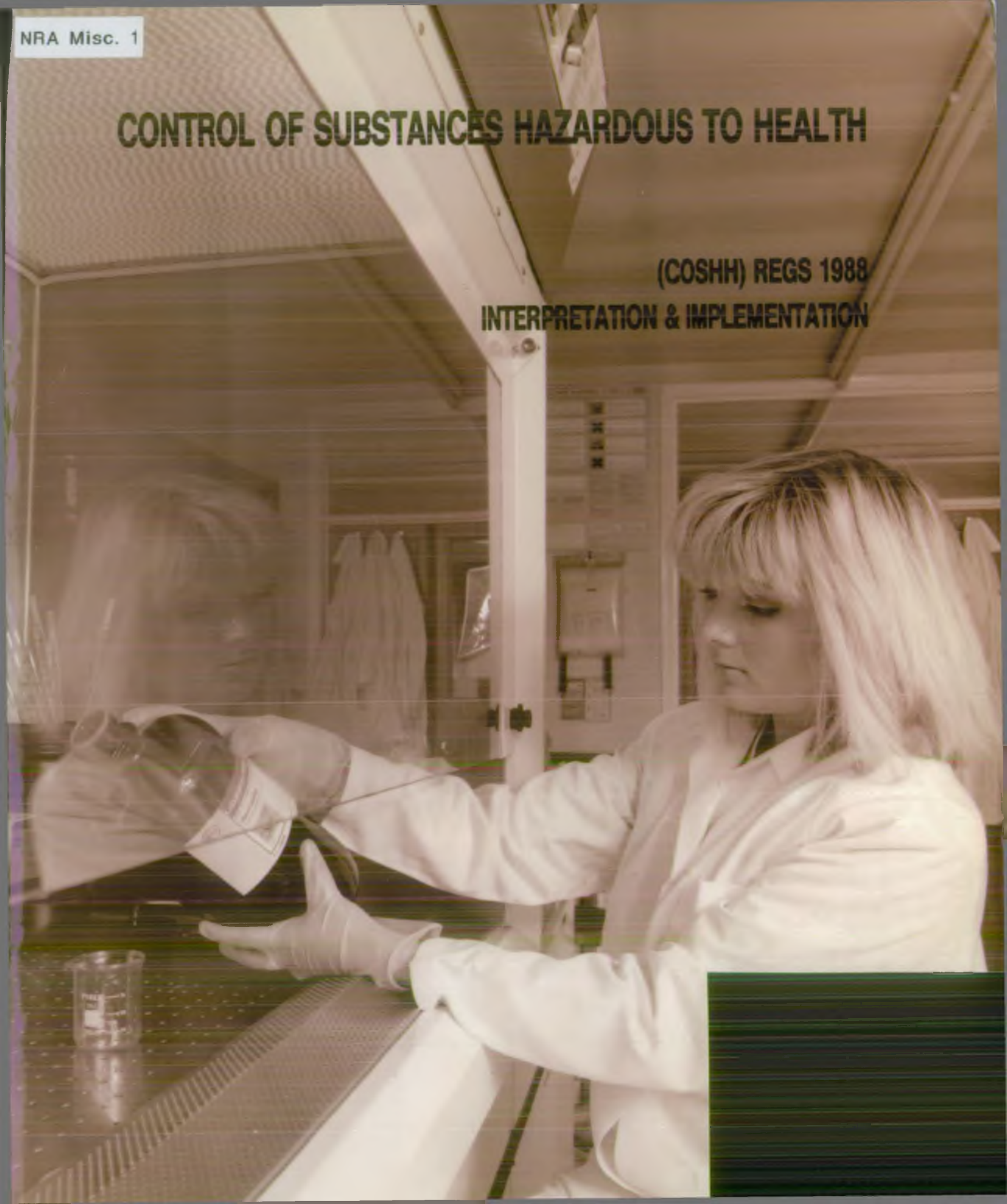
CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH

(COSHH) REGS 1988

INTERPRETATION & IMPLEMENTATION



NATIONAL RIVERS AUTHORITY

CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH

(COSHH) REGS 1988
INTERPRETATION & IMPLEMENTATION

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NATIONAL RIVERS AUTHORITY

CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH

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NATIONAL RIVERS AUTHORITY

CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH

POLICY

1. In the course of day-to-day operations employees of the Authority may be required to use substances that are known to be Hazardous to Health unless handled in accordance with strict safety procedures.

2. The Authority will ensure that:

   - ★ The use of hazardous substances is avoided wherever practicable.
   - ★ Safe handling procedures are established for all hazardous substances in use.
   - ★ Information is widely available to assist in the identification of hazardous substances.
   - ★ Training in the safe use of hazardous substances is given whenever necessary.
   - ★ Expert advice is available when required.
   - ★ Monitoring of exposure levels is undertaken when necessary.
   - ★ Monitoring of employee health is undertaken if necessary.
   - ★ Procedures are reviewed and updated regularly.

3. The Authority will require all employees to follow the established safety procedures and to bring to its attention any instances where it may be considered that these can be improved upon.

4. Compliance with the statutory provisions of the Control of Substances Hazardous to Health Regulations 1988 will be a minimum requirement throughout the organisation.

5. The Regulations will be implemented in such a manner as to encompass their full spirit and purpose in protecting the health of all employees.

P. J. Humphreys,

P. J. HUMPHREYS
Director of Personnel

Dated 1st September 1989.

Section 1

SECTION 1

IMPLEMENTATION & RESPONSIBILITY LEVELS

1. INTRODUCTION

(1) The implementation of the Control of Substances Hazardous to Health Regulations requires that a number of consecutive stages be followed with decisions being made at each stage. In addition training needs will be identified and there is a need for all employees to be made aware of the Regulations and to have access to data on hazardous substances relevant to their duties.

(2) This section sets out the manner in which each of these aspects is to be dealt with in order to achieve the necessary degree of consistency throughout the organisation.

2.2 COSHH REQUIREMENTS

The main requirements of COSHH fall within six sub-headings as follows:

(1) INVENTORIES of all substances used or to which persons may be exposed at work should be compiled by the user. Products as well as separate substances should be listed and the relevant product data sheets obtained. Persons nominated to compile the inventories must have the necessary knowledge and experience to ensure a thorough and methodical approach.

(2) ASSESSMENTS of the health risks in relation to each hazardous substance identified must be carried out by all employers. The assessments must be made by persons selected as having the necessary knowledge, experience and skills required to make decisions on action required. Those selected must make assessments on all new products or substances purchased by users; assess all hazardous substances identified by the inventories; consider what control measures are deemed necessary; inform users of decisions made and keep records of all assessments made. If the assessments are no longer valid or there has been a change in the work or process then they should be reviewed and updated as necessary.

(3) PREVENTION OR CONTROL OF EXPOSURE must be secured so far as is reasonably practicable by measures other than the provision of personal protective equipment (PPE). The use of PPE should only be considered where the risks cannot be controlled at source.

(4) USE OF CONTROL MEASURES must be strictly enforced by employers. Every employee must make full and proper use of any control measure, personal protective clothing and equipment or facility provided and must report any defect found.

Additionally; all control measures are required to be maintained in an efficient state, in efficient working order and in good repair and be examined and tested at regular intervals. Records must be kept of the results of all tests, examinations and inspections.

(5) MONITORING EXPOSURE at the workplace must be carried out in any case in which it is necessary for the maintenance of adequate control of the exposure of employees to substances hazardous to health.

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

Records must be kept of any monitoring carried out for a period of 30 years where the record is representative of the personal exposures of employees. The assessments carried out (Regulation 6) will identify the areas and substances required to be monitored. This could include, laboratories, ozone plants or confined spaces where hazardous substances may be present. Any record of monitoring carried out must be made available to employees or their representatives.

(6) HEALTH SURVEILLANCE must be provided where carcinogenic substances are in use unless exposure is not significant. Surveillance should be under the supervision of an employment medical adviser or appointed doctor.

Health surveillance will also be appropriate for workers exposed to any other substance hazardous to health such that an identifiable disease or adverse health effect may be related to the exposure.

Suitable facilities must be provided where examinations and inspections are required.

All health records must be retained for at least 30 years from the date of the last entry made.

2.3 RESPONSIBILITY LEVELS

2.3.1 General Responsibility

In common with all other Health & Safety matters, responsibility for compliance with the Regulations is covered under the Authority's Health & Safety Policy through general delegation. COSHH requires specific responsibilities to be more fully defined at two broad levels viz User Level and Specialist level.

2.3.2 User Responsibility Level

Managers directly responsible for operations involving the use of Hazardous Substances will be responsible for identifying substances that may be regarded as such and ensuring that they are handled in accordance with approved methods determined on their behalf by others, having more specialist knowledge of the hazards.

2.3.3 Specialist Responsibility Level

The determination of Hazards and the measures necessary to eliminate or control risks to the health of employees using related substances will be the responsibility of panels appointed to provide the necessary range of expertise.

2.3.4 Definition of Officers Responsible at User Level — RESPONSIBLE PERSONS

(1) In order to adequately cover the wide geographic area of the organisation and the diversity of its operations, responsibility at this level will be broadly based but will, nevertheless, be assigned to specific individuals.

