
  - o If asbestos is found or suspected
  - o UCL's asbestos management plan
- Radioactive waste
  - Radioactive waste procedures or email the Radiation Protection Team
- This Hazardous Waste Management Plan covers management of the hazardous waste produced by Department of Electronic and Electrical Engineering

## 2. Purpose of Hazardous Waste Management Plan

The purpose of this Hazardous Waste Management Plan is to:

- Identify the hazardous waste produced by Department of Electronic and Electrical Engineering
  - o What it is
  - Where it produced
  - o How it is produced
- Ensure that all staff and students know how to manage hazardous waste so that it is correctly labelled and packaged so that it enters the correct waste stream.
- Document the named person(s) who can provide advice on each waste stream.
- · Where to get advice if there are issues

The following table lists UCL procedures relating to hazardous waste.

Quantity limits	UCL Estates Waste and Recycling
Prevention of loss of control including additional controls such as autoclaving	Safety Services Transporting Infectious material  UCL Estates Laboratory Waste  Safety Services Sharps
Spill kits	Safety Services Chemical spill safety Safety Services Spill kits Safety Services Spills in CL2 & CL3
Emergency plans	Mercury Phenol (carbolic acid or hydroxybenzene)
Specific waste plans	For compounds that have been the subject of UCL Safety Alerts, information on waste management and best practice is available in the Chemical Safety Library

#### 3. Risk Assessment/COSHH

Lab activities should have risk assessments in place. These risk assessments are carried out locally by each lab or area. Hazardous waste will be identified as a hazard in these assessments and their management will be in the control measures.

If there is a new type of waste being produced that does not appear in this Plan, please contact the people listed in Section 8. For further information refer to the Safety Services website on how to classify the waste.

The risk assessment and/or COSHH forms and the procedure should consider the following (list not exhaustive):

- Safe packaging of the hazardous waste
- · Labelling of the hazardous waste
- The appropriate storage method
- Control measures for spillages
- If a container is used for storage at the point of generation for waste, whether it must be placed in a secondary bund, for example within a fume hood.
- Breakage and other emergency situations including fire precautions.
- Whether spill kits and spill training are required if required include the spill plan including where the kit is kept and who is responsible for the kit.

### 4. Waste Classification

List of Waste (LoW) is a UK Government document on the classification risk associated with different types of waste.

Description of waste	State	Quantity	Producer	Waste category	Classificati on code
Laboratory chemicals consisting of or containing hazardous substances, including mixtures of laboratory chemicals,	L	Low	Research, Roberts 906	мн	16 05 06
Liquid waste organic solvents, other solvents and solvent mixtures	L	Low	Research, Roberts 906	АН	14 06 03
Liquid waste organic solvents, halogenated solvents and solvent mixtures	L	Low	Research, Roberts 906	АН	16 06 02
Lead Batteries	S	Low	Teaching MPEB 6.02	АН	16 06 01
Alkaline Batteries	S	Low	Teaching MPEB 6.02	AN	16 6 04
Electrical and electronic equipment with no hazardous components	S	Low	Department Wide, Roberts and MPEB	AN	20 01 36
Discarded electrical and electronic equipment containing hazardous components but not florescent tubes, mercury or CFCs	s	Low	Department Wide, Roberts and MPEB	АН	20 01 35
Waste printing toner other than those containing hazardous substances	s	Low	IT department Roberts 604	MN	08 03 18

# **Waste Category Key:**

AH	Absolute Hazardous -	hazardous at a	any concentration
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MH Mirror Hazardous – only hazardous waste if the hazardous substance or substances within it are present above the threshold concentration.

MN Mirror Non-hazardous - identified as hazardous in the SDS but are in quantities below the threshold concentrations for each instance of waste disposal. Can be disposed of down designated sinks if they are water soluble and diluted etc. Details are here.

AN Absolute Non-hazardous - not hazardous in any way

A list of common hazardous waste substances is listed with their corresponding LoW code on the Safety Services website at <a href="https://www.ucl.ac.uk/safety-services/policies/2022/may/classification-hazardous-waste">https://www.ucl.ac.uk/safety-services/policies/2022/may/classification-hazardous-waste</a>.

## 5. Departmental Storage of Hazardous Waste

Each lab is responsible for their own hazardous waste storage using labelled containers and store them appropriately in their labs.

Type of waste	Location	Storage vessel	Volume of storage
Non-Chlorinated Solvent Waste	906	Glass bottle	2.51
Chlorinated Solvent waste	906	Plastic Bottle	2.51
Alkali	906	Plastic Bottle	5.01
Lead Batteries	MPEB 6.02	Вох	Smaller
Alkaline Batteries	MPEB 6.02	Вох	Large

# 6. Labelling of Hazardous Waste

Can use generic labels such as:

- Acid Waste
- Alkali
- Chlorinated Solvent
- Non-Chlorinated Solvent

However, **you must record every component in the waste container,** and it must be also listed on the Estates Waste Form.

Each area in EEE is responsible for removal of hazardous waste via the UCL central estates arrangements. All waste must be labelled clearly before central removal, the consignment notes will be kept by the DSO for three years before disposing via confidential waste.

## 7. Disposal of Hazardous Waste

# 7.1. Hazardous waste collection by UCL Estates

- Labs are to follow the central Estates protocol found here: https://www.ucl.ac.uk/estates/sites/estates/files/ucl\_chemical\_waste\_procedure.docx
- And the collection request form can be found here:
  <a href="https://www.ucl.ac.uk/estates/sites/estates/files/ucl\_new\_chemicals\_solvents">https://www.ucl.ac.uk/estates/sites/estates/files/ucl\_new\_chemicals\_solvents\_form.xlsx</a>

Consignment notes should be given to the Safety Officer, Roberts 914 who will keep them for 3 years in line with legislation.

### 7.2. Hazardous waste disposal via sinks

DO NOT dispose hazardous waste via sink.

#### 8. Contact

If you find waste that is not listed above and /or need further advice and help, please contact: Chemical Safety Officer for EEE: <a href="mailto:eee-safety@ucl.ac.uk">eee-safety@ucl.ac.uk</a>