

Local Exhaust Ventilation (LEV) Systems

Tables and appendix

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Author:	HSS	Approved by:	<i>Gary Tideswell</i>	Version number:	2	Issue Date:	July 2014

Table 1: Responsibilities for local exhaust ventilation

Due to the variety of local exhaust ventilation systems at the University, from simple bench top devices through to building wide and more complex systems, responsibility for managing the many elements (cupboards, ducting, fans, motors, stacks, etc.) which may form an LEV system will belong to a number of different people.

Basic principles of responsibility for different types of local exhaust ventilation

Determining who has responsibility for any LEV system depends on the type of system in use and how contaminated air is removed from the work area (i.e. removed by ductwork to the outside or just re-circulated through filters back into the room). In general LEV systems will fall into one of the groupings identified in the table below, for each type responsibility for an LEV system is managed differently. A key principal is that ductwork systems are normally seen as part of the fabric/ structure of the buildings which house them and as such fall within FD Estates remit.

However in a small number of instances, there may be a variation to the responsibilities for a system set out below, if this is the case then contact your Health and Safety Manager for further advice.

Table 1: LEV responsibilities

Local Exhaust Ventilation Systems – who takes leading responsibility					
Action	R e s p o n s i b i l i t y				
	Duct-work system	Ducted fume cupboard	Ducted micro-biological safety cabinet (MBSC) But <u>not</u> including any duct-work system	Ducted other LEV	Un-ducted LEV systems (also known as mobile or recirculating LEV systems)
Selects or designs	FD Estates in collaboration with the user (school or service)		Local school or service in collaboration with FD Estates		Local school or service
Arranges installation and commissioning	FD Estates		Local school or service		Local school or service
Arranges routine maintenance (e.g. Planned Preventative Maintenance, servicing)	FD Estates		Local school or service		Local school or service
Arranges repairs	FD Estates		Local school or service		Local school or service
Keeps records of repairs etc.	FD Estates		Local school or service		Local school or service
Arranges formal examination	FD Estates		Local school or service		Local school or service
Keeps a record of the formal examination	FD Estates		Local school or service		Local school or service
Carries out the formal examination (see frequency table on page 3)	University appointed examiner	University appointed examiner	School appointed examiner	University appointed examiner	MBSC by School appointed examiner. University appointed examiner for others
Inducts	FD Estates		Locally by the LEV users in the school or service		Locally by the LEV users in the school or service
Trains	FD Estates		Locally by the LEV users in the school or service		Locally by the LEV users in the school or service
Checks (daily or other)	FD Estates		Locally by the LEV users in the school or service		Locally by the LEV users in the school or service
Reports faults	FD Estates		Locally by the LEV users in the school or service		Locally by the LEV users in the school or service
Used	N/A		Locally by the LEV users in the school or service		Locally by the LEV users in the school or service

Table 2: Frequency of formal examination

All LEV is formally examined at least once every 12 months or more frequently where a requirement is identified in the Table below.

Process for which the LEV is being used	Minimum frequency
Standard use of LEV to control airborne hazards not otherwise specified below	yearly
Processes which have the potential to generate infectious aerosols that contain hazard group 3 biological materials.	6 monthly
Processes which have the potential to generate infectious aerosols that contain any of the following hazard group 2 organisms: <i>Bordetella pertussis</i> , <i>Corynebacterium diphtheria</i> , <i>Neisseria meningitidis</i>	6 monthly
Processes, other than wet processes, in which metal articles (other than gold, platinum or iridium) are ground, abraded or polished using mechanical power, in any room for more than 12 hours in any week.	6 monthly
Processes giving off dust or fume in which non-ferrous metal castings are produced.	6 monthly
Processes in which blasting is carried out in or incidental to the cleaning of metal castings, in connection with their manufacture.	monthly
Jute cloth manufacture.	monthly

Appendix 1: A selection of relevant legislation standards and guidance

Legislation:

- The Control of Substances Hazardous to Health Regulations 2002
- The Control of Substances Hazardous to Health Regulations 2002 (as amended), Approved Code of Practice and guidance, L5 (sixth edition) published 2013.

European Standards:

- BS EN 14175:2006 – Fume cupboards. Variable air volume fume cupboards.
- BS 7258 part 2 – Laboratory fume cupboards. Recommendations for selection, use and maintenance: 1994 (**withdrawn**, but can be used for reference purposes).
- BS 7989:2001 – Specification for recirculatory filtration fume cupboards.
- BS EN 12469:2000 – Performance criteria for microbiological safety cabinets.
- BS 5726:2005 – Microbiological safety cabinets - Information to be supplied to the purchaser from the supplier and to the installer, and siting and use of microbiological safety cabinets - Recommendations and guidance.
- BS EN 12779:2004+A1:2009 - Safety of woodworking machines. Chip and dust extraction systems with fixed installation. Safety related performances and safety requirements.
- BS EN ISO/IEC 17020:2012 – Conformity assessment. Requirements for the operation of various types of bodies performing inspection.
- BS EN 1127-1:2011 Explosive atmospheres. Explosion prevention and protection. Basic concepts and methodology.

Guidance:

- HSG258 - Controlling airborne contaminants at work.
- Clearing the air - A simple guide to buying and using local exhaust ventilation (LEV).
- DW/144 HVCA – Specification for sheet metal ductwork. Low, medium and high pressure/velocity air systems.
- DW/154 HVCA 2000 – Specification for plastics ductwork.
- DW/191 HVCA 1973 - Code of practice for resin-bonded glass fibre ductwork metric.
- The technical basis for COSHH essentials: Easy steps to control chemicals HSE 2009
- ACGIH Industrial ventilation: A manual of recommended practice for design (27th edition).