(2) Responsibility will be assigned to officers meeting the following general specification such that all employees are covered:

- **Responsible for a limited geographical area of operation or generally responsible for the activities within specific premises.**
- **Limit of responsibility is such that the Line Manager is regularly in direct contact with employees and is familiar with and responsible for their day to day activities.**
- **Of sufficient seniority to effectively control the activities of specific groups of employees as well as liaising directly with Senior Management and Employee Representatives at local level.**

(3) Examples of officers meeting this specification are District/Area Engineers, District/Area Quality Officers, Lab. Managers, Office Managers etc.

2.3.5 DEFINITION OF PANEL OF OFFICERS' RESPONSIBLE AT SPECIALIST LEVEL

2.3.5.1 Expertise in the safe handling of Hazardous Substances requires a range of knowledge that is unlikely to be widely available through single individuals. Knowledge relating to the use of products in general use is fundamentally different from that relating to the use of laboratory compounds. ASSESSMENT PANELS will be established covering respectively, General Products and Chemical Compounds. Preliminary surveys suggest that up to 2,000 potentially hazardous products may be in general use and up to 450 laboratory compounds.

2.3.5.2 GENERAL PRODUCT ASSESSMENT PANEL

This panel will be responsible for determining the measures necessary to control the use of Hazardous Substances outside of Laboratories. The panel will be constituted to provide the following expertise:

- ★ **Knowledge of the use and purpose to which products are put, knowledge of effective alternatives and knowledge of the impact that control measures might have on operations.**
- ★ **Knowledge of the toxic effect of products and the purpose behind the manufacturers recommended handling codes and Hazard Data Sheets.**
- ★ **Knowledge of the concerns of employees who may be required to handle potentially Hazardous Substances.**

Examples of Officers meeting this specification are Operations/Environment Managers and Chemists. In addition the panels must have access to other sources of expertise such as Medical Surveillance and Toxicology whenever required.

A Safety Adviser and an Employee Representative will be appointed to each panel.

A panel of four or five members is envisaged with co-opted expertise, either internal or external, on a needs basis.

The Safety Adviser should normally act as Secretary to the Panel.

2.3.5.3 LABORATORY COMPOUNDS ASSESSMENT PANEL

This panel will be responsible for determining the measures necessary to control the use of Hazardous Substances within Laboratories.

The requirements are the same as those of the General Products Panel above except that Officers will be drawn from Laboratory managers specialising in the theory and practice of Laboratory Work.

2.4 TRAINING

(1) The requirements for training outlined in the COSHH Regulations are covered in general terms by Regulation 12 under the heading of "Information Training and Instruction". COSHH does not generate a need for specific training requirements other than to ensure that users know the risks to health created by exposure and the precautions which should be taken.

(2) Although training in the safe utilisation of Hazardous Substances has been undertaken throughout the pre NRA Water Industry for many years, a review of the adequacy of this training will be undertaken by Responsible Persons, in consultation with the Safety Adviser.

(3) Any Training identified will be provided under current established procedures.

2.5 EMPLOYEE AWARENESS

(1) All employees must be made aware of the COSHH Regulations and of the provisions that have been made on their behalf. They must also have access to data regarding the nature of substances that they may be required to use and the recommended handling procedures applicable.

(2) Employees will be made aware of the Regulations prior to 1st January 1990. This is most effectively achieved through a direct address by Regional Safety Advisers travelling to suitable venues where employees can conveniently assemble in reasonable size groups.

(3) Groups will be addressed by their designated Responsible Person, who should take the opportunity to personally explain their role. At least one member of the appropriate assessment panel should also assist in the presentation.

(4) A concise NRA employee guide to the COSHH Regulations will be available for distribution during December 1989. Ideally, this will be distributed at the Awareness Presentation.

(5) Lists of all substances in general use that have been assessed by the Panels will be held at all places of work and be available for reference to all employees. The lists will include reference to the recommended safety procedures if any.

2.6 EMPLOYEE CONSULTATION

Employee representatives will play an active role on the local Assessment Panels and full consultation on implementation procedures will be provided for at National and Regional level Joint Health and Safety Committees.

2.7 ACTION REQUIRED & TIMETABLES FOR IMPLEMENTATION

Activity	Action By	Timescale (1989)
1. Designate Responsible Persons (RP)	RGMs/RMs	Retrospective Confirmation from 1st September
2. Complete Inventories	RPs	By 30th September
3. Appoint Assessment Panels (a) General Products Panel (GPP) (b) Laboratory Compounds Panel (LCP)	RGMs/RMs	Retrospective Confirmation From 1st October
4. Consult Employee Representatives on Implementation Procedures	Personnel Officers	By 31st October
5. Complete Assessments	GPPs + LCPs	By 31st October
6. Disseminate Assessments	Safety Advisers	By 13th November
7. Implement Assessments Review Training Needs	RPs	By 31st December
8. Organise & Implement Awareness Presentations	Safety Advisers	By 31st December
9. Prepare & Issue Employee Guidance Pamphlet	COSHH Task Group	By 30th November
10. Prepare & Issue Summary of Assessed Substances	GPPs + LCPs	By 31st December
11. Prepare Proposals for National Data Bank & Related Procedures	National Safety Adviser	From 1st January 1990

Section 2

SECTION 2

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SECTION 2

INTERPRETATION AND PRACTICE

Introduction

Section 2 gives detailed interpretation of the Regulations and the practice necessary to achieve compliance with them.

It is written as a supplement to the statutory Approved Codes of Practice issued by the Health and Safety Commission giving more direct emphasis to NRA activities.

Section 2 is based on the Health and Safety Commission document – Control of Substances Hazardous to Health Regulations 1988, Approved Code of Practice Control of Substances Hazardous to Health and Approved Code of Practice Control of Carcinogenic Substances HMSO ISBN 011 885468 2.

Regulation 1 — Citation and Commencement

"These regulations may be cited as the Control of Substances Hazardous to Health Regulations 1988 and shall come into force on 1st October 1989."

Regulation 2 — Interpretation

2.(1) "In these Regulations, unless the context otherwise requires — 'the 1974 Act' means the Health and Safety at Work etc Act 1974;

'approved' means approved for the time being in writing by the Health and Safety Executive as the case may be;

'approved list' means the list published by the Health and Safety Commission entitled 'Information Approved for the Classification, Packaging and Labelling of Dangerous Substances (2nd edition)' as revised or re-issued from time to time;

'fumigation' means an operation in which a substance is released into the atmosphere so as to form a gas to control or kill pests or other undesirable organisms and 'fumigate' and 'fumigant' shall be constructed accordingly;

'maximum exposure limit' for a substance hazardous to health means the maximum exposure limit for that substance set out in schedule 1 in relation to the reference period specified therein when calculated by a method approved by the Health and Safety Commission;

'micro-organism' includes any microscopic biological entity which is capable of replication;

'occupational exposure standard' for a substance hazardous to health means the standard approved by the Health and Safety Commission for that substance in relation to the specified reference period when calculated by a method approved by the Health and Safety Commission;

'substance' means any natural or artificial substance whether in solid or liquid form or in the form of a gas or vapour (including micro-organisms);

'substance hazardous to health' means any substance (including any preparation) which is —

(a) a substance which is listed in Part 1A of the approved list as dangerous for supply within the meaning of the Classification Packaging and Labelling Regulations 1984 (a) and for which the general indication of nature of risk is specified as very toxic, toxic, harmful, corrosive or irritant;

(b) a substance for which the maximum exposure limit is specified in Schedule 1 or for which the Health and Safety Commission has approved an occupational exposure standard;

(c) a micro-organism which creates a hazard to the health of any person;

(d) dust of any kind, when present at a substantial concentration in air. (The maximum concentrations permissible are 10 mg/m^3 (inhalable) and 5 mg/m^3 (respirable));

(e) a substance, not being a substance mentioned in sub-paragraphs (a) to (d) above, which creates a hazard to the health of any person which is comparable with the hazards created by substances mentioned in those sub-paragraphs.

2.(2) In these Regulations, any reference to any employee being exposed to a substance hazardous to health is a reference to the exposure of that employee to a substance hazardous to health arising out of or in connection with work which is under the control of his employer.

2.(3) In these regulations, unless the context otherwise requires:

(a) a reference to a numbered regulation or Schedule is a reference to the regulation or Schedule in these Regulations so numbered;

(b) a reference to a numbered paragraph is a reference to the paragraph so numbered in the regulation or Schedule in which that reference appears."

It must be stressed that the absence of a substance from the listed documents does not indicate that the substance is safe. Therefore exposure to any substance should be kept as low as is reasonably practicable at all times.

Regulation 3 — Duties under these Regulations

3.(1) "Where any duty is placed by these Regulations on an employer in respect of his employees, he shall, so far as is reasonably practicable, be under a like duty in respect of any other person, whether at work or not, who may be affected by the work carried on by the employer except that the duties of the employer —

(a) under regulation 11 (health surveillance) shall not extend to persons who are not his employees;

(b) under regulations 10 and 12 (1) and (2) (which relate respectively to monitoring and information, training etc) shall not extend to persons who are not his employees, unless those persons are on the premises where the work is being carried on.

3.(2) These regulations shall apply to a self-employed person as they apply to an employer and an employee and as that self-employed person were both an employer and employee, except that regulations 10 and 11 shall not apply to a self-employed person.

3.(3) The duties imposed by these Regulations shall not extend to the master or crew of a sea-going ship or to the employer of such persons in relation to the normal shipboard activities of a ship's crew under the direction of the master."

This Regulation places specific duties on employers, self-employed persons and employees and action taken to comply with it must have regard to other legislation which may apply.

