Control of Substances Hazardous to Health Procedure

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CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH PROCEDURE

1. INTRODUCTION

The University uses substances hazardous to health in many of its operations, and accepts that it has a duty of care to reduce exposure to such substances to as low as reasonabley practicable.

The arrangements detailed in this procedure have been drawn up to inform staff how the University will comply with the requirements of the Control of Substances Hazardous to Health (COSHH) Regulations 2002.

There is a specific requirement under the COSHH Regulations to carry out a suitable and sufficient risk assessment in respect of all substances hazardous to health, and to put in place appropriate control measures to reduce the risk of exposure to staff, students and other persons who may be exposed as a result of the University's operations. The responsibility to ensure compliance with COSHH rests with the School, Department and all individuals involved.

When carrying out a COSHH risk assessment, reference should be made to other relevant procedures and regulations, e.g. those related to disposal of hazardous waste, PPE, Dangerous Substances and Explosive Atmospheres (DSEAR).

This procedure covers control of substances hazardous to health anywhere within the University. It also applies to areas outside of the University (e.g. during field trips and work in other establishments). In respect of works undertaken in other workplaces, assurance must be sought that the risk assessments and risk control measures produced by the controllers of those workplaces are suitable and sufficient, prior to the commencement of the activities that may give rise to exposure.

Further information regarding COSHH is available from the Health and Safety Team and Health and Safety Executive website.

2. ROLES AND RESPONSIBILITIES

The overall responsibility for compliance with the COSHH Regulations lies with the employer. In the University that responsibility lies with the University Court and the Principal and Vice - Chancellor. They will ensure that there are appropriate procedures and systems in place to manage the risk from hazardous substances. Responsibility for implementation of this procedure lies with the Deans of Schools and Heads of Departments.

In Schools, assessments should be carried out by those working with, or supervising those working with, hazardous substances. The requirement to carry out a COSHH risk assessment applies to all work involving hazardous substances within the School, including undergraduate practical class work and postgraduate projects. It is recommended that postgraduate and 4th year undergraduate students are involved in the preparation of the COSHH risk assessment for their projects. To ensure the University's legal integrity, all risk assessments generated by students must be audited prior to use to verify that they are suitable and sufficient and, where necessary, amended by their Academic Supervisor prior to commencement of work on the project. In this way, students not only absorb the requirements of the discipline that they are studying but also take ownership of the health & safety management that surrounds that discipline. Staff who specify a particular substance must consider the hazardous properties of that substance at the planning stage of a task, and must always give priority to using a safer alternative.

In Support Departments, competent staff using the substances should carry out the COSHH risk assessment. Management and Supervisory staff should audit the assessment to verify that

it is suitable and sufficient and, where necessary, amend it and communicate any changes to those affected.

The Health, Safety and Wellbeing Champion within each school and department must bring any concerns reported to them, and related to COSHH, to the attention of the Health, Safety and Wellbeing Committee as appropriate. All members of staff have a responsibility to take reasonable care of their own health, safety and welfare and that of others who could be affected by their acts or ommissions. As such, all members of staff must take ownership of health and safety within their area of responsibility. Any significant concerns that cannot be resolved must be reported to the Health, Safety and Wellbeing Champion to raise at the Committee.

The role of the Health and Safety Team is to advise and assist Deans of Schools and Heads of Departments and their staff on the implementation of this procedure.

Every employee has a duty to co-operate with their employer to enable the employer to comply with the COSHH Regulations; to make proper use of any control measure, personal protective equipment or other equipment or facility provided; to report any defects found and to report any accidents or incidents in which they are involved.

3. SUBSTANCES HAZARDOUS TO HEALTH

Substances that are hazardous to health include:

- Those identified by the European Regulation (EC) No 1272/2008 on Class, Labelling, and Packaging of Substances and Mixtures, known as the GB CLP Regulations
- Substances with workplace exposure limits (these are listed in the HSE publication EH40 Workplace Exposure Limits). Workplace Exposure Limits relate to airborne substances which enter the body via inhalation. These substances have a maximum level beyond which a person must not be exposed, either within a short term (15 minutes) or long term (8 hours)
- Biological agents (bacteria and other micro-organisms), if they are directly connected with the work
- Any kind of dust if its average concentration in air exceeds the levels specified in EH40
- Any other substance which creates a risk to health (e.g. gases such as argon or helium, which, while not dangerous in themselves can endanger life by reducing the amount of oxygen available to breathe; pesticides; medicines; cosmetics; or substances produced in chemical processes).

