Health and Safety Services
Wellbeing, Safety and health

UNIVERSITY OF LEEDS

Local Exhaust Ventilation (LEV) Systems

Standard

Introduction

The University has a wide variety of Local Exhaust Ventilation (LEVs) systems which are used to control the risks from hazardous airborne substances; they range from simple bench top devices through to much more complex building-wide LEV systems. Responsibility for managing the many aspects of LEVs, from the initial selection, design and installation, through to the use, formal examination, checking, maintenance and repair, and onto the eventual decommissioning of the LEVs, can belong to different roles and teams.

What do we mean by Local Exhaust Ventilation (LEV)?

Local Exhaust Ventilation is used to control airborne hazardous substances (i.e. contaminated air) by capturing the airborne contaminates as soon as they are generated and removing them from a person's breathing zone before they can be inhaled causing harm.

The contaminated air is then drawn away and may be discharged into the air at a distant point (such as the rooftop) where the dilution effect of the atmosphere reduces the concentration to acceptable levels, or it may be cleaned up (e.g. by particulate filtration) and discharged back into the workplace, or elsewhere.

Where an LEV system is needed to protect anything other than people (e.g. the environment, animals, etc), then talk to your Health and Safety Manager.

This protocol covers **four types of LEV** as identified by the University: ducted fume cupboard, ducted microbiological safety cabinet, ducted other LEV (e.g. woodworking dust extractor, down-flow table, snorkel) and unducted LEVs (also known as recirculating LEVs – e.g. unducted fume cupboards, recirculating microbiological safety cabinets, solder workstations).

This protocol *does NOT include*: general building ventilation, dilution ventilation (see definitions for more information) or respiratory protection equipment (RPE – e.g. filter mask). If you are unsure what type of ventilation/LEV is installed in your area talk to your Health and Safety Manager.

Standard

The University takes a management approach based on the adequate control of the risks backed up by the need for legal compliance, and expects that:

In general

- LEVs are used where the need to control airborne hazardous substances by use of LEV is identified through a risk assessment.
- Responsibility for the LEVs is identified, based on the attached Table 1.
- The type of LEV and its intended use is identified in an inventory which is updated annually and all new LEVs (except microbiological safety cabinets) are reported to the University Insurance Officer.
- Head of School/ Service identifies the lead person in each location where LEVs are installed
- Where use of an LEV is shared, then management for that system is formally agreed in writing.
- Before their first use of an LEV new to them, each user is given an induction including as a minimum: how to use the LEV correctly, how to carry out a pre-use visual check and possible effects of and dealing with failure of the LEV.
- Any LEV that fails the formal examination, or has gone past its formal examination date, or is not functioning as intended, is taken out of use and signed, to indicate that it cannot be used until addressed (also see formal examination section below for further details).
- The activity risk assessment considers any need for emergency processes related to the use of LEV and where required these are put in place.
- People working with LEVs are given supervision and training as identified in the training matrix, and this is recorded.
- Contractors appointed to either formally examine or service LEVs are competent.
- Any variation to this Standard and Table is formally agreed in writing by the Head of Health and Safety and/ or Head of FD Estates.

Use of LEV

- Local arrangements are produced to manage the use of LEV.
- An LEV is used to control the hazard for which it has been designed.
- A pre-use visual check of the LEV is carried out each time before it is used and if defects are identified these are recorded and reported.

Formal examination

- LEV is formally examined at least once every 12 months or more frequently where a requirement to do so is identified in the Table 2.
- Each LEV is labelled by the formal examiner with their name and the last and next examination dates.
- Records of the formal examination are kept for at least 5 years.

Selection, design, installation and commissioning of new LEV

- Head of School/ Service identifies a lead person in each location where LEVs are selected or designed.
- An assessment is undertaken to identify the requirement for a new LEV (or any significant alteration to an existing system). This includes as a minimum: input from a user representative and the local Health and Safety Manager/ specialist; likely type of hazards; relevant European standard to be met (if there is no European standard, competent advice is obtained); any need for make-up-air is identified and factored in as part of the assessment.
- LEVs are installed by a competent person in accordance with the European quality standards; if there is no European standard, competent advice is obtained and a record kept.
- Before first use, and/ or after any significant modification or repair, LEVs is commissioned and a commissioning report provided.
- The user manual and log book is obtained from the LEVs supplier (or installer on the supplier's behalf) and a copy is kept with the LEVs and used to inform the maintenance programme.

Maintainer checks, maintenance and repair of LEV

- A documented programme of maintenance is scheduled and carried out.
- The LEVs maintainer and the person carrying out LEVs maintenance or maintenance checks are competent.
- If a repair that is vital to the protection of users is identified during the formal examination, then once the repair is carried out the LEV is formally re examined to prove its effectiveness before being put back into use.
- Records of any repairs carried out are kept for at least 5 years.