Question: *Are biological safety cabinets (full isolators) regarded as LEV and if so how should effectiveness be "tested" and what should a good "thorough examination" look like?*

Answer: Isolators are considered as LEV under the COSHH Regulations and, as such, are required to have regular examination and tests at intervals not greater than 14 months. At containment level 3 or 4 it is recommended that this be done every 6 months, in line with microbiological safety cabinets.

At commissioning 5 tests are considered essential;

1. Air leaktightness
2. Leak detection
3. Filters
4. Negative pressure
5. Air change rates.

A good thorough examination should include (but not be limited to) the following, and the actual tests performed adjusted to suit risk and accessibility.

1. Visual inspection of canopy, gauntlets, sleeves etc
2. Monitoring of manometers
3. Isolator housekeeping
4. Visual surface examination including ducting
5. Integrity of canopy using soft soap or smoke pencil visualisation
6. Integrity of gauntlets/gloves using soft soap or smoke pencil
7. Alarm test
8. Anti blow back valve check
9. Check integrity of filter and housing
10. Monitor inlet filter pressure drops
11. Calibrate manometers.

Question: *In woodwork Industry - as well as LEV testing and maintenance, do you recommend annual personal monitoring for respirable and total dust?*

Answer: It depends. If you have no exposure data at all then some monitoring would be useful. Assessing personal exposures is one way of demonstrating that your LEV system is providing adequate control. If your LEV system is performing adequately and you have personal exposure data to show that control is adequate, there is no specific requirement to continue to monitor, unless something changes that may affect exposure. Having said that many companies conduct regular exposure monitoring to demonstrate that control is being maintained.

Question: *What LEV controls are required while grinding within a workshop?*

Answer: This is a difficult question to answer without more information. The need for LEV will depend on many variables. For example:

1. Grinding what material? For example, if mild steel and a beryllium alloy were being ground, the controls for each would look very different.
2. Frequency
3. Performed wet or dry
4. Numbers of people involved
5. Type of grinding process, fixed grinders or hand grinders
6. Outcome of COSHH assessment

Question: *Do you have any guidance on log books?*

Answer: HSG 258 contains a section on user manuals and log books (pages 57, 58, 59)

The user manual should contain a description of the system, how to use the system, how to maintain it , the spares available and a list of things that can go wrong. It should also contain a detailed system diagram.

All LEV systems require a log book that contains schedules and forms to keep records of regular checking, maintenance and repair. The logbook contains:

1. Schedules for regular checks and maintenance
2. Records of regular checks, maintenance, replacements and repairs
3. Checks of compliance with the correct way of working with the LEV system
4. Name of person who made checks.

Examples of what should appear on checklists (not complete)

1. Hoods, static pressures
2. Dampers
3. Duct inspections
4. Maintenance carried out
5. Replacement to system
6. Air cleaner inspection.

Question: Is *LEV restricted to small areas or does it include whole rooms?*

Answer: I am not exactly sure what this question is referring to. LEV can be used to control releases from a single point source within a room or indeed the whole room could be classed as LEV, as is the case with a downdraught spray booth.

Background

I have a query or two relating to spray shops. In brief:

- We have built our own spray shop for the use of water based marine paints (avoiding isocyantes, Epoxy and Alkyd based paints).
- The building is within our yard, on the coast with no obvious receptors nearby. The predominant wind direction moves away from offices.
- Dimensions of the spray shop is 22m long x 10m wide x 6.6m high.
- The spray shop has high level vents but no active extraction system.
- We won't be using a great volume of paint and expect to be well below the limit requiring an emissions licence.
- Those undertaking the work will be using a continuous air feed system.
- All lighting is zone 2 and there are no plugs fittings within the spray shop.
-

Question a: *Would we be expected to use an active extraction system with or without a filtration system?*

Answer a: There is quite a lot to consider for this situation and I do not feel it is possible to answer fully in just a few sentences. Under COSHH (Reg 7) employers have a duty to ensure that exposure of his employees to substances hazardous to health is either prevented or adequately controlled. Where exposure cannot be prevented protection measures should be employed that are appropriate to the activity and consistent with the risk assessment.

The Regs state that where control cannot be achieved by other means that PPE equipment in addition to other measures (design and use of appropriate work processes, control of exposure at source, adequate ventilation, etc) can be used. The general principal of the hierarchy of control should be employed and the "Principles of Good Practice For the Control of Exposure to Substances Hazardous to Health" detailed in Schedule 2A should be followed.

Question b: *There is a door for general access however, the roller shutter doors are not rated for use in explosive atmospheres. Would it be sufficient for them to be managed solely using a safe system of work i.e. not to be run until the room has vented for x length of time?*

Answer b: I would recommend that a risk assessment under the Dangerous Substances and Explosive Atmosphere Regulations 2002 (DSEAR) be conducted.

Question: We have rubber fume and dusts to contend with at my workplace and my question would have been on the requirement to monitor individuals (how often etc) - we have airlite pumps etc One thing we do here is to process our own tests in our Chemistry Lab which HSE have agreed to. However I wonder if there is anything to say that 3rd party testing is required - even if just on occasional tests?

Answer: No, there is nothing in the COSHH Regulations to say that third party testing is required. Wherever technically possible I would recommend that validated analytical methods are followed and that a UKAS accredited laboratory be used for the chemical analysis. Some companies do conduct third party testing occasionally to validate their own work. Employers also have a duty to ensure that whoever carries out the sampling is competent to do so, Reg 12 (4).