Substances that are hazardous to health may include proprietary preparations such as paints, lubricants and cleaning materials. Materials freely available for domestic use are therefore covered by the COSHH Regulations as they are being used “at work”.

4. COSHH ASSESSMENT

Step 1: In order to complete a COSHH assessment, you first need to gather information about the hazardous properties of the substance. In order to do this, an inventory of all substances hazardous to health used or produced should be created. Information can be found from Safety Data Sheets, product labels, manufacturers/suppliers, EH40, Approved List of Biological Agents and relevant trade association or professional body literature. The form in Appendix 1 should be used for this purpose. You will also have to identify what the routes of exposure are, e.g. inhalation, ingestion, injection or absorption.

Step 2: Information related to the task and individuals involved should also be determined, including: frequency and duration, existing control measures in place, who could be harmed and how, whether there are susceptible people exposed, the environment where exposure takes place (e.g. indoors versus outdoors), the methods used (e.g. hand applied versus spray) etc.

Step 3: With all the information you have gathered on the substance, environment, task and persons exposed you will now be able to evaluate the risk and determine what controls may be required.

Step 4: The COSHH assessment must be recorded using the template in Appendix 2, unless approval is granted by the Health and Safety team to use an alternative.

Step 5: The COSHH assessment must be reviewed at least annually. Review should occur sooner if there is any reason to suspect that the assessment is no longer valid, if there has been any significant change, if an incident has occurred, or if results of monitoring or health surveillance indicate that controls are not being effective etc.

In some cases, further detailed assessments may be required in order to evaluate the risk from hazardous substances. HSE Guidance is available in the form of HSG 173 Monitoring Strategies for Toxic Substances and Methods for the Determination of Hazardous Substances. In these instances, specialist advice may be required from an Occupational Hygienist, which should be arranged by the persons overseeing the works. Any activity involving carcinogens, mutagens or asthmagens may require specialist expertise and control measures.

5. CONTROL MEASURES

Schedule 2A of the COSHH Regulations outlines the Principles of Good Practice for the Control of Exposure to Substances Hazardous to Health:

a) Design and operate processes and activities to minimise emission, release and spread of substances hazardous to health

b) Take into account all relevant routes of exposure - inhalation, skin absorption, ingestion and injection when developing control measures

c) Control exposure by measures that are proportionate to the health risk

d) Choose the most effective and reliable control options which minimise the escape and spread of substances hazardous to health

e) Where adequate control of exposure cannot be achieved by other means, provide, in combination with other control measures, suitable personal protective equipment

f) Check and review regularly all elements of control measures for their continuing effectiveness

g) Inform and train all employees on the hazards and risks from the substances with which they work and the use of control measures developed to minimise the risks

h) Ensure that the introduction of control measures does not increase the overall risk to health and safety

In choosing the “most effective and reliable control options”, consideration should first be given to eliminating the risk, substituting the risk for a safer alternative (e.g. irritant instead of corrosive), modifying the process, engineering controls, enclosing the process, minimising exposure and use PPE.

There is a wide range of Respiratory Protective Equipment (RPE) available, therefore careful consideration should be given to the type selected to ensure it is correct for the task, the environment and the wearer. RPE (except disposable respirators) must be thoroughly examined and, where appropriate, tested at least once every month and a record kept using the

form in Appendix 3. Records must be retained for 5 years. Note: In the case of respirators used only occasionally, an examination and test should be made prior to next use and maintenance carried out as appropriate.