The following table summarises the scope of the requirements:

Duty of Employer relating to:	Duty for the Protection of:		
	Employees —	Other Persons at the Premises	Other Persons likely to be affected by work
Assessment (Reg 6)	Yes	SFRP	SFRP
Prevention or Control of Exposure (Reg 7)	Yes	SFRP	SFRP
Use of Control Measures, Maint; examination and test etc (Regs 8 & 9)	Yes	SFRP	SFRP
Monitoring exposure (Reg 10)	Yes, where requisite	SFRP	No
Health Surveillance (Reg 11)	Yes, where appropriate	No	No
Information, Training etc (Reg 12)	Yes	SFRP	No

(SFRP = So far as is reasonably practicable.)

Employers in charge of premises must ensure, so far as is reasonably practicable, that visiting members of the emergency services such as firemen are made aware of any substances on the premises which offer a significant risk to their health. This may be achieved by an approved sign displayed in a prominent position.

Employees must co-operate with their employers so far as this is necessary to:

(i) enable an employer to meet his obligations;

(ii) to make full and proper use of any control measures;

(iii) report defects.

Regulation 4 — Prohibitions Relating to Certain Substances

This Regulation relates to substances and activities which do not apply in the National Rivers Authority.

Regulation 5 — Application of Regulations 6 to 12

5.(1) "Regulations 6 to 12 shall have effect with a view to protecting persons against risks to their health, whether immediate or delayed, arising from exposure to substances hazardous to health except —

(a) where and to the extent that the following Regulations apply, namely:

(i) the Control of Lead at Works Regulations 1980;

(ii) the Control of Asbestos at Work Regulations 1987

(b) where the substance is hazardous to health solely by virtue of its radioactive, explosive or flammable properties, or solely because it is at a high or low temperature or a high pressure,

(c) where the risk to health is a risk to the health of a person to whom the substance is administered in the course of medical treatment.

(d) below ground in any mine within the meaning of Section 180 of the Mines and Quarries Act 1954.

5.(2) In paragraph 1 (c) 'medical treatment' means medical or dental examination or treatment which is conducted under the direction of a registered medical or dental practitioner and includes any such examination, treatment or administration of any substance conducted for the purpose of research.

5.(3) Nothing in these Regulations shall prejudice any requirements imposed by or under any enactment relating to public health or the protection of the environment."

The COSHH Regulations therefore apply to *all* work activities and workplaces in the National Rivers Authority.

Regulation 6 — Assessment of Health Risks Created by Work Involving Substances Hazardous to Health

6.(1) "Subject to regulation 17 (1) (which relates to transitional provisions), an employer shall not carry on any work which is liable to expose any employees to any substance hazardous to health unless it has made a suitable and sufficient assessment of the risks created by that work to the health of those employees and of the steps that need to be taken to meet the requirements of these Regulations.

6.(2) The assessment required by paragraph (1) shall be reviewed forthwith if –

(a) there is a reason to suspect that the assessment is no longer valid;

(b) there has been a significant change in the work to which the assessment relates, and, where as a result of the review, changes in the assessment are required, those changes shall be made."

The purpose of an assessment is to enable a valid decision to be made about measures necessary to control substances hazardous to health. It also enables the employer to demonstrate readily, both to himself and other persons, that all the factors pertinent to the work have been considered and that an informed and valid judgement has been reached about the risks, the steps which need to be taken to achieve and maintain adequate control, the need for monitoring exposure at the workplace and the need for health surveillance.

Within the National Rivers Authority only branded products should be used. Within analytical laboratories pure chemicals will of course be generally used and their harmful effects must be assessed and the appropriate safeguards established. Use of only branded products in day to day operations, affords the protection required, as all such products must contain on their packaging, the necessary safety data to permit an assessment to be made.

In the event that the safety data is insufficient to make an assessment then the manufacturer/supplier is to be contacted. Should the requested data be refused, the substance should be taken out of use and the matter referred to the Health and Safety Executive.

The following steps are given to assist in obtaining a full and complete assessment of substances hazardous to health:

(a) Make a list of *all* substances used or to which persons may be exposed at work (bearing in mind the definition given in Reg. (2)(1) "substances means any natural or artificial substance whether in solid or liquid form or in the form of a gas or vapour (including micro-organisms)". It is recommended that the initial list contains all items whether harmful or not, whether used daily or very rarely. This will require a detailed search of all shelves, cupboards, storage areas and tool boxes. Do not rely on purchasing records; local purchases from petty cash etc may not be recorded. In order to control and promote awareness of the various substances being introduced into the workplace prior to the purchase of any new substance or product the relevant product data sheet should be obtained and forwarded with a completed inventory form to the Assessment Panel. An inventory form is attached in Appendix E.

(b) Form an Assessment Panel to deal with the assessment. It is suggested that the necessary knowledge and experience could be obtained by including operational, technical, safety, purchasing, occupational health, personnel and a toxicologist where necessary, bearing in mind Regulation 12(3) "Every employer shall ensure that any person (whether or not his employee) who carries out any work in connection with the employer's duties under these regulations has the necessary information, instruction and training."

(c) Wherever practicable proprietary substances are to be used only on their own and never mixed, unless specifically authorised by the manufacturer. It is the duty of line managers to ensure that the assessment panel are able to consider various interactions and the mixed exposures of two or more substances as to whether this increases the toxicity and hence the hazard to health.

(d) NOTE: Chemical substances used in laboratories, laboratories use many substances of a specialist and hazardous nature. It is therefore recommended that all substances in such places of work be assessed in the same manner as above but by the personnel who use them ie trained laboratory staff. However, complete details of the inventory and assessments must be provided to the assessment panel.

(e) Check each item against the list contained in Part 1A1 of the "Information Approved for the Classification, Packaging and Labelling of Dangerous Substances for Supply and Conveyance by Road (Second Edition onwards) ISBN 11 883901 2". Any substance which is listed under column 2 as being "very toxic", "toxic", "corrosive", "harmful" or "irritant" is a substance hazardous to health for the purpose of COSHH.

(f) Each item should then be assessed for hazard. It is recommended that the "irritant" items be dealt with first working towards the "very toxic" last on the basis that the "very toxic" items should already be covered by a safe system of work. Information to assist in the assessment can be obtained from labels, suppliers, manufacturers, H & S E Publications, Industry and Research papers.

(g) The following questions as well as many others must be addressed for each substance:

What is the hazard?
What is it used for?
*What is the risk?
Can a substitute be used?
If so is it less hazardous?
Will a substitute affect the process?
What control measures are required?
What are the cost factors?

*It may sometimes be necessary to carry out a monitoring exercise as part of the assessment in order to answer this question fully (EH42/89 para 17-25 refers).

Each assessment panel may add more questions to the above list depending on the substance being assessed and the process for which it is used.

Note:

Hazard means: The adverse consequence to health or contact with a biological, chemical or physical substance or process.

Risk means: A quantitative measure of hazard.

(h) Having decided that a substance in use is hazardous and that it is not reasonably practicable to substitute it for another, the following points must be considered:

How is it hazardous?
ie inhaled, swallowed (either directly or from settling on food etc or from eating food with contaminated fingers); absorbed through the skin (either directly or from contact with contaminated surfaces or clothing); in contact with the surface of the skin or eyes; injected into the body by high pressure equipment or contaminated sharp object.

Is the exposure within the Maximum Exposure Limit (EH40)?

Is there an Occupational Exposure Standard applicable to the substance (EH40)?

What effects could it have on the health of employees, or visitors or the general public both in the short or long term?

How can the operator be protected?

What safeguards are required?

What training is required?

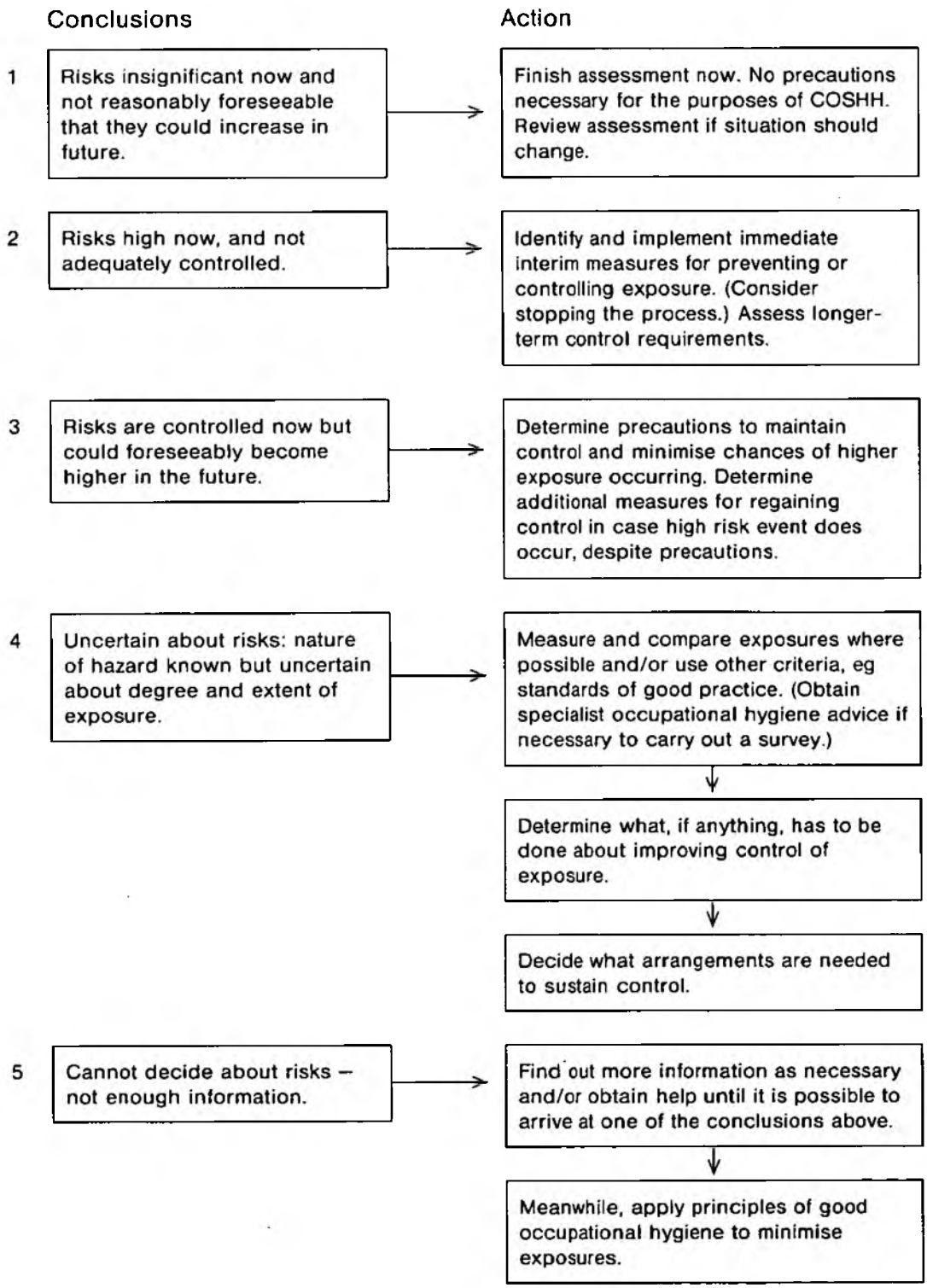
Is medical surveillance required?

