



**Science and
Technology
Facilities Council**

CONTROL OF LEGIONELLA

Safety Code No 38

Rev. 1.11, Issued February 2023

Contents

1.	Purpose	4
2.	Scope	5
3.	Definitions	5
4.	Responsibilities	6
4.1	Head of Estates:	6
4.2	Legionella Responsible Persons:	6
4.3	Water Safety Group/Steering Groups.....	8
4.4	Managers, including those responsible for the design, construction or operation of water-containing systems:.....	8
4.5	SHE Group:	8
Appendix 1.	STFC Legionella Management Guidelines.....	10
Appendix 2.	ISIS Cooling Towers and Evaporative Condensers (R11 and R80) Water Safety Plan	11
Appendix 3.	Closed loop water systems	12
Appendix 4.	Other Legionella risk systems	13
Appendix 5.	Record Keeping and Water System Registers	14
Appendix 6.	Training	15
Appendix 7.	Emergency Action in the Event of an Outbreak.....	16
Appendix 8.	Audit Checklist.....	17
Appendix 9.	STFC Site Water Safety Group Terms of Reference (ToR).....	21
Appendix 10.	Document Retention Policy.....	23

Revisions

1.0	Initial Issue	September 2010
1.1	Update training providers	September 2011
1.2	Minor update to 4.1.1	December 2011
1.3	Addition of Appendix 8	October 2012
1.4	Document Retention Policy Added	August 2014
1.5	Legislation references updated, Water Safety Group (ToR) Added, ISIS Cooling Towers and Evaporative Condensers (R11 and R80) Water Safety Plan Added	April 2016
1.6	Revision to Hydrop guidance documents for cooling towers and separately all other legionella hazards	June 2017
1.7	Rationalisation of appendices 1, 2 & 8	October 2018
1.8	Added Appendix for DL Closed loop systems	July 2019
1.9	Updated Appendix for ISIS cooling towers	February 2020
1.10	Update to training Appendix	August 2022
1.11	Updated Appendix 2 added	February 2023

CONTROL OF LEGIONELLA

1. PURPOSE

Legionella are a range of bacteria widespread in natural fresh water which can if they proliferate cause Legionnaires' disease or Legionellosis - potentially fatal forms of pneumonia. In the UK there are between 200 and 300 cases per year of which approximately 30 are fatal.

While the ecology of Legionella in water systems is not fully understood, in the laboratory, it will grow optimally in stagnant nutrient rich water in the temperature range 20°C to 45°C (37°C body temperature) and pH 6.5-7.5. Water contaminated by Legionella only presents a risk when it is dispersed in air in the form of an aerosol (very fine water droplets / spray) such as that from a shower. Legionnaires' disease can therefore be contracted where there are opportunities to inhale infected water droplets.

Legionnaires' disease is a statutorily reportable disease.

There is no health and safety legislation specific to the management of Legionella, rather it is addressed through general duties defined under the:

- Health and Safety at Work etc. Act 1974, Sections 2, 3 and 4;
- Management of Health and Safety at Work Regulations 1999, particularly Regulations 2, 3, 4 and 6;
- Control of Substances Hazardous to Health Regulations (COSHH) 2002, particularly Regulations 6, 7, 8, 9 and 12, where the definition of hazardous substances includes harmful micro-organisms;
- Notification of Cooling Towers and Evaporative Condenser Regulations, 1992;
- Public Health (Infectious Diseases) Regulations 1988;
- The Water Supply (Water fittings) Regulations 1999;
- The Water Supply (Water Quality) Regulations 2010; and
- Food Safety Act 1990.

An HSC Approved Code of Practice (ACOP) '[Legionnaires Disease - The control of Legionella bacteria in water systems](#)', L8, offers specific guidance for managing the risk from Legionella bacteria.

The present code establishes STFC standards and arrangements for the management and control of Legionella risks at STFC premises minimising, avoiding or preventing infection.