Under COSHH, adequate control of exposure to a substance hazardous to health means the following:

- Applying the eight principles of good practice set out in Schedule 2A of the COSHH Regulations, as listed above
- In the case where a workplace exposure limit (WEL) has been set for the substance, then not to exceed this WEL
- If the substance causes cancer (carcinogens), heritable genetic damage (mutagens) or sensitisation, reduce exposure to as low a level as is reasonably practicable below the WEL

Regular checks must be made on interlocks, warning lights, safe systems of work etc to ensure they are used and continue to operate as intended. These checks include visual checks, inspection, testing, servicing and remedial work. Each School/Department is responsible for appointing relevant persons to ensure that this is carried out.

6. STORAGE OF HAZARDOUS SUBSTANCES

All substances hazardous to health should be stored safely and securely. Recommendations on how to do this can be obtained from the product label and Safety Data Sheet. The following general guidelines should be considered: do not purchase large quantities of chemicals that will not be used, secure in a suitable chemical store cupboard with adequate containment, separate substances which may react with one another, ensure any containers used to store chemicals are adequately labelled and do not store chemicals above head height.

7. MONITORING EXPOSURE

In certain circumstances, the COSHH Regulations require that the exposure of employees to substances harmful to health should be monitored:

i) When there could be serious risks to health if control measures were to fail or deteriorate
ii) When exposure limits might be exceeded
iii) When control measures might not be working properly

If monitoring of exposure is carried out, then records must be kept of the results of that monitoring for at least five years. If the results of exposure monitoring can be linked to the personal exposure of identifiable persons then records must be kept for a minimum of 40 years. These records will be maintained and kept by the University's Occupational Health Service.

8. HEALTH SURVEILLANCE

The COSHH Regulations require health surveillance in the following circumstances:

i) Where an employee is exposed to one of the hazardous substances or process listed in Schedule 6 to COSHH and there is a reasonable likelihood that an identifiable disease or adverse health effect will result from that exposure;

ii) Where employees are exposed to a substance linked to a particular disease or adverse health effect and

a. there is a reasonable likelihood, under the conditions of the work, of that disease or effect occurring, and
b. it is possible to detect the disease or health effect

iii) An Occupational Health Advisor or Occupational Health Physician determines that such health surveillance is appropriate.

Where health surveillance is carried out, a simple health record must be kept. Records must be kept for at least 40 years. These records will be maintained and kept by the University's Occupational Health Service.

9. INCIDENTS

Where the work activity gives rise to a risk of an accident, incident, or emergency involving exposure to a hazardous substance, the person responsible for the task must ensure that plans are made to deal with an emergency situation before it happens. These contingency plans should be attached to the risk assessment or may be posted as warning notices within the area where the emergency situation could arise.

Note that in the case where carcinogens, mutagens, sensitisers or biological agents are used then emergency plans and procedures must be in place.

All incidents must be reported on the Awaken Incident Reporting System.

10. INFORMATION, INSTRUCTION AND TRAINING

Suitable and sufficient information, instruction and training must be provided to employees and any other relevant persons. The person with overall responsibility for the task should ensure that this is carried out. This should include:

- the names of the substances they work with, or could be exposed to, and the risks created by such exposure
- access to any safety data sheets that apply to those substances
- the main findings of the risk assessment
- the precautions individuals must take to protect themselves and others
- how to use personal protective equipment and clothing provided
- results of any exposure monitoring and health surveillance (without giving individual employees' names)
- any emergency procedures which need to be followed.

11. ENGINEERING CONTROLS

The COSHH Regulations require that where engineering controls are provided, they must be maintained. In the case of Local Exhaust Ventilation (LEV) systems they must be thoroughly examined at least once every 14 months, unless processes listed in Schedule 4 of the Regulations are taking place.

Deans of Schools or Heads of Departments are responsible for having appropriate equipment maintenance arrangements in place. Engineering controls must be regularly checked to ensure they continue to operate as intended, in order that prevention or adequate control of exposure is maintained. These checks should include visual checks, inspection, testing, examination, servicing and remedial work. A record of these interim checks and of work carried out must be retained for a period of at least 5 years.

APPENDIX 1 – INVENTORY OF HAZARDOUS SUBSTANCES

Substance	Quantity in Stock	Hazard Classification (toxic, corrosive, etc?)