Is a monitoring programme required?

The effects on the health of each individual employed in the workplace must be considered. This will require detailed medical examination of individual health records probably in consultation with the individual's general practitioner. Approaches in this direction should only be made by the Occupational Health Representative on the Assessment Panel.

(i) The assessment must be performed thoroughly. This will identify control measures which may be required. If the assessment shows that there is no likelihood of a risk to health, the assessment is complete and no further precautions are needed. If the assessment shows that further action is needed, it is necessary to decide what needs to be done to complete the assessment requirement. Sample forms which will help with the assessment are attached as *Appendix E.* For further detailed information refer to COSHH Assessments ISBN 011 885 4704.

(j) The various stages of action resulting from possible conclusions about risks are outlined below:



(k) Assessment should be recorded, reviewed and updated if there is any reason to suggest that the assessment is no longer valid or there has been a significant change in the work or process.

(l) Having completed the assessment of each substance hazardous to health you should now consider the prevention or control of exposure.

Regulation 7 – Prevention or Control of Exposure to Substances Hazardous to Health

7.(1) "Every employer shall ensure that the exposure of his employees to substances hazardous to health is either prevented or, where this is not reasonably practicable, adequately controlled.

7.(2) So far as is reasonably practicable, the prevention or adequate control of exposure of employees to a substance hazardous to health shall be secured by measures other than the provision or personal protective equipment.

7.(3) Where the measures taken in accordance with paragraph (2) do not prevent, or provide adequate control of, exposure to substances hazardous to the health of employees, then, in addition to taking those measures, the employer shall provide those employees with such suitable personal protective equipment as will adequately control their exposure to substances hazardous to health.

7.(4) Where there is exposure to a substance for which a maximum exposure limit is specified in Schedule 1, the control of exposure shall so far as the inhalation of that substance is concerned, only be treated as being adequate if the level of exposure is reduced so far as is reasonably practicable and in any case below the maximum exposure limit.

7.(5) Without prejudice to the generality of paragraph (1), where there is exposure to a substance for which an occupational exposure standard has been approved, the control of exposure shall, so far as the inhalation of that substance is concerned, be treated as being adequate if:

(a) that occupational exposure standard is not exceeded

(b) where the occupational exposure standard is exceeded, the employer identifies the reasons for the standard being exceeded and takes appropriate action to remedy the situation as soon as is reasonably practicable.

7.(6) Subject to Regulation 17(2) (which relates to transitional provisions), where respiratory protective equipment is provided in pursuance of this regulation, then it shall:

(a) be suitable for the purpose

(b) be of a type approved or shall conform to a standard approved, in either case, by the Health and Safety Executive

7.(7) In this regulation, 'adequate' means adequate having regard only to the nature of the substance and the nature and degree of exposure to substances hazardous to health and 'adequately' shall be construed accordingly."

Exposure is deemed to be adequately controlled if:

(a) a "maximum exposure limit" (MEL) is not exceeded (limits set out in Schedule 1 of Regulations).

(b) the level of employee's exposure is reduced "so far as is reasonably practicable" below the MEL.

(c) for a substance where the H & SE has approved an occupational exposure standard (OES) control will be regarded as adequate if the OES is not exceeded, or if it is exceeded and the reasons for this have been identified, the level of employees' exposure is reduced to that standard or if steps are being actively taken to achieve that standard as soon as is "reasonably practicable".

(d) for other substances hazardous to health (ie those not given a MEL or an OES), exposure should be controlled to a level to which nearly all the population could be exposed, day after day without adverse effects on health.

Exposure can be by the routes, inhalation, ingestion, absorption through the skin or mucous membranes or contact with the skin or mucous membranes.

Compliance with exposure limits may be demonstrated by measuring and recording exposure of employees according to the principles set out in H & SE Guidance Note EH 42/89.

The control of exposure may be achieved by the elimination of substances, substitution by a safer alternative, total enclosure, suppression, partial closure with local exhaust ventilation (LEV), general ventilation, limit contamination by cleaning and separate facilities, limit numbers and time exposure and protective clothing.

The regulations require that so far as is reasonably practicable, the prevention or adequate control of exposure of employees shall be secured by measures other than the provision of personal protective clothing. The use of personal protective equipment should only be considered where the risks cannot be controlled at source.

Other measures for preventing or controlling exposure may consist of:

* (a) Elimination of use of the substance

(b) Substitution by a less hazardous substance or same substance in less hazardous form

(c) Enclosed process and handling systems including safe storage and disposal systems

(d) Local Exhaust Ventilation

(e) General ventilation, fan-assisted or not

(f) Reduction in numbers of employees exposed or period of exposure

(g) Adequate facilities for washing, changing and storage of clothing etc

(h) Prohibition of eating, drinking and smoking in contaminated or potentially contaminated areas

* Measures (a) to (d) should be considered first. If not reasonably practicable consideration should then be given to a combination of the remaining Measures (e) to (h).

However, there will be situations where the use of Personal Protective Equipment (PPE) will be necessary:

(a) where it is not technically feasible to achieve adequate control by process, operational or engineering measures

(b) where a revised assessment indicates PPE is necessary until such times as other arrangements can be made

(c) where urgent action is required due to plant failure

(d) during routine maintenance operations

PPE must comply with BS or European Standards where appropriate. Eye protection should comply with the Protection of Eye Regulations 1974 and BS2092.

The respiratory protective equipment provided must be:

(a) capable of adequately controlling exposure

(b) suitable for the purpose

(c) of a type approved or conforming to a standard approved by the HSE

(d) correctly matched to the job and the wearer

Regulation 8 — Use of Control Measures

8.(1) "Every employer who provides any control measure, personal protective equipment or other thing or facility pursuant to these Regulations shall take all reasonable steps to ensure that it is properly used or applied as the case may be.

8.(2) Every employee shall make full and proper use of any control measure, personal protective equipment or other thing or facility provided pursuant to these Regulations and, if he discovers any defect therein, he shall report it forthwith to his employer."

It is the responsibility of the employer to take all reasonable steps to ensure any control measure is properly used or applied and of the employee to make full and proper use of any such control measure.

Procedures need to be established and must include:

(a) visual checks at intervals to ensure measures are being used or applied

(b) prompt remedial action where necessary

(c) use of control measures by employees

(d) training in the use of control measures and protective equipment

(e) systems for reporting defects etc

(f) storage of equipment

(g) dealing with contaminated equipment

(h) hygiene procedures

Whilst not part of the Regulations or Code of Practice purchases must be strictly controlled to ensure that substances which have not been assessed are not introduced to the work activity or workplace.

Regulation 9 — Maintenance, Examination and Test Control Measures

9.(1) "Every employer who provides any control measures to meet the requirements of Regulation 7 shall ensure that it is maintained in an efficient state, in efficient working order and in good repair.

9.(2) Subject to Regulation 17(3) (which relates to transitional provisions), where engineering controls are provided to meet the requirements of Regulation 7, the employer shall ensure that thorough examinations and tests of those engineering controls are carried out:

(a) in the case of local exhaust ventilation plant, at least once every 14 months, or for local exhaust ventilation plant used in conjunction with a process specified in column 1 of Schedule 3, at the interval specified in the corresponding entry in column 2 of that Schedule.

(b) in any case, at suitable intervals.

9.(3) where respiratory protective equipment (other than disposable respiratory protective equipment) is provided to meet the requirements of Regulation 7, the employer shall ensure that at suitable intervals thorough examinations and, where appropriate, tests of that equipment are carried out.

