

FIRE SERVICES EXAMINATIONS BOARD

STUDY NOTE

EXAMINATION

SUB-OFFICERS EXAMINATION

PAPER

HUMAN RESOURCE MANAGEMENT

SUBJECT

HEALTH, SAFETY AND WELFARE

ITEM

THE CONTROL OF SUBSTANCES HAZARDOUS TO
HEALTH REGULATIONS 1999

STUDY NOTE No.

2308

INTRODUCTION TO THE STUDY NOTE

This study note has been prepared as the basis of study in connection with the qualifying examinations for promotion.

Candidates will be expected to demonstrate knowledge of the information contained in the study note and understand how it should be applied:

The 'References' made at the end of the Study Note are included for information only and candidates will not be expected to study these as part of the bibliography.

THE CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS 1999 (COSHH)

1. Introduction

The purpose of these regulations (commonly referred to as COSHH), is to protect employees from the harmful effects of substances that they may encounter in the course of their employment and which are hazardous to their health.

These regulations impinge on the day to day management of health and safety on the fire station and the activities of personnel on the watch.

Accordingly, it is necessary for the Sub Officer to be aware of the regulations and how they can affect this day to day work activity.

This study note is a précis of the regulations.

2. Legal Requirements

COSHH places general duties on employers to ensure that:

- (a) the exposure of employees to substances hazardous to health is either prevented, or if this is not reasonably practicable, adequately controlled; and
- (b) any substance which is likely to be hazardous to the health of their employees or members of the public is not used unless:
 - (i) a suitable and sufficient assessment of the risks to health created by that use has been carried out; and
 - (ii) effective control measures have been implemented.

3. Substances Which are Hazardous to Health

These fall into the following categories:

- (a) Substances categorised as very toxic, toxic, corrosive, harmful, irritant.

These range from common cleaning materials used in janitorial work, hose repair and substances used in brigade workshops to the smoke created at live fire training establishments or at incidents, hazardous cargoes involved in RTAs or substances encountered whilst effecting a confined space rescue.

(b) Pesticides

These may be used in substantial quantities in certain occupations, eg, property maintenance and agriculture. They include toxic and very toxic chemicals.

(c) Biological agents, ie, micro-organisms

These are prevalent in blood or body fluids. They may also be found at hospitals, university and research institutions, in sewers and water treatment plants (including air conditioning plants).

(d) Dusts

These may be found in quantities harmful to health in vehicle workshops, industrial premises, farm silos, docks, etc.

(e) Maximum Exposure Limit

Substances with a maximum exposure limit or substances for which the HSC has approved an occupational exposure standard.

(f) Other Materials, Mixtures and Compounds

Any other substance which creates a hazard to health of any person, which is comparable with the hazards created by the substances mentioned above.

4. Risk Assessment

The procedures for assessing risks under COSHH involve:

- (a) Identifying all the substances likely to be encountered by employees and which have the potential to harm their health and safety, or that of members of the public.
- (b) Identifying the circumstances where harm is likely to occur.
- (c) Identifying suitable control measures to eliminate or reduce the likelihood that people will be harmed.
- (d) Implementing the control measures; and monitoring and reviewing the validity of the risk assessment.

Risk is related not only to the **toxicity** of a substances but also to its **quantity** and the ways and extent to which people may come into **contact** with it. A suitable and sufficient assessment is one in which a series of questions has been considered about the work and the substances, which might arise from it. There are seven key questions.

- (a) What hazardous substances are used in, or are given off by, the work or process?
- (b) What harmful effects do these substances have on the body?
- (c) In which locations and in what quantities could the hazardous substances be present?
- (d) Who might be affected by the substances (ie, employees and others)?
- (e) How great is the degree and the extent of their exposure to the substance?
- (f) How does in-house experience concerning exposure compare with recognised standards?
- (g) What action should now be taken in respect of the information gathered? ie, (if action is shown to be necessary) methods of achieving control, standards to be achieved, maintenance requirements, training requirements, whether monitoring and/or health surveillance are needed, etc.

The regulations require assessments to be reviewed "regularly" and forthwith if the assessment is considered to be no longer valid, or there has been significant change in the work to which the assessment relates.