Appendix 2

COSHH - Risk Assessment Template

	COSHH Risk Assessment No:	
School: Computing, Engineering, Physics and Physical Sciences [CEPS]	Section/Area:	
Describe the activity or work process. *(Include how long and how often this is carried out and the quantity of substance used)*		
Location of process being carried out?		
Identify the persons at risk:	Employees *(including trainees)* ☐ Contractors ☐	Public *(including students)* ☐
Name the substance involved in the process and its manufacturer. *(A copy of a current safety data sheet for this substance should be attached to this assessment)*		

Classification *(state the category of danger)*

☐ Acute toxicity Cat 1-3	☐ Serious health hazard	☐ Aquatic Environment
☐ Acute toxicity (cat 4)	☐ Flammable	☐ Explosive
☐ Corrosive	☐ Oxidising	☐ Gas under pressure

Hazard Type

☐ Gas ☐ Vapour ☐ Mist ☐ Fume ☐ Dust ☐ Liquid ☐ Solid ☐ Other (State)_____

Route of Exposure

☐ Inhalation ☐ Skin ☐ Eyes ☐ Ingestion ☐ Other (State)_____

Workplace Exposure Limits (WELs) On MSDS or WEL 2005 document on staff drive.
Please *indicate n/a where not applicable*

Long-term exposure level (8hrTWA):	Short-term exposure level (15 mins):

State the Risks to Health from Identified Hazards

Control Measures: *(for example extraction, ventilation, training, supervision). Include special measures for vulnerable groups, such as disabled people and pregnant workers*
Is health surveillance or monitoring required? Yes ☐ No ☐
Personal Protective Equipment *(state type and standard)*

 ☐ Dust mask		 ☐ Visor	
 ☐ Respirator		 ☐ Goggles	
 ☐ Gloves		 ☐ Overalls	
 ☐ Footwear		 ☐ Other	

First Aid Measures
Storage
Disposal of Substances & Contaminated Containers
Hazardous Waste ☐ Skip ☐ Return to Depot ☐ Return to Supplier ☐ Other ☐
(If Other Please State):----------

Is exposure adequately controlled?	Yes ☐ No ☐
What further action needs to be taken	

Action	By Who	By what date

Assessed by and date :

Approved by and date :

Date of next assessment :

New and old CLP symbols

New Pictogram	Number	Hazard Class (CLP)	Old "CHIP" Symbol
	GHS-01	Explosives; Self-reactive substances and mixtures, types A, B; Organic peroxides, types A,B	 Explosive
	GHS-02	Flammable gases, aerosols, liquids or solids; Self-reactive substances and mixtures; Pyrophoric liquids and solids; self-heating substances and mixtures; Substances and mixtures which in contact with water emit flammable gases; Organic peroxides	 Highly/extremely flammable
	GHS-03	Oxidising gases, liquids and solids	 Oxidising
	GHS-04	Compressed gases, liquids and solids; Liquefied gases; Refrigerated liquefied gases; Dissolved gases	No current symbol
	GHS-05	Corrosive to metals; Skin corrosion; Severe eye damage	 Corrosive

New Pictogram	Number	Hazard Class (CLP)	Old "CHIP" Symbol
	GHS-06	Acute toxicity (Cat 1-3)	 Toxic/ Harmful Very Toxic
	GHS-07	Acute toxicity (Cat 4) Skin and eye irritation; Skin sensitisation; Specific target organ toxicity; Respiratory tract irritation; Narcotic effects	 Harmful/Irritant
	GHS-08	Respiratory sensitisation; Germ cell mutagenicity; Carcinogenicity; Reproductive toxicity; Specific target organ toxicity; Aspiration hazard	 No current specific symbol Use either
	GHS-09	Hazardous to the aquatic environment	 Dangerous for the environment

APPENDIX 3 – TESTING AND THOROUGH EXAMINATION OF RPE

Date of Examination	**Name of Examiner**	**Is condition of equipment satisfactory?** (Are all parts present, correctly fitted, and is the equipment in good working order? Check in particular the integrity of straps, face pieces, filters and valves)	**Particulars of defects found.** (Note: Defects must be remedied before further use).	**Date repairs completed**