

Guidance

26 A water system includes all plant/equipment and components associated with that system, eg all associated pipework, pumps, feed tanks, valves, showers, heat exchangers, quench tanks, water softeners, chillers etc. It is important to consider the system as a whole and not, eg the cooling tower in isolation. Deadlegs and parts of the system used intermittently, eg test loops in engineering factories and injection moulding machines, also need to be included as part of the system, because they can create particular problems with microbial growth going unnoticed. Once brought back online they can cause heavy contamination, which could disrupt the efficacy of the water treatment regime.

27 For other risk systems, such as humidifiers and air washers, vehicle washes, wet scrubbers, indoor fountains and water features, see the advice on control measures in *Part 3: Other risk systems* at www.hse.gov.uk/pubns/books/hsg274.htm.

Identification and assessment of the risk

Regulation

COSHH, regulation 6; Management Regulations, regulation 3; HSW Act, sections 2, 3 and 4.

Summary

These Regulations require employers to make a suitable and sufficient assessment of the risks from any work liable to expose employees to any substance hazardous to health, before that work is carried out. Employers are also required to make an assessment of the risks to other people not in their employment who may be affected by the work activity. They are also required to regularly review the risk assessment, and make any necessary changes as a result of the review.

ACOP

28 A suitable and sufficient assessment must be carried out to identify and assess the risk of exposure to legionella bacteria from work activities and water systems on the premises and any precautionary measures needed. The dutyholder is responsible for ensuring the risk assessment is carried out. The dutyholder is either:

- (a) the employer, where the risk from their undertaking is to their employees or others; or
- (b) a self-employed person, where there is a risk from their undertaking to themselves or others; or
- (c) the person who is in control of premises or systems in connection with work, where there is a risk from systems in the building, eg where a building is let to tenants, but the landlord keeps responsibility for its maintenance.

29 The dutyholder must ensure that the person who carries out the risk assessment and provides advice on prevention and control of exposure must be competent to do so.

30 The risk assessment should identify and evaluate potential sources of risk and:

- (a) the particular means of preventing exposure to legionella bacteria; or
- (b) if prevention is not reasonably practicable, the particular means of controlling the risk from exposure to legionella bacteria.

ACOP

31 Where the assessment demonstrates there is no reasonably foreseeable risk or that risks are insignificant and unlikely to increase, and are properly managed, no further assessment or measures are needed. However, if the situation changes, the assessment should be reviewed and revised, if any changes are needed.

32 You need to review the assessment regularly and specifically when there is reason to believe that the original risk assessment may no longer be valid. You should also review management and communication procedures as appropriate.

Guidance

33 Before any formal health and safety management system for water systems is implemented, the dutyholder should carry out a risk assessment to identify the possible risks. The purpose of the assessment is to enable a decision on:

- (a) the risk to health, ie whether the potential for harm to health from exposure is reasonably foreseeable, unless adequate precautionary measures are taken;
- (b) the necessary measures to prevent, or adequately control, the risk from exposure to legionella bacteria.

34 The risk assessment also enables the dutyholder to show they have considered all the relevant factors, and the steps needed to prevent or control the risk.

35 The dutyholder may need access to competent help and advice when carrying out the risk assessment. For further guidance on this, see paragraphs 48–51. This source of advice may not necessarily be from within the person's organisation but may be from a consultancy, water treatment company or a person experienced in carrying out risk assessments. Employers are required to consult employees or their representatives about the arrangements for getting competent help and advice (see paragraph 20).

36 The dutyholder under paragraph 28 should, with the help of the appointed responsible person, make reasonable enquiries to ensure that organisations such as water treatment companies or consultants, and staff from the occupier's organisation, are competent and suitably trained and have the necessary equipment to carry out their duties in the written scheme safely and adequately.

37 Few workplaces stay the same, so it makes sense to review regularly what you are doing. Further guidance on risk assessment is at www.hse.gov.uk/risk.

ACOP

Carrying out a risk assessment

38 As part of the risk assessment, take into account the individual nature of each site and consider the system as a whole and not, eg the cooling tower in isolation. In complex systems, a site survey of all the water systems should be carried out, including an asset register of all associated plant, pumps, strainers and other relevant items. This should include an up-to-date schematic diagram showing the layout of the plant or system, including parts temporarily out of use.

Guidance

39 Consider the individual nature of the site and system as a whole, including deadlegs and parts of the system used intermittently. These should be included because they can create particular problems, as microbial growth can go unnoticed. When they are brought back online, they can cause heavy contamination, which could disrupt the efficacy of the water treatment regime.