

Reference	NR/L3/CIV/164
Issue	1
Publication date	3 Sept 2011
Compliance date	3 Dec 2011

Level 3

Legionnaires' disease – The control of legionella bacteria in water systems

Endorsement and Authorisation

Endorsed by:



R Anderson, Senior Policy Development Specialist (Buildings & Civils)

Authorised by:



N Ricketts, Professional Head (Buildings & Civils)

Accepted for issue by:



M McManus, National Standards Manager

This document is the property of Network Rail. It shall not be reproduced in whole or part nor disclosed to a third party without the written permission of the Standard Owner.

© Copyright 2011 Network Rail.

Uncontrolled copy once printed from its electronic source.

Published and issued by Network Rail, Kings Place, 90 York Way, London N1 9AG.



Reference	NR/L3/CIV/164
Issue	1
Publication date	3 Sept 2011
Compliance date	3 Dec 2011

Issue record

Issue	Date	Comments
1	September 2011	NR/L3/CIV/164: <i>Legionnaires' disease – The control of legionella bacteria in water systems</i>

Compliance

This Network Rail standard is mandatory and shall be complied with by Network Rail and its contractors if applicable from 03 December 2011.

When this standard is implemented, it is permissible for all projects that have formally completed GRIP Stage 3 (Option Selection) to continue to comply with the issue of any relevant Network Rail standards current when GRIP Stage 3 was completed and not to comply with requirements contained herein, unless stipulated otherwise in the scope of this standard.

Reference Documents

Legislation

The Health & Safety at Work Act 1974

Water Regulations 1999

Management of Health and Safety at Work Regulations 1999

Control of Substances Hazardous to Health Regulations 2002 (COSHH)

The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR)

UK Health and Safety (HSE)

Legionnaires' disease. The control of legionella bacteria in water systems – Approved Code of Practice and Guidance (ACOP) – L8 (Third Edition)

Legionnaires' disease. A guide for employers IACL27(rev2) 2009

British Standards

BS 8580 Water quality – Risk assessments for Legionella control – Code of practice

BS 7592 Sampling for Legionella bacteria in water systems – Code of practice

Network Rail Standards

NR/L3/INV/0104 Reporting of occupational ill health.

NR/L3/MTC/RCS0216 Risk Control Manual

NR/L3/OCS/041 Operations Manual – Contents & Responsibilities Matrix

NR/GN/OHS/00150 Infection Control

Reference	NR/L3/CIV/164
Issue	1
Publication date	3 Sept 2011
Compliance date	3 Dec 2011

Disclaimer

In issuing this document for its stated purpose, Network Rail makes no warranties, express or implied, that compliance with all or any documents it issues is sufficient on its own to ensure safe systems of work or operation. Users are reminded of their own duties under health and safety legislation.

Supply

Copies of documents are available electronically, within Network Rail's organisation. Hard copies of this document may be available to Network Rail people on request to the relevant controlled publication distributor. Other organisations may obtain copies of this document from IHS. Tel: 01344 328039.

Reference	NR/L3/CIV/164
Issue	1
Publication date	3 Sept 2011
Compliance date	3 Dec 2011

Contents:

1.	Purpose	5
2.	Introduction	5
3.	Scope	5
4.	Legal Requirements	5
5.	Definitions	6
6.	Responsibilities	6
6.1	Franchised Property	6
6.2	Network Rail Operational Property	6
6.3	Network Rail Managed Property – multi occupancy buildings	7
7.	Training and Competence	7
8.	Management of Legionella	7
8.1	Water System Information	7
8.2	Risk Assessment and Action Plan	7
8.3	Implementing the Action Plan	8
9.	Action in the event of an outbreak	9
10.	Water supply system maintenance and enhancement	9
11.	RACI	10
12.	Further Information	11
	Appendix A - Checklist for all Tenants	12
	Appendix B – Water Temperature Record Log	13
	Appendix C – Copper / Silver ionization / Chlorine dioxide Record Log	14
	Appendix D – Taps / Showers Record Log	15
	Appendix E – Example Water System Schematic	16
	Appendix F – Example Legionella Risk Assessment	17

Reference	NR/L3/CIV/164
Issue	1
Publication date	3 Sept 2011
Compliance date	3 Dec 2011

1. Purpose

The purpose of this Standard is to raise awareness of legionella risks and obligations of employers under HSE regulations. Responsible persons are identified, and requirements provided to reduce the growth of legionella and subsequent infection risks to passengers and employees on Network Rail Property.