2. SCOPE

The present code applies to the design, operation and maintenance of all water systems where there is the potential for Legionella to grow and become dispersed as a respirable aerosol, whether owned or managed by the STFC or brought onto STFC sites by facility users, tenants; contractors or other visitors.

The sources include, but are not limited to, the following domestic or non-domestic systems:

- Cooling Towers;
- Hot Water Calorifiers (primary heating coil, electric immersion heater or otherwise);
- Cooling systems for scientific equipment;
- Fixed and mobile air conditioning, dehumidification or ventilation systems, and humidifiers;
- Water Storage Tanks;
- Domestic or emergency showers or eye wash stations;
- Water features or fountains, including drinking fountains;
- Sprinkler Systems, hose reels;
- Car Washers;
- Machine tools coolant systems;
- Fire-fighting systems for example sprinkler systems, hose and reels
- Machine Tool Coolant Systems e.g. lathes etc; and
- Hot and Cold Water systems, domestic and industrial.

3. DEFINITIONS

3.1 Cooling Tower

Apparatus through which warm water is discharged against an air stream, in doing so part of the water is evaporated to saturate the air, and this cools the water. The cooler water is usually pumped to a heat exchanger to be reheated and recycled through the tower.

3.2 Dead Leg

Pipes leading to a fitting through which water only passes when there is draw-off from the fitting.

3.3 Dip Slide

A testing device for the microbial content of liquids. It consists of a plastic carrier bearing a sterile culture medium which can be dipped in the liquid to be sampled. It is then incubated to allow microbial growth. The resulting microbial colonies and number are estimated by reference to a chart.

3.4 Drift Eliminator

More correctly referred to as drift reducers or minimisers this equipment contains a complex system of baffles designed to remove water droplets from cooling tower air passing through it.

3.5 Evaporative Condenser

A heat exchanger in which refrigerant is condensed by a combination of air movement and water sprays over its surface.

3.6 Legionella Responsible Persons

Persons who have been formally appointed, in accordance with the HSE Approved Code of Practice, to assume managerial responsibility for implementation of the Legionella precautions and the responsibilities detailed in this SHE code.

3.7 Sentinel Tap

For a hot water services this is the first and last taps on a re-circulating system. For cold water systems (or non-re-circulating hot water systems) they are the nearest and furthest taps from the storage tank. The choice of sentinel taps may also include other taps which are considered to represent a particular risk.

3.8 Water Safety Group (WSG) / Steering Group

This is a multidisciplinary group formed to undertake the commissioning, development, implementation and review of the water safety plan. The aim of the Water Safety Group is to ensure the safety of all water used by residents, staff and visitors, to minimise the risk of infection associated with water, including legionella.

4. RESPONSIBILITIES

4.1 Head of Estates shall:

- 4.1.1 ensure that one or more suitably trained and experienced Legionella Responsible Persons (LRPs), and deputies, are appointed and provided with the resources to manage Legionella hazards within defined areas of responsibility, as appropriate discussing their appointment with other Directors where such hazards exist, see Appendix 6. The names of such appointments should be recorded in the SHE Directory, which will generate appointments in writing.
- 4.1.2 ensure Site Water Safety Groups are established to review of Legionella management at each STFC site, see Appendix 9.

4.2 Legionella Responsible Persons shall:

- 4.2.1 ensure that effective arrangements are implemented for the assessment and management of the Legionella risks within their area of responsibility, see Appendices 1,2,3 and 4.
- 4.2.2 as appropriate, ensure one or more suitably qualified and experienced persons or Legionella management contractors are appointed for water systems treatment and maintenance to undertake the duties detailed in this code on their behalf . Where contractors are employed they shall be registered with the [Legionella Control Association](#). The competence and performance of those undertaking these activities should be reviewed

regularly and documented.