9.(4) Every employer shall keep a suitable record of the examinations and tests carried out in pursuance of paragraphs (2) and (3) and of any repairs carried out as a result of those examinations and tests, and that record or a suitable summary shall be kept available for at least 5 years from the date on which it was made."

Control measures are required to be maintained in an efficient state, in efficient working order and in good repair, be examined and tested at intervals.

Maintenance

(a) all engineering control measures in use should receive a visual check at least once per week.

(b) preventative servicing procedures should specify which controls require servicing, the nature of the servicing, when it should be carried out, allocation of responsibility and how defects are to be remedied.

(c) where control measures include operational procedures these should be reviewed periodically to ensure they are still effective.

(d) whoever carries out any of the above tasks must be competent.

Examination and Test

(a) Engineering controls – such controls must be thoroughly examined and tested at suitable intervals. The interval is not laid down but is commensurate with the extent of the risk in the event of failure or deterioration of the control measure. The frequency may need to be increased with the increasing age of the engineering control concerned.

(b) Local exhaust ventilation plant (LEV) – any such plant, fixed or portable, including microbiological safety cabinets require examination and test at least once every 14 months. Where ventilation is in situ to protect the fabric of the building the Regulations are considered not to apply.

(c) Respiratory protective equipment (RPE) – thorough examinations and where appropriate tests should be at least once per month and more frequently where conditions are severe. (Does not apply to one-shift disposable respirators.) Where use of half mask respirators used for short spells and only occasionally and used against dusts or fumes of relatively low toxicity, longer intervals may be suitable but in any event should not exceed 3 months.

Records

These may be kept in any form but must contain the following particulars:

For LEV Plant:

(a) Name and address of employer responsible for the plant.

(b) Identification and location of the LEV plant, process and hazardous substance concerned.

(c) Date of last thorough examination and test.

(d) Conditions at time of test is normal, special (eg maximum use, stood down).

(e) Information about the LEV plant which shows

(i) its intended operating performance

(ii) whether the plant now still achieved the same performance

(iii) if not, repairs required to achieve that performance

(f) Methods used to make judgement eg visual, pressure measurements, air flow measurements, dust lamp, air sampling, filter integrity tests.

(g) Date of examination and test.

(h) Name, designation and employer of person carrying out examination and test.

(i) Signature of person doing examination and test.

(j) Details of repairs carried out together with the date.

Note: The effectiveness of any repairs must be proved by a re-test and such re-test must be recorded.

For Respiratory Protective Equipment

(a) Name and address of employer responsible for the equipment.

(b) Particulars of equipment, distinguishing number or mark, description sufficient to identify it and name of maker.

(c) Date of examination and name and signature of persons carrying it out.

(d) Condition of equipment and particulars of defects found including in the case of canister or filter respirators the state of the canister and integrity of the filter.

(e) In compressed oxygen or air apparatus the pressure in the cylinder.

(f) In the case of air line fed equipment the volume flow and quality of the supplied air. (If the air is supplied from a mobile compressor this test to be made prior to use in any new location.)

The records are to be kept for at least 5 years.

Regulation 10 — Monitoring Exposure at the Workplace

10.(1) "In any case in which:

(a) it is requisite for ensuring the maintenance of adequate control of the exposure of employees to substances hazardous to health;

(b) it is otherwise requisite for protecting the health of employees

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

10.(2) Where a substance or process is specified in column 1 of Schedule 4, monitoring shall be carried out at the frequency specified in the corresponding entry in column 2 of that Schedule.

10.(3) The employer shall keep a suitable record of any monitoring carried out for the purpose of this regulation and that record or a suitable summary thereof shall be kept available.

(a) where the record is representative of the personal exposures of identifiable employees, for at least 30 years;

(b) in any other case, of at least 5 years."

"Monitoring," for the purpose of this regulation, means the use of valid and suitable occupational hygiene techniques to derive a quantitative estimate of the exposure of employees to substances hazardous to health. In the case of airborne contaminants monitoring involves the periodic or continuous sampling of the atmosphere at the workplace and will usually require sampling in the breathing zone by means of suitable sampling equipment.

The monitoring techniques to be employed will invariably be specified by Occupational Health specialists. This may necessitate "buying in" the necessary expertise. Where this applies the employer must satisfy himself as to the competence of those carrying out the monitoring (Reg. 12(3)).

Where requisite

Monitoring is requisite when any of the following circumstances apply, unless suitable procedures for monitoring do not exist, or cannot be devised, or it is immediately obvious whether control is adequate.

(a) when failure or deterioration of the control measures could result in a serious health effect, either because of the toxicity of the substance or because of the extent of potential exposure, or both;

(b) when measurement is necessary so as to be sure that a maximum exposure limit or occupational exposure standard or any self-imposed standard is not exceeded;

(c) when necessary as an additional check on the effectiveness of any control measure provided in accordance with Regulation 7 and always in the case of the substances or processes specified in Schedule 4.

Recommendation for monitoring made in any relevant technical literature, including HSE Guidance Notes, indicate some of the situations where monitoring needs to be carried out, if any of the circumstances described above apply (in the case of exposure to micro-organisms, atmospheric and personal sampling methods are not appropriate in normal circumstances and are therefore usually not requisite).

The assessment carried out under Regulation 6 will identify the areas and substances required to be monitored. This could include laboratories, ozone plants, and confined spaces, wells etc where hazardous substances may be present. Other less obvious areas include repair shops where toxic substances/cleaning agents are used, carpenters shops where hardwoods are cut, paint spray booths, pesticide storage, mixing and spraying areas. The list is *not* exhaustive.

Situations in which monitoring would be necessary:

(a) where there is no other source of reliable information to estimate exposure, when making an assessment.

(b) where exposure does, or is likely to, approach the control limit or recommended limit.

(c) where it is necessary to check the effectiveness of control measures provided.

(d) where it is necessary to obtain information for the selection of respiratory protective equipment.

(e) where the importer, manufacturer or supplier recommends monitoring.

Procedures for Monitoring

The assessment carried out under Regulation 6 and the control measures considered necessary under Regulation 7 to contain the exposure will dictate the composition of the monitoring programme.

Where the assessment under Regulation 6 shows that monitoring is required, it should be carried out at least once every 12 months, except in those cases listed in Schedule 4 of the Regulations, where more frequent monitoring is required.

Where groups of employees are performing identical or similar tasks and are consequently being exposed to similar risks to health sampling may be carried out on a group basis, provided that it is representative or each individual within the group.

The sampling techniques and methods of analysis contained in guidance produced by the Health and Safety Executive in the methods for the Determination of Hazardous Substances (MDHS) should be adopted as the standard.

Records

The monitoring record must provide sufficient information to determine:

(a) when the monitoring was done and what the results were;

(b) what monitoring procedures were adopted, including the duration;

(c) the locations where samples, the operations in progress at the time and, in the case of personal samples, the names of the individuals concerned.

It is suggested that the records be computerised and in all cases the information must be readily available and in an easily understood form. It should be kept in such a way that the results can be compared with any health records required under Regulation 11.

Specimen records are attached as Appendix E.

Records of monitoring must be available to employees or their representatives in accordance with Regulation 12(2)(a) and to Inspectors appointed by the relevant enforcing authority or Employment Medical Advisers.

Regulation 11 – Health Surveillance

11.(1) "Where it is appropriate for the protection of the health of his 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.(2) Health surveillance shall be treated as being appropriate where:

(a) the employee is exposed to one of the substances and is engaged in a process specified in Schedule 5, unless that exposure is not significant;

(b) the exposure of the employee to a substance hazardous to health is such that an identifiable disease or adverse health effect may be related to the exposure, there is a reasonable likelihood that the disease or effect may occur under the particular conditions of his work and there are valid techniques for detecting indications of the disease or the effect.

11.(3) The employer shall ensure that a health record, containing particulars approved by the Health and Safety Executive, in respect of each of his employees to whom paragraph (1) relates is made and maintained and that record or a copy thereof is kept in a suitable form for at least 30 years from the date of the last entry made in it.

11.(4) Where an employer who holds records in accordance with paragraph (3) ceases to trade, he shall forthwith notify the Health and Safety Executive thereof in writing and offer those records to the Executive.

11.(5) Subject to Regulation 17(4) (which relates to transitional provisions), if an employee is exposed to a substance specified in Schedule 5 and is engaged in a process specified therein, the health surveillance required under paragraph (1) shall include medical surveillance under the supervision of an employement medical advisor or appointed doctor at intervals of not more than 12 months or at such shorter intervals as the employment medical adviser or appointed doctor may require.

11.(6) Where an employee is subject to medical surveillance in accordance with paragraph (5) and an employment medical adviser or appointed doctor has certified in the health record of the employee that in his professional opinion that employee should not be engaged in work which exposes him to that substance or that he should only be so engaged under conditions specified in the record, the employer shall not permit the employee to be engaged in such work except in accordance with the conditions, if any, specified in the health record, unless that entry has been cancelled by an employment medical adviser or appointed doctor.

11.(7) Where an employee is subject to medical surveillance in accordance with paragraph (5) and an employment medical adviser or appointed doctor has certified by an entry in his health record that medical surveillance should be continued after his exposure to that substance has ceased, the employer shall ensure that the medical surveillance of that employee is continued in accordance with that entry while he is employed by the employer, unless that entry has been cancelled by an employment medical adviser or appointed doctor.

11.(8) On reasonable notice being given, the employer shall allow any of his employees access to the health record which relates to him.

