TO BE READ IN CONJUNCTION WITH ESP 21 PERMIT TO WORK, AND ESP 23 AUTHORISING PERSONS PROCEDURES

1.0 PURPOSE

The purpose of this procedure is to ensure that all LEV used by the University has been correctly sourced, installed and serviced following competent advice.

This procedure defines the process and actions of persons involved in making the decisions, who should be involved and at what point during procurement and installation.

It also covers the fumigation process (where necessary), servicing and any subsequent maintenance, testing and ultimate disposal of previously used LEV.

IT DOES NOT COVER THE ACTUAL DAY TO DAY USE OR MANAGEMENT OF INSTALLED LEV.

When followed it will ensure that the LEV equipment installed for Staff and Student use has been correctly specified and installed to reduce the known risk to their health from the substances they are using in the course of their work/study.

1.1 Definitions

LEV is deemed to be any equipment that extracts known harmful substances from source, and filters out the harmful substance before either returning the air back into circulation within the room or feeds it externally to the wider atmosphere.

As such it would be expected to contain the following pieces of equipment as a minimum.

1.1.1 A hood that captures the containment at its source.
1.1.2 Ducts for transporting the contaminated air.
1.1.3 An air-cleaning device that removes/minimises the contaminant.
1.1.4 A fan that moves the air through the system.
1.1.5 An exhaust discharging the filtered air back into circulation.

Harmful Substance is accepted as any of the substances listed in the latest amendment of the EH40 2005 2nd edition (published 2011) of workplace exposure limits as issued by the Health & Safety Executive (HSE). Access to this document can be gained through the University Health & Safety Department who maintain an up to date copy.

2.0 GENERAL

If a known hazardous substance must be used for educational, conservation or research purposes then the University has a legal obligation to reduce the risk to the individual's health and safety to an acceptable level.

The accepted manner for this has traditionally been to design and install an effective LEV system. The user should also be trained how to operate the system correctly and fill in the LEV log book required by law to enable Estates Services to assess and formulate the correct maintenance programme to ensure the LEV is efficient and actually can do the role it was designed and installed to carry out to protect the user.

Failure to do this would result in the University being in breach of currently health and safety regulations and would constitute a possible threat to **not only the individual user's personal health and safety but possibly those people in the area that the work is being carried out in.**

2.0 PROCEDURE

When a substance has been notified to the Health & Safety Department for adding to their COSHH data base, if it is flagged up as being a harmful substance the Health & Safety Department who will notify the proposing end user college that the substance is known to be harmful to humans and what the safe level is, that the control methods must bring down the exposure limits to, according to EH40.

It is then up to the College to carry out a Risk Assessment with the support of the University Health & Safety Department. The Risk Assessment should then trigger a Method Statement also agreed by the University Health & Safety Department and may include such options as using another substance, using a less concentrated form, a different process or external control methods such as LEV if there are not other viable options to the same end result.

2.1 Initiating the Procedure

A request is made to Estates Services with the supporting Method Statement and Risk Assessment that an LEV system is required (the above steps have already justified it).

2.2 LEV Design & Installation Process

2.2.1 Estates Services will add the job onto their authorised projects list of tasks for the next period when students are off site to enable them to get access to carry out the work.

2.2.2 Providing the project has been granted funding by the University, it will then proceed to the next stage which would be to approach an external LEV designer for designs to be prepared to meet the specifications requested in the method statement.

2.2.3 Once a design has been costed and approved it will be installed and if necessary (particularly for hazardous substances or the first in a programme of many in the installation) it will be tested to ensure it meets the required specifications.

2.2.4 Providing it meets the required specifications it will then be commissioned and supporting documentation (operating handbooks) will be issued by the supplier/installer to Estates Services.

2.3 Completing the Project – Handover of the LEV

2.3.1 Once the correct paperwork has been handed over to Estates Services who will issue the supporting logbook and adding the system to its maintenance schedule with the data from the commissioning certificate.

3.0 MAINTENANCE OF EQUIPMENT

3.4.1 All known (on Estates services master schedule) LEV equipment will be asset marked and recorded on the Universities CAFM system will have as a minimum a service and thorough examination carried out by a specialist LEV company every 6 or 12 months (however up to 14 months is allowed for the purposes of arranging access to the fume cabinets), dependent upon the category of equipment or its risk to human health.

3.4.2 The Universities Insurance supplier (currently Zurich) also carry out 100% test of LEV systems to ensure equipment safety, efficiency and operation.

3.4.3 After the annual service has been carried out, a function test is also carried out and a service report generated and sent to the E&CF department to enable them to amend their master schedule.

3.4.4 Any LEV equipment whose test result drops more than 10% of the previous year's measurements, should be further investigated and attempts made to bring it within either 10% of commissioning data or 10% of earliest recorded data.

3.4.5 Whilst it is below the acceptable minimum standard it must be notified to the Estates services Compliance officer to ensure that it is brought to the attention of the user and a **'Do not use sign**' should be placed over the operation switches, where it is safe to do so the fume cabinet electrics will also be isolated at the relevant distribution board

This sign must stay in place until the Estates Services Compliance officer has been informed and received evidence that it has been returned back to a satisfactory working condition.

3.5 Fumigation of LEV prior to servicing or maintenance

Some Category 2 LEV equipment is used specifically to allow the safe handling and growth of bacterial organisms harmful to human health, these need to be fumigated prior to a service or maintenance being carried out.

There are strict controls on site to ensure the type 2 biological containment environment is not breached. However every 6 months the LEV must be serviced to ensure efficient operation and control of the environment.

If the system has been used to house or promote growth of biological materials or for research on biological materials then it must be fumigated to protect the health and well-being of the specialist service engineers.

We use Formalin for fumigation which can also have detrimental effects to human health as such it is a permit to work controlled activity.

Related Legislation

- Health & Safety at Work Act 1974
- Electricity at Work Regulations 1989
- Workplace (Health, Safety & Welfare) Regulations 1992
- Provision and Use of Workplace Equipment Regulations 1998
- Management of Health & Safety at Work Regulations 1999
- Control of Substances Hazardous to Health Regulations 2002
- Regulatory Reform (Fire Safety) Order 2005
- Working at Height Regulations 2005
- Control of Asbestos Regulations 2012