2. Introduction

Legionnaires' disease is a potentially fatal pneumonia caused by legionella bacteria. It is the most well-known and serious form of a group of diseases known as legionellosis. Other similar (but usually less serious) conditions include Pontiac fever and Lochgoilhead fever.

Infection is caused by breathing in small droplets of water contaminated by the bacteria. The disease cannot be passed from one person to another. Everyone is potentially susceptible to infection but some people are at higher risk, eg those over 45 years of age, smokers and heavy drinkers, those suffering from chronic respiratory or kidney disease, and people whose immune system is impaired.

Legionella bacteria are common in natural water courses such as rivers and ponds. Since legionella is widespread in the environment, they may contaminate and grow in other water systems such as water cooling towers, evaporative condensers and hot and cold water services. They survive low temperatures and thrive at temperatures between 20-45°C if the conditions are right, eg if a supply of nutrients is present such as rust, biofilm, sludge, scale, algae and other bacteria. They are killed by high temperatures.

For information on symptoms see NR/GN/OHS/00150 *Infection Control*.

3. Scope

This Standard provides requirements for the management of water systems, in order to prevent the growth of legionella bacteria. This applies to all occupied and unoccupied buildings owned by Network Rail, and includes premises which are managed by Network Rail, as well as premises managed as part of a Franchise agreement.

4. Legal Requirements

The *Health & Safety at Work Act 1974*, the *Management of Health and Safety at Work Regulations 1999* and the *Control of Substances Hazardous to Health Regulations 2002 (COSHH)* are the primary pieces of legislation covering the control of legionella. All employers or persons in control of a building (for tenants this will be the area leased to them) shall:

- Identify and assess sources of risk
- Prepare a course of action for preventing or controlling the risk
- Implement and manage the action plan, appoint a responsible person, and confirm the duty holder.
- Keep records and check that what is being done is effective
- Notify the local authority if water cooling towers or evaporative condensers are present within a structure.

Reference	NR/L3/CIV/164
Issue	1
Publication date	3 Sept 2011
Compliance date	3 Dec 2011

5. Definitions

Duty Holder – The organisation or employer required to comply with Health and Safety legislation.

Responsible Person – A person appointed by the Duty Holder to take day to day responsibility for controlling any identified risk from legionella bacteria.

Cold water service - installation of plant, pipes and fittings in which cold water is stored, distributed and subsequently discharged.

Hot water service - installation of plant, pipes and fittings in which water is heated, distributed and subsequently discharged (not including cold water feed tank and cistern)

IOSH - Institution of Occupational Safety and Health is the Chartered body for health and safety professionals.

NEBOSH - The National Examination Board in Occupational Safety and Health is an independent examining board and awarding body with charitable status.

6. Responsibilities

6.1 Franchised Property

For Franchised property, the SFO/DFO is defined as the duty holder, and is responsible for carrying out the risk assessment and subsequent management of hot and cold water systems in accordance with the HSE guidance documents.

The SFO/DFO shall appoint a responsible person for all premises, for stations or depots, where there is an identified risk from legionella bacteria. This would typically be the Facilities Manager, or other person with sufficient knowledge and competence to carry out this role.

Responsibility for the maintenance of hot and cold water plumbing and sanitary installations, where visible and / or accessible is normally the responsibility of the Station Facility Owner or Depot Facility Owner (SFO/DFO), as defined in the Station Access Conditions (SACs) or Depot Access Conditions (DACs). This includes hot water and cold water plumbing, sanitary installations and tanking points installed by, or on behalf of the SFO/DFO.

6.2 Network Rail Operational Property

For all operational property including occupied and unoccupied buildings, Network Rail, represented by the Route Asset Manager (Buildings) is the duty holder and responsible for obtaining water supply schematic, risk assessment and action plan, where there is an identified risk from legionella bacteria, as defined in 8.1 and 8.2.

The Network Rail Function occupying, or using the building, shall consult the Route Asset Manager (Buildings), and appoint a responsible person to implement and manage the action plan, as detailed in 8.3. The responsible person should be appointed by the following:

- For buildings occupied by staff managing train operations (e.g. signal boxes and signalling centres) - Operations Manager.
- For Maintenance Accommodation (e.g. MDU's and EEA welfare facilities) and unoccupied buildings (e.g. signalling and telecom equipment rooms, track section cabins) - Infrastructure Maintenance Delivery Manager (IMDM)

Note: Water supplies to unmanned buildings should be turned off, and disconnected unless there is a valid reason to retain the water supply. Where water supply has been disconnected, and drained, no further risk assessments or actions need to be undertaken.