11.(9) An employee to whom this regulation applies, shall, when required by his employer and at the cost of the employer, present himself during his working hours for such health surveillance procedures as may be required for the purposes of paragraph (1) and, in the case of an employee who is subject to medical surveillance in accordance with paragraph (5), shall furnish the employment medical adviser or appointed doctor with such information concerning his health as the employment medical adviser or appointed doctor may reasonably require.

11.(10) Where, for purposes of carrying out his functions under these Regulations, an employment medical adviser or appointed doctor requires to inspect any workplace or any record kept for the purposes of these Regulations, the employer shall permit him to do so.

11.(11) Where an employee or an employer is aggrieved by a decision recorded in the health record by an employment medical adviser or appointed doctor to suspend an employee from work which exposes him to a substance hazardous to health (or to impose conditions on such work), he may, by application in writing to the Executive within 28 days of the date on which he was notified of the decision, apply for the decision to be reviewed in accordance with a procedure approved for the purposes of this paragraph by the Health and Safety Commission, and the result of the review shall be notified to the employee and employer and entered in the health record in accordance with the approved procedure.

11.(12) In this regulation:

(a) "appointed doctor" means a fully registered medical practitioner who is appointed for the time being in writing by the Health and Safety Executive for the purposes of this regulation;

(b) "employment medical adviser" means an employment medical adviser appointed under Section 56 of the 1974 Act;

(c) "health surveillance includes biological monitoring".

The general Approved Code of Practice gives guidance on health surveillance. In the case of carcinogenic substances, some of the objectives of health surveillance and its limitations need to be emphasised.

Health surveillance is appropriate in cases of all carcinogenic substances, unless exposure is not significant. Some are listed in Schedule 5 to the Regulations Appendix B as requiring medical surveillance under the supervision of an employment medical advisor or appointed doctor. In the case of substances known to, or suspected of, causing cancer of the skin (eg arsenic, coal soots, coal tar, non-solvent refined mineral oils, contaminated used mineral oils), health surveillance should include regular skin inspection by a suitably qualified person about any symptoms, following self-inspection by the employees concerned. In all other cases, only a health record, as described in paragraph 2 of Appendix C need be kept.

Health surveillance generally has limitations in identifying susceptible persons and in the early recognition of cancer at a stage when treatment is likely to offer a better prognosis. For this reason it is largely restricted to the keeping of health records under the regulations, in order to protect the health of workers through the detection and evaluation of risks to health. Medical surveillance by an Employment Medical Adviser or appointed doctor is, however, required in those cases included in Schedule 5 Appendix B, in addition, skin cancer is an obvious example where appropriate health surveillance can detect the condition at an early stage when it can be cured.

In view of the usual latent period between exposure to a carcinogenic substance and any health effect, employees who have been exposed to carcinogenic substances should be provided with information about any need for continuing health surveillance after exposure has ceased.

Purpose of Health Surveillance

The objectives of health surveillance, where employees are exposed to substances hazardous to health in the course of their work, are:

(a) the protection of the health of individual employees by the detection at as early a stage as possible of adverse changes which may be attributed to exposure to substances hazardous to health;

(c) the collection, maintenance and use of data for the detection and evaluation of hazards to health, both work related and personal;

(d) assess, in relation to specific work activities involving micro-organisms of hazards to health, the immunological status of employees.

The results of any health surveillance procedures should lead to some action which will be of benefit to the health of employees. The options and criteria for action should be established before undertaking health surveillance as well as the method of recording, analysis and interpretation of the results of health surveillance.

Suitable Health Surveillance

Health surveillance will always include the keeping of an individual health record and, in addition, it can include a range of procedures, one or more of which is capable of achieving the objectives set out above. The procedure(s) which are most suitable in the particular case should be selected. It is recommended that the health surveillance procedures be specified by the Occupational Health Specialists appointed. Employers should satisfy themselves that the procedures are adequate.

Regulation 11(5) specifies the frequency of medical surveillance carried out under the supervision of Employment Medical Advisors or appointed doctors. This is at intervals not exceeding 12 months, or at such shorter intervals as the employment medical adviser or appointed doctor requires. The exact nature of the examination is at the direction and discretion of the Employment Medical Adviser or appointed doctor.

Where Health Surveillance is Appropriate

Health surveillance is appropriate for workers liable to be exposed to the substances and engaged in the processes listed in Schedule 5 to the regulations (see Appendix B).

Health surveillance, including the keeping of health records, will also be appropriate for workers exposed to any other substance which fulfils the criteria listed in Regulation 11(2)(b). Any judgement as to the likelihood that a disease or adverse health effect may occur must be related to the nature and degree of exposure. The judgement should include assessment of available epidemiology, information on human exposure, and human and animal toxiological data, as well as extrapolation from information about analogous substances or situations.

Valid techniques are those of acceptably high sensitivity and specificity which can detect abnormalities related to the nature and degree of exposure. The criteria for intercepting the data should be known (eg this may require the establishment of normal values and action levels). The aim should be to establish health surveillance procedures which are safe, easy to perform, non-invasive and acceptable to employees.

In particular conditions of work, should any of the criteria above not apply, health surveillance procedures should be reviewed and subsequently modified or discontinued as appropriate.

Categories where health surveillance is appropriate under the criteria in Regulation 11(2)(b) are given below together with information in typical forms of surveillance. Other examples are given in relevant technical literature including HSE Guidance Notes. In all cases surveillance should be carried out, unless there is no significant risk to health. The list is not definitive and there will be other instances where the criteria in Regulation 11(2)(b) indicates that health surveillance is required.

SUBSTANCE/PROCESS	TYPICAL PROCEDURE
(a) Substances of recognised systematic toxicity.	Appropriate clinical laboratory investigations.
(b) Substances known to cause occupational asthma.	Enquiries seeking evidence of respiratory symptoms related to work.
(c) Substances known to cause severe dermatitis.	Skin inspection by a responsible person.

The collection, maintenance and review of health records (see Appendix C, para 1(a)) may protect the health of workers through the detection and evaluation of risks to health.

In some cases, the only health surveillance required is the collection and maintenance of those records. Examples are:

(a) known or suspected carcinogens (see list Appendix D and other substances labelled "may cause cancer") other than those already included in Schedule 5 to the regulations or as set out above;

(b) man-made mineral fibres;

Significant Exposure

If following a suitable and sufficient assessment, it can be shown under the circumstances of exposure to a substance hazardous to health, that such exposure is most unlikely to result in any disease or adverse health effect, then exposure can be deemed not to be significant. Further information about significant exposure can be found in other Approved Codes of Practices under COSHH Regulations and in relevant technical literature, including HSE Guidance Notes.

Continuing health surveillance after cessation of exposure. In certain circumstances it may be appropriate for an employer to continue health surveillance of his employees (while they remain his employees) after exposure to a substance hazardous to health has ceased.

Cases where this will be of benefit to workers may be those where an adverse effect on health may be anticipated after a latent period and where it is believed that the effect can be reliably detected at a sufficiently early stage. Examples of substances which normally entail continuing health surveillance after cessation of exposure are those which cause cancer of the urinary tract.

Facilities for Health Surveillance

Where health surveillance procedures are carried out at the employer's premises suitable facilities should be available. In cases where examinations and inspections are required, facilities should include a room which is clean, warm, well ventilated, suitably furnished and having a wash basin, equipped with hot and cold running water, soap and a clean towel. (If it is not reasonably practicable to provide hot and cold running water, means of heating water should be provided in the room.) The room should be set aside for the exclusive purpose of health surveillance when required and provision should be made for privacy. Where the number of employees to be examined or assessed is substantial, a' suitable waiting area should be provided. An adjacent WC with hand-washing facilities should be provided for employees when providing specimens for biological monitoring or biological effect monitoring.

Health Record

A health record, to be kept in all cases where health surveillance is required by the Regulations should contain at least the information set out in Appendix C. These particulars are approved by the Health and Safety Executive.

In a Suitable Form

In addition to keeping the particulars given in Appendix C an index or list of the names of persons undergoing, or who have undergone health surveillance should be kept. The record should be kept in a form compatible with and capable of being linked to those required by Regulation 10 for monitoring of exposure, so that, where appropriate, the nature and degree of exposure can be compared with effects on health.

Regulation 12 — Information, Instruction and Training for Persons who may be Exposed to Substances Hazardous to Health

12.(1) "An employer who undertakes work which may expose any of his employees to substances hazardous to health shall provide that employee with such information, instruction and training as is suitable and sufficient for him to know —

(a) the risks to health created by such exposure; and

(b) the precautions which should be taken.

12.(2) Without prejudice to the generality of paragraph (1), the information provided under that paragraph shall include —

(a) information on the results of any monitoring of exposure at the workplace in accordance with Regulation 10 and, in particular, in the case of any substance hazardous to health specified in Schedule 1, the employee or his representatives shall be informed forthwith, if the results of such monitoring show that the maximum exposure limit has been exceeded; and

(b) information on the collective results of any health surveillance undertaken in accordance with Regulation 11 in a form calculated to prevent it from being identified as relating to any particular person.

12.(3) Every employer shall ensure that any person (whether or not his employee) who carries out any work in connection with the employees' duties under these Regulations has the necessary information, instruction and training."

Regulation 12 requires that employees who may be exposed to hazardous substances are given suitable and sufficient information, instruction and training.

Employees must be informed about:

(a) the risks to health arising from their work;

(b) the precautions to be taken, including the use of protective clothing and equipment;

(c) the results of monitoring exposure, particularly where exposure limits are exceeded (see Regulation 10 above);

(d) the results of health surveillance (see Regulation 11 above).

