UNIT-7

Principles of Good Control Practice

Learning Outcomes
By the end of this unit the learner will be able to:
• Discuss the significance of each of the primary principles of good control practice in the context of COSHH • Perform regular checks and reviews on all control measures to ensure they are working as they should • Understand the importance of clear and continuous communication regarding safety issues in the workplace

Unit 7

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Principles of Good Practice for the Control of Substances Hazardous To Health

Good practice in the control of substances hazardous to health can be encapsulated in the eight generic principles set out below. They must all be applied to obtain effective and reliable control. The principles overlap in their application. They are not ordered by rank – the first is not more important than the last – although there is a logic to their overall order of presentation. The principles are explained below:

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

It is more effective, and usually cheaper, to reduce the emission of a contaminant at source, rather than to develop ways of removing the contaminant from the workplace once it has been released and dispersed. Sources of exposure should be reduced in number, size, emission or release rate as much as possible.

It is often not possible to obtain adequate and reliable control unless this is done. Both the processes and procedures need to be considered. To identify how people get exposed during work activities, it is essential to recognise the principal sources and how the contaminant is transferred within the workplace. Care should be taken to identify significant sources and causes of exposure.

Principle (b): Take into account all relevant routes of exposure, inhalation, skin and ingestion when developing control measures

The physical, chemical and infectious properties of a substance, as it is used, have a great bearing on which route of exposure, or combination of routes, is most important. If there is no exposure, there is no risk to health; but usage nearly always leads to some exposure.

Employers should consider:

- The health effects that the substances can cause;
- The way the substances are used;
- The degree of exposure;
- How exposure occurs.

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

The more severe the potential health effect, and the greater the likelihood of it occurring,
The stricter the measures required to control exposure. Control measures that are adequate should take into account the nature and severity of the hazard and the magnitude, frequency and duration

of exposure. They should be proportionate to the risk.

Principle (d): Choose the most effective and reliable control options that minimise the escape and spread of substances hazardous to health

Some control options are inherently more reliable and effective than others. For example, the protection afforded by PPE is highly dependent on good fit and attention to detail. In contrast, a very reliable form of control is changing the process so that less of the hazardous substance is emitted or released.
Employers should choose the most effective and reliable control options for the circumstances and direct these at the main sources and causes of exposure.
There is a broad hierarchy of control options available, based on inherent reliability and likely effectiveness. COSHH regulation 7 refers too many of these options.

They include:

- Elimination of the hazardous substance;
- Modification of the substance, process and/or workplace;
- Applying controls to the process, such as enclosures, splashguards and LEV;
- Working in ways that minimise exposure, such as using a safe working distance to avoid skin exposure;
- Equipment or devices worn by exposed individuals.

The key message is that there is a hierarchy of reliability of control options and this is often linked to their effectiveness. There is good advice available on the engineering control aspects of control measures and the application of human factors principles (see References).

Principle (e): Where adequate control of exposure cannot be achieved by other means, provide, in combination with other control measures, suitable PPE

Effective control measures usually consist of a mixture of: process and/or workplace measures, applied controls (such as LEV), and methods of working that minimise exposure and make the best use of controls. Sometimes the mix includes PPE, such as respirators, work wear or gloves.

- PPE tends to be less effective and reliable than other control options because it:
- Has to be selected for the individual;
- Has to fit the individual and not interfere with their work or other PPE worn at the same time;
- Has to be put on correctly every time it is worn;
- Has to remain properly fitted all the time the individual is exposed;
- Has to be properly stored, checked and maintained;
- Tends to be delicate and relatively easily damaged;
- Can fail without warning;
- May provide no protection when it fails.

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

Once an effective set of workable control measures has been devised, it needs to be put in place and managed. This includes training all relevant people in the use and maintenance of the control measures. The requirement for maintenance covers all elements of the measures to get effective and sustained control of exposure. These include any defined methods of working, supervisory actions, record keeping etc (ie the 'software' of control) as well as the 'hardware' of control. Certainly, whatever hardware is involved must be checked and must continue to function as intended. But a similar approach needs to be taken to check the actions people must take and the methods of working they need to adopt. These need checking and correcting, if necessary, too.

The effectiveness of control measures should be checked regularly. Which checks, and how often they are made, will depend on the particular control measures and the consequences if the measures fail or degrade significantly. Process changes are likely to be more stable and reliable than, say, LEV. In turn, LEV is likely to be more stable and reliable than controls that rely on routine human behaviour.

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

For control measures to be effective, people need to know how to use them properly. Most importantly, people need to know why it is necessary to work in a certain way and use the controls as specified – they need to be motivated.
Motivation comes from understanding what the health risks are and, therefore, why the control measures are important. It also comes from the user having confidence in the control measures and believing that they will protect his or her health.

If the health risk is serious, for example silicosis, cancer, asthma, allergic contact dermatitis or blood borne disease such as HIV, and is chronic or latent in nature, a good appreciation of the risk is especially important. With latent or delayed risks, exposure can often be excessive, with no short-term warning, such as smell or irritation, to indicate that anything is amiss. The people potentially exposed need to be told, clearly and honestly, why they should use the control measures and the potential consequences in terms of ill health if they do not use them.

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

Process changes, enclosures, ventilation, new methods of working, PPE and other changes to Control exposure can introduce new risks. For instance, process changes might mean that equipment cannot be fully decontaminated before maintenance staff are given repairs to do.

Enclosures might create an explosion risk if they contain potentially explosive aerosols.
New methods of working may create risks of musculoskeletal injury. LEV has to be maintained, introducing possible risks from access to, and manual handling of, heavy parts. PPE can restrict movement, feel and vision. And some controls may increase emissions to the environment.

People designing control measures should look for these ‘new’ risks and minimise them. They must not focus only on the risk from substances hazardous to health. A good control solution is one which minimises the health risk while reducing maintenance burdens, being relatively fool proof, and not introducing other risks.

Further information on good practice for the control of substances hazardous to health can be found at www.hse.gov.uk/coshh/.

Further Reading:

- ✓ ***What Were You Thinking? Learning to Control Your Impulses Paperback – February 1, 2016 by Bryan Smith***
- ✓ ***Emotional Intelligence 2.0 Hardcover – June 16, 2009 by Travis Bradberry (Author), Jean Greaves (Author)***