

## Proficiency Module Syllabus

### P901 – Legionella – Management and Control of Building Hot and Cold Water Services

**Aim:** To provide background and an overview of the risk of legionella infection and how it can be controlled in domestic type hot and cold water systems. *[This course is also a pre-requirement before undertaking course P903 – Management and Control of Evaporative Cooling Systems and other High Risk Industrial Systems or P904 – Management and Control in Leisure, Display, Therapy and other Non-Industrial Systems.]*

**Learning Outcome:** On successful completion, the student shall be able to demonstrate knowledge of:

- The origins of legionella and the factors which allow it to proliferate to hazardous levels in man-made water systems.
- The main conditions which cause legionella infection to occur in susceptible individuals.
- The fundamental principles of assessing the risk of exposure to legionella in domestic hot and cold water systems.
- The legal requirements, approved codes of practice and best practice guidance.
- Implementation of legionella control regimes with suitable monitoring programmes and records.

**Course Length:** It is envisaged that this course will be conducted over 1 day which includes the examination. This course will require 6 hours' study time.

Content:	Topic	Time Allocation
1	<b>Introduction and History of the Organism</b>	<b>15%</b>
2	<b>Legislation and Guidance</b>	<b>15%</b>
3	<b>Risk Assessment of Systems</b>	<b>25%</b>
4	<b>Operational Control</b>	<b>20%</b>
5	<b>Outbreak Investigation Procedures</b>	<b>10%</b>
6	<b>Record Keeping</b>	<b>5%</b>
7	<b>Case Studies</b>	<b>10%</b>

**Note:** Reference is made in this syllabus to HSE guidance and or documentation. This may not be the most up-to-date relevant publications from HSE/other sources and is intended as guidance for candidates only.

#### 1 Introduction and History of the Organism [15%]

- 1.0.1 The occurrence of legionella, sources and primary cause of growth in man-made water systems.
- 1.0.2 Types and significance of the bacteria.
- 1.0.3 The infection chain, susceptibility to infection, symptoms, treatment and prognosis.
- 1.0.4 Health effects on exposed people.
- 1.0.5 Review of data gathered by Public Health England (PHE) and others.

#### 2 Legislation and Guidance [15%]

- 2.0.1 Acts of Parliament
- 2.0.2 Approved codes of practice, HSE guidance notes, British Standards. Other industry accepted good practice sources of information.

### **3 Risk Assessment of Systems [25%]**

- 3.0.1 Role of the named duty holder and responsible person(s).
- 3.0.2 Definition of competent responsible person.
- 3.0.3 Key components of the management and control systems.
- 3.0.4 Design and operation of domestic type hot and cold water systems.
- 3.0.5 Importance of schematic diagrams and sentinel outlets.
- 3.0.6 Sentinel points on hot water systems with a circulation.
- 3.0.7 Significance of dead legs, blind ends and inaccessible parts of the water system.
- 3.0.8 Miscellaneous Systems.

### **4 Operational Control [20%]**

- 4.0.1 Duties and responsibilities of responsible person(s).
- 4.0.2 The role, risks and responsibilities when subcontracting part of the task of the control strategy.
- 4.0.3 The written scheme of precautions including routine temperature checks and routine condition inspection.
- 4.0.4 Other control strategies—Ionisation, ClO<sub>2</sub>, etc.
- 4.0.5 The role of general bacteriological testing as part of the control strategy.
- 4.0.6 Corrective or remedial actions.
- 4.0.7 Record keeping, the details required for effective management control and retention of monitoring data.

### **5 Outbreak Investigation Procedures [10%]**

- 5.0.1 The appointment and role of a Proper Officer and Incident Control Team.
- 5.0.2 Definition of an outbreak.
- 5.0.3 The roles of the investigating organisations (HSE, PHE, Local Authority).
- 5.0.4 Control and Investigation phases.
- 5.0.5 Interpreting the patterns of cases to trace the source; interpreting the microbiology to trace the source and the role of sequence based typing (SBT).

### **6 Record Keeping**

- 6.0.1 Regulatory requirements for record keeping.

### **7 Case Studies [10%]**

- 7.0.1 Causes of recent Legionnaires' disease outbreaks and the suspected water system sources.
- 7.0.2 Prosecutions.

### **Further Information**

- 1) Approved Code of Practice & Guidance – Legionnaires' disease The control of legionella bacteria in water systems – L8 – ISBN 9780717666157 and HSG274 – Technical Guidance – The control of legionella bacteria in hot and cold water systems.
- 2) Legionnaires' disease A guide for employers. ISBN 0-7176-1773-4
- 3) Health and Safety Executive/Local Authorities Enforcement Liaison Committee (HELA) Legionnaires Disease LAC Number 46/1
- 4) Essential information for providers of residential accommodation. INDG376 – ISBN 0-7176-2207-X
- 5) Controlling Legionella in nursing and residential care homes ING253
- 6) The control of legionella hygiene, "safe" hot water, cold water and drinking water systems. Health Technical Memorandum 04-01
- 7) Health and Safety in care homes HSG220
- 8) The water supply (water fittings) regulations 1999 – ISBN 0-11-082552-7
- 9) HSE Legionella web site. <http://www.hse.gov.uk/legionnaires/>
- 10) HSE INDG 458 A Brief Guide to Dutyholders
- 11) BS 8580: 2010 Water quality. Risk assessments for Legionella control. Code of practice
- 12) BS 7592: 2008 Sampling for legionella bacteria in water systems – Code of Practice

## **8 Examination**

There is a closed-book examination comprising 20 short answer questions to be answered in 60 minutes. The examination covers sections 1 to 6 of the syllabus in proportion to the time allocation given on the front page the syllabus.

Successful completion of the above will lead to a:

**PROFICIENCY CERTIFICATE**  
in  
**Legionella—Management and Control of Building Hot and Cold Water Services**