This information must also be made available to Safety representatives subject to Regulation 12.(2)(b).

Employees must also have the necessary instruction and training:

(a) Instruction must cover:

(i) the precautions to be taken;

(ii) cleaning, storage and disposal procedures;

(iii) emergency procedures.

(b) Employees must be trained in the effective use of:

(i) methods of controlling exposure;

(ii) personal protective equipment;

(iii) emergency measures.

Any person who carries out work on behalf of the National Rivers Authority must also have received the necessary instruction and training.

Regulation 13 – Provisions Relating to Certain Fumigations

This regulation does not apply in the National Rivers Authority.

Regulation 14 – Exemption Certificates

This regulation does not apply in the National Rivers Authority.

Regulation 15 — Extension Outside Great Britain

This regulation does not apply in the National Rivers Authority.

Regulation 16 — Defence in Proceedings for Contravention of these Regulations

In any proceedings for an offence consisting of a contravention of these Regulations it shall be a defence for any person to prove that he took all reasonable precautions and exercised all due diligence to avoid the commission of that offence.

Regulation 17 — Transitional Provisions

17.(1) Where work which is liable to expose employees to substances hazardous to health was commenced before 1st October 1989 or within 3 months after that date, it shall be sufficient compliance with Regulation 6(1) if the assessment required by that regulation is made before 1st January 1990.

17.(2) Until 1st January 1990, respiratory protective equipment required to be approved in accordance with Regulation 7(6) need not be so approved, but until that date any such equipment which was required to be approved under any regulation revoked by these Regulations shall be approved in accordance with those regulations or in accordance with the said Regulation 7(6).

17.(3) Where, in respect of the engineering controls to which Regulation 9(2) applies, immediately before 1st October 1989 local exhaust ventilation plant was required to be thoroughly examined and tested under any of the relevant statutory provisions then in force, the first thorough examination and test under Regulation 9(2) shall not be required until the date on which it would have next been required under the former provision had that provision not been revoked.

17.(4) Where in respect of an employee to whom Regulation 11(1) applies, immediately before 1st October 1989 the employee was subject to health surveillance under any of the relevant statutory provisions then in force, he shall not be required to be medically examined for the first time under Regulation 11(5) until the date on which he would have next been required to be so examined under the former provision had that provision not been revoked.

Regulation 18 — Modifications Relating to the Ministry of Defence etc

This regulation does not apply in the National Rivers Authority.

Regulation 19 — Repeals, Revocations and Savings

19.(1) "The provision of —

(a) the Mines and Quarries Act 1954(a) specified in column 1 of Part I of Schedule 8;

(b) the Factories Act 1961(b) specified in column 1 of Part II of Schedule 8;

are repealed to the extent set out in the entry opposite thereto in the corresponding entry in column 2 of the respective Part.

19.(2) The Hydrogen Cyanide (Fumigation) Act 1937(c) is repealed.

19.(3) The regulations and orders specified in column 1 of Schedule 9 are revoked or, where expressly stated, modified to the extent set out in the entry opposite there to in column 2 of that Schedule.

19.(4) Any record or register required to be kept under any regulations or orders revoked by paragraph (3) shall, notwithstanding those revocations, be kept in the same manner and for the same period as if these Regulations had not yet been made, except that the Health and Safety Executive may approve the keeping of records at a place or in a form other than at the place where, or in the form which, records were required to be kept under the regulations or orders so revoked.

(a) 1954 c 70; amended by SI 1974/2013.

(b) 1961 c 34; amended by SI 1974/1941.

(c) 1937 c 45; amended by SI 1074/1840.

An assessment of the repeals and revocations set out in Schedule 9 reveals that one of the regulations may apply:

The Grinding of Metals (Miscellaneous Industries) Regulations 1925, as amended. Section 17(b) requires a register to be kept in respect of the examination of ventilation equipment."

References

The Control of Substances Hazardous to Health Regulations 1988, SI 1988 No 1657.

Information Approved for the Classification, Packaging and Labelling of Dangerous Substances.

Information Approved for the Classification, Packaging and Labelling of Dangerous Substances for supply and conveyance by road (Second Edition).

Classification, Packaging and Labelling Regulations, 1984 (SI 1984/22, Amended by SI 1986/1922 and SI 1988/766).

Control of Pesticides Regulations 1986.

The Grinding of Metals (Miscellaneous Industries) Regulations 1925, as amended by Section 17(b).

Health and Safety at Work 1974 Act.

Safety Signs Regulations 1980.

Protection of Eyes Regulations 1974.

Water Industry Health & Safety Advisory Broadsheets.

The following publications give more detailed information on COSHH and its requirements:

Introducing COSHH (a brief guide for all employers), leaflet available free from HSE.

Introducing Assessment (a simplified guide for employers), leaflet available from HSE.

Hazard and Risk Explained, leaflet available free from HSE.

COSHH Assessments (a step-by-step guide to assessment and the skills needed for it), HMSO, ISBN 0 11 885470 4.

Control of Substances Hazardous to Health Regulations 1988, Approved Code of Practice Control of Substances Hazardous to Health and Approved Code of Practice Control of Carcinogenic Substances, HMSO, ISBN 0 11 885468 2.

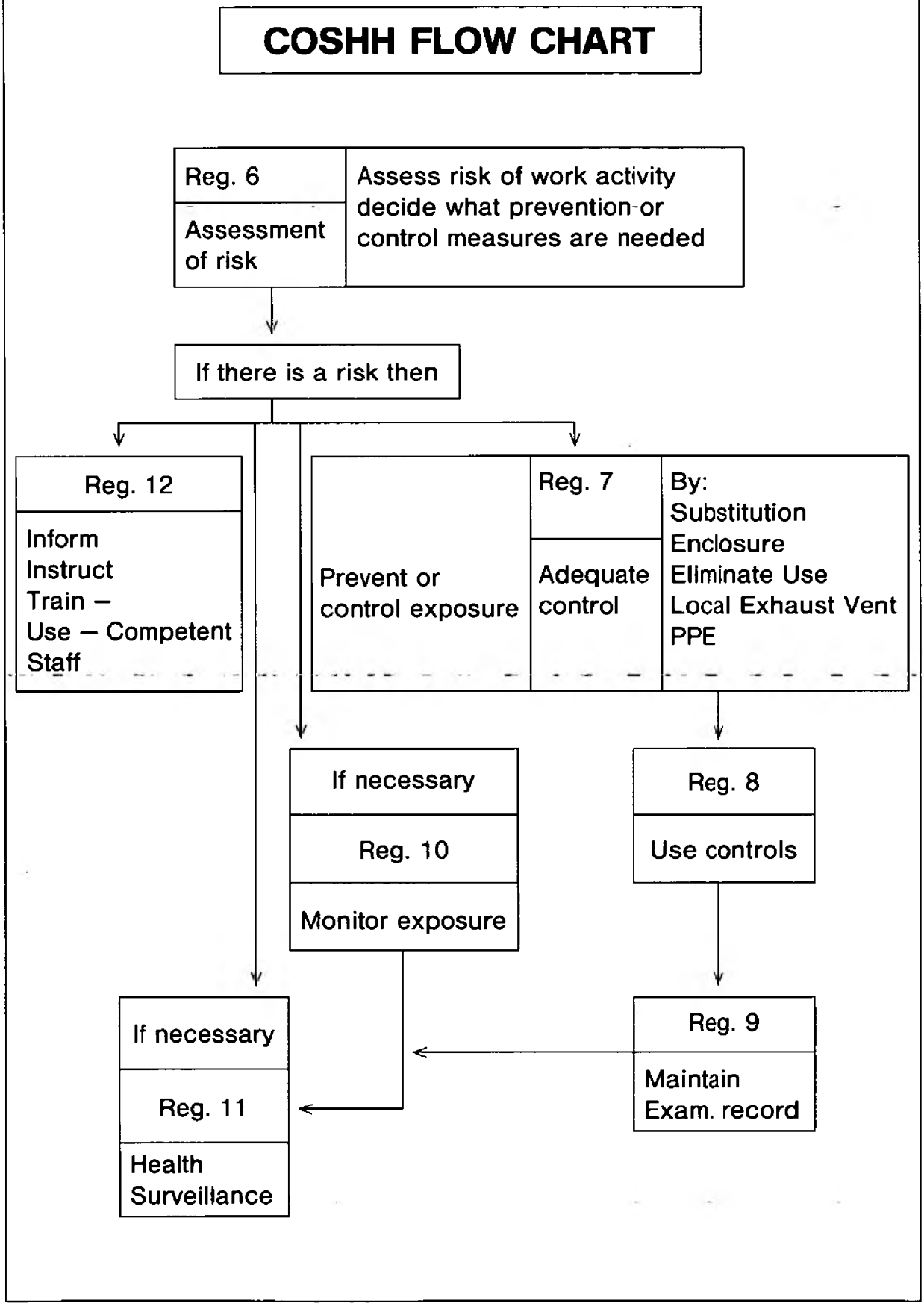
Guidance Note EH40/89 (and subsequent editions) Occupational Exposure Limits, HMSO, ISBN 0 11 885411 9.

Guidance Note EH42/89 Monitoring Strategies for Toxic Substances.

For employers engaged in fumigation operations: Control of Substances Hazardous to Health Regulations 1988 and Approved Code of Practice Control of Substances Hazardous to Health Fumigation Operations, HMSO, ISBN 0 11 885469 0.