The Approved Code of Practice identifies that "regularly" is a period not exceeding 5 years.

5. Who Should Carry Out COSHH Assessments

As with other health and safety requirements the responsibility lies with managers, but in this area managers may require technical advice from their brigade health and safety advisor and occupational health nurse or physician, who will have access to technical data on hazardous substances.

6. Identification of Substances

Identifying all the hazardous substances to which employees are likely to be exposed is a large task, which needs to be approached in a systematic manner.

With the Fire Service these substances fall into two broad categories:

- (a) manufactured substances, such as chemicals and cleaning agents, which a brigade acquires for use in its operations and in its premises; and
- (b) other hazardous substances and agents, such as blood and body fluids, fume and smoke which firefighters encounter in the course of their operational duties.

(a) Manufactured Substances

The identification of most hazardous chemicals and other manufactured substances will be comparatively easy, as their containers will normally bear warning labels which manufacturers and suppliers are required to attach.

Suppliers/manufacturers also have legal obligations under the HASWA and the Chemicals (Hazard, Information and Packaging for Supply) Regulations 2002, (CHIP) Regulations, to provide hazard information to users.

In addition to providing warning, manufacturers and suppliers are also obliged to provide information about:

- (i) the use for which any substance is designed and has been tested; and
- (ii) about the conditions necessary to ensure that when put to that use, it will be safe and without risk to health.

This information is usually in the form of hazard data sheets, etc.

Personnel should take careful note of all danger and warning labels and should, wherever possible, seek the manufacturer's advice when dealing with incidents where hazardous materials are involved.

All necessary precautions should be taken to ensure that materials with 'N' marking for environmental effects of dangerous chemicals preparations are NOT released into the environment.

Procedures are required to ensure that, whenever any new hazardous substance is brought into use, an assessment is carried out.

(b) Other Hazardous Substances and Agents

Any other hazardous substances and agents should be identified through the general risk assessment programme. The most common encountered by the Fire Brigade are fumes, smoke and body fluids.

7. Control Measures

Having identified the substances and the circumstances in which they are used or occur, it is necessary to consider measures which need to be taken to protect those who are exposed to the substances. In the case of manufactured substances, this will involve an analysis of how substances are stored, handled, used, mixed, applied, controlled and disposed of and how exposure takes place.

Hazard data sheets will often determine the control measures to be taken in respect of manufactured substances.

The COSHH Regulations require that a hierarchy of control measures is applied. Brigades must, where reasonably practicable, apply control measures in the following order of priority:

(a) Elimination

Remove the hazard completely.

(b) Substitution

Replace high hazard substance with substances of lower hazard.

(c) Separation

Separate individuals from exposure to the substance, eg by restricting access or by enclosing the substance or process.

(e) Engineering control

The use of plant, processes and systems of work which minimise or suppress the generation of fumes, dust, vapours, etc eg the provision of local exhaust ventilation (LEV).

(f) Safe systems of work

The adoption of safe working procedures eg the use of BA control procedures.

(g) PPE

The provision and use of suitable personal protective equipment (PPE) eg gas tight suits and breathing apparatus.

NB The use of PPE as a control measure must be regarded as a "last resort" option.

8. The Maintenance of Control Measures

Where control measures are provided, employers shall ensure that they are maintained in an efficient working order.

9. Routine Monitoring

The employer shall ensure that the exposure of employees to substances hazardous to health is monitored in accordance with a suitable procedure.

10. Health Surveillance

Where it is appropriate for the protection of the health of employees who are, or are liable to be, exposed to a substance hazardous to health, the employer shall ensure that such employees are under suitable health surveillance.

11. Employee Information

The employees are entitled to receive Information on:

- (a) hazards and risks from work activity;
- (b) precautions to be taken;
- (c) results of tests/monitoring programmes; and
- (d) collective health surveillance information.

References

A Guide for Managers - Fire Service Health and Safety Guide Volume 2 issued by HM Fire Service Inspectorate, Publications Section.
DCOL 3/2002, Item C and DFL 4/2002, Item C.