For employers engaged in work with vinyl chloride; Approved Code of Practice Control of Vinyl Chloride at Work, HMSO, ISBN 0 7176 0317 2.

COSHH FLOW CHART



Schedule 5 – Medical Surveillance Regulation 11(2)(a) and (5)

Column 1 Substances for which medical surveillance is appropriate	Column 2 Processes
Vinyl chloride monomer (VCM)	In manufacturing, production, reclamation, storage, discharge, transport, use of polymerisation.
Nitro or amino derivatives of phenol and of benzene or its homologues.	In the manufacture of nitro or amino derivatives of phenol and of benzene or its homologues and the making of explosives with the use of these substances.
Potassium or sodium chromate or dichromate.	In manufacture.
1-Naphthylamine and its salts Orthotolidine and its salts Dianisidine and its salts Dichlobenzidine and its salts	In manufacture, formation or use of these substances.
Auramine. Magenta	In manufacture.
Carbon disulphide Disulphur dischloride Benzene, including benzol articles Carbon tetrachloride Trichlorethylene	Processes in which these substances are used or given off as vapour, in the manufacture of india-rubber or of or goods made wholly or partially of india-rubber.
Pitch	In manufacture of blocks of fuel consisting of coal, coal dust, coke or slurry with pitch as a binding substance.

Health Records

Regulation 11(3) (Code paragraphs 87, 91 and 92.)

Particulars approved by the Health and Safety Executive.

(1) A record containing the following particulars should be kept for every employee undergoing health surveillance.

(a) surname, forenames, sex, date of birth, permanent address, post code, National Insurance Number, date of commencement of present employment and a historical record of jobs involving exposure to substances requiring health surveillance in this employment.

(b) conclusions of all other health surveillance procedures and the date on which and by whom they were carried out. The conclusions should be expressed in terms of the employee's fitness for his work and will include, where appropriate, a record of the decisions of the employment medical adviser or appointed doctor, or conclusions of the medical practitioner, occupational health nurse or other suitably qualified or responsible person, but not confidential clinical data.

(2) Where health surveillance consists only of keeping an individual health record the particulars required are those at 1(a) above.

Carcinogenic Substances and Processes

Any substance which under the Classification, Packaging and Labelling of Dangerous Substances Regulations 1984 (SI 1984/22, amended by SI 1986/1922 and SI 1988/766), has been assigned the "risk phase" :R45: "May Cause Cancer" and which is listed in Part 1A1 of the approved list.

Alflatoxins
Arsenic and its inorganic compounds
Benzo(a) (pyrene)
Beryllium and beryllium compounds
Insoluble chromium (VI) compounds
Mustard gas (B,B'Dichlorodiethyl sulphide)
Inorganic nickel compounds arising during the refining of nickel
Ortho-toluidine
Coal soots, coal tar, pitch and coal tar fumes
Non-solvent refined mineral oils and contaminated used mineral oils
Auramine manufacture
Leather dust in boot and shoe manufacture, arising during preparation and finishing
Hard wood dusts
Isopropyl alcohol manufacture (strong acid process)
Rubber industry (processes giving rise to dust and fumes)
Magenta manufacture
3,3' Dimethoxy benzidine (Dianisidine) and its salts
1-Naphthylamine and its salts
4-Nitrobiphenyl
Orthotolidine and its salts
Vinyl chloride monomer (VCM)

(Note: VCM is also covered by the Approved Code of Practice Control of Vinyl Chloride at Work.)

NATIONAL RIVERS AUTHORITY

COSHH SUBSTANCE INVENTORY TITLE SHEET

FUNCTION .....

LOCATION .....

INVENTORY CARRIED OUT BY .....
(PRINT CAPITALS)

DATE .....

SIGNATURE .....

PART ONE				PART TWO DO NOT COMPLETE	
INVENTORY SUBSTANCE NAME	QUANTITY HELD	WHERE HELD	USED FOR	(PART 1A Cpl Regs) YES	NO

Appendix E

PART ONE				PART TWO DO NOT COMPLETE	
INVENTORY SUBSTANCE NAME	QUANTITY HELD	WHERE HELD	USED FOR	(PART 1A) Cpl Regs) YES	NO

Appendix E

NATIONAL RIVERS AUTHORITY

HEALTH AND SAFETY SECTION
COSHH SURVEY FORM

Name of Product.....

Manufacturers Details (inc. telephone no. and fax) .....

.....

.....

Product Data Sheet Available Yes/No If Yes Append

Hazard Classification ( )

Very Toxic Toxic Harmful Corrosive Irritant

Other.....

Normal Stock Level Held.....

Location Stored.....

Annual Quantity Purchased .....

Is the Product still required?.....

Can a less hazardous substitute be used?.....

Is the product used at the location held or elsewhere?.....

.....

.....

Any Other Comments?.....

.....

Signed ..... Date.....

Office Use Only Monitoring Y / N MEL Y / N

Health Surveillance Y / N OES Y / N Training Req Y / N

Appendix E

NATIONAL RIVERS AUTHORITY

CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS 1988

INVENTORY OF HAZARDOUS SUBSTANCES

Section ..... Date..... Sheet No .....

No.	NAME OF HAZARDOUS SUBSTANCE IDENTIFIED	HOW & WHERE IS THE HAZARDOUS SUBSTANCE USED	HEALTH RISK IDENTIFIED (See special notes below)	PRESENT CONTROL STRATEGY					FUTURE CONTROL STRATEGY				
				EXTRACT VENTILATION	SEGREGATION	SUBSTITUTION	EYE, RESPIRATORY OR SKIN PROTECTION	OTHER	EXTRACT VENTILATION	SEGREGATION	SUBSTITUTION	EYE, RESPIRATORY OR SKIN PROTECTION	OTHER

SPECIAL NOTES

No. (As above)	IS THE SUBSTANCE					ROUTE OF ENTRY			
	TOXIC	FLAMMABLE	CARCINOGENIC	CORROSIVE	OTHER	SKIN ABSORPTION	INGESTION	INHALATION	OTHER

Signature of Person compiling inventory .....

Last Updated.....

INVENTORY OF HAZARDOUS SUBSTANCES CONTINUATION SHEET

Appendix E

No.	NAME OF HAZARDOUS SUBSTANCE IDENTIFIED	HOW & WHERE IS THE HAZARDOUS SUBSTANCE USED	HEALTH RISK IDENTIFIED (See special notes below)	PRESENT CONTROL STRATEGY					FUTURE CONTROL STRATEGY				
				EXTRACT VENTILATION	SEGREGATION	SUBSTITUTION	EYE, RESPIRATORY OR SKIN PROTECTION	OTHER	EXTRACT VENTILATION	SEGREGATION	SUBSTITUTION	EYE, RESPIRATORY OR SKIN PROTECTION	OTHER

SPECIAL NOTES

No. (As above)	IS THE SUBSTANCE					ROUTE OF ENTRY			
	TOXIC	FLAMMABLE	CARCINOGENIC	CORROSIVE	OTHER	SKIN ABSORPTION	INGESTION	INHALATION	OTHER

Signature of Person compiling inventory .....

Last Updated.....

Appendix E

NATIONAL RIVERS AUTHORITY

WORKPLACE MONITORING RECORD

ANALYTE				ASSESSMENT AREA NUMBER				
	LOCATION OF SAMPLE / PERSONNEL SAMPLED	DATE	START TIME	FINISH TIME	SAMPLE RATE ( )	SAMPLE VOLUME ( )	TOTAL ANALYTE ( )	ANALYTE CONCENTN. ( )
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								

Appendix E

NATIONAL RIVERS AUTHORITY

WORKPLACE MONITORING SUMMARY

ASSESSMENT AREA NUMBER
PROCESS IDENTIFICATION/LOCATION
ANALYTES
DATE OF SURVEY
PERSONNEL SAMPLED
SUMMARY OF RESULTS

Section 3

SECTION 3

DATA BASE FOR CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH

3.(1) INTRODUCTION

In order to facilitate the retrieval of information relating to hazards arising from the use of substances by the National Rivers Authority a national reference system of data reference is required. The system will be computer based, and will derive its input from the surveys carried out at all NRA workplaces under these Procedures.

The Inventories and Assessments will identify all products, chemicals and substances in use. Assessments of health risks associated with these will be carried out locally. The resultant data will form the source of the national database after a process of collation and rationalisation.

3.(2) DATABASE CONTENT

The data to be held will comprise the following:

1. List of all substances found to be in use at NRA sites.

   (a) identified under product name
   (b) identified under IUPAC chemical name
   (c) identified under the United Nations number
   (d) identified under common name
   (e) identified under Trade or Commercial name
   (f) identified as component of substance in use.

2. Toxicological classification/hazard of each of above substance or chemical. (Including "non-hazardous".)

3. Sources of toxicological advice.

4. Controls to be implemented.

5. List of uses within NRA as identified by survey, in summary form.

6. List of currently prohibited substances within NRA.

3.(3) SEARCH FACILITIES

Wide search facilities will be available.

3.(4) EXTENSION OF DATABASE

The system must be capable of continuous extension for the introduction of new chemicals, alternative combinations of existing chemicals, new trade names, and alternative chemical nomenclature as introduced from time to time.

3.(5) FORMAT

The database will be held on IBM PC in a format consistent with that to be determined as a National NRA standard.

Facilities will be provided to ensure that Regions can operate the data base on a stand alone basis under the general co-ordination of the National Safety Adviser.

Personal data will not be held on this data base but will remain the responsibility of Personnel management as appropriate.