- 4.2.3 ensure that a documented register of all water systems, including cooling towers and evaporative condensers, is established, maintained and regularly reviewed, see Appendix 5.
- 4.2.4 ensure that all existing or new cooling towers or evaporative condensers are registered with the local environmental health authority in writing detailing the type and location of the facility. A copy of their notification should be retained. Where cooling towers or evaporative condensers are made redundant, decommissioned or demolished, inform the local environmental health authority in writing retaining a copy of the notification.
- 4.2.5 ensure that documented risk assessments are conducted for systems detailed in the water systems register within their area of responsibility. Risk assessments should determine whether potential for harm or exposure is reasonably foreseeable and as appropriate detailing the control measures necessary to prevent or minimise the risk from Legionella exposure, see Appendix 1, 2, 3 and 4.

Legionella Risk Assessments should be reviewed every 2 years, or whenever significant changes or modifications to water systems occur or in the light of the results of Legionella monitoring programmes.

- 4.2.6 ensure that documented “Written Schemes”, based on risk assessments are created to outline the controls for preventing, reducing, controlling and monitoring Legionella hazards. The scheme should describe the correct operation of the water system and persons responsible for carrying out actions, see Appendix 1, 2, 3 and 4, including:
 - An accurate schematic diagram of the system, updated whenever there is a significant change;
 - System commissioning, shutdown and re-commissioning procedures and precautions;
 - System checks and frequencies to determine the effectiveness of Legionella controls and warning of system malfunction;
 - Maintenance requirements and frequencies; and
 - Remedial actions to be taken in the event of system malfunction or Legionella outbreak.
- 4.2.7 ensure that all records relating to the management of Legionella are retained for at least 5 years, including but not limited to test results, inspection records, maintenance records, contractor training records etc., see Appendix 5.
- 4.2.8 ensure that the design of new water systems, or equipment containing water, considers the hazards arising from Legionella in order that the risks are eliminated or minimised.
- 4.2.9 as appropriate supervise the contracts for water system treatment and maintenance of cooling towers, and hot and cold water systems.
- 4.2.10 immediately report any instances of increased risk (e.g. high bacterial or other pathogen counts) or Legionella outbreak to the SHE Group, see STFC SHE code 5 [Reporting and Investigation of SHE Incidents](#).
- 4.2.11 ensure that Site Water Safety Groups are established and operated as per ToR. See Appendix 9.

4.3 Water Safety Group/Steering Groups

4.3.1 See Appendix 9 for DL and RAL Terms of Reference.

4.4 Managers, including those responsible for the design, construction or operation of water-containing systems shall

4.4.1 inform and seek the advice of the LRP in respect of: work on or modifications to existing water equipment/systems or their design; or any new water equipment/systems and their design and installation, that may pose the risk of Legionella incubation, see Appendices 1, 2, 3 and 4.

4.3.2 ensure that all staff, users, contractors or other visitors working in areas, or undertaking activities, where Legionella hazards could exist or could be introduced into existing water systems are made aware of potential hazards and controls detailed in the relevant Risk Assessments and Written Schemes. It is likely also that there are other hazards present where Legionella controls are employed, for example: scalding; COSHH; and environmental disposal hazards.

See SHE Code 15 [Contractor Management](#), and SHE Code 19 [Work on buildings premises, services and infrastructure](#).

STFC staff working in such areas should be trained, see Appendix 6, and evidence of training and competence sought from contractors.

4.3.3 report all incidents or near misses related to the management and control of Legionella, see STFC SHE code 5 [Reporting and Investigation of SHE Incidents](#). Report all actual or suspected cases of Legionnaires disease in staff or others working on STFC sites immediately to the STFC SHE Group and Occupational Health teams.

4.5 SHE Group shall:

4.4.1 Report all instances of Legionnaires disease to local environmental health authorities, and the HSE under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR), 2013. See Appendix 7.

4.4.2 ensure that an audit of the implementation of this SHE code is undertaken, as appropriate by the appointed Legionella management contractor, at least every 3 years, see STFC SHE Code 30 [SHE Auditing and Inspection](#). This shall be in addition to any local audit/inspection programmes undertaken against relevant guidelines and approved codes of practice more frequently.

5 References

- i. The Water Regulations Advisory Scheme's (WRAS) 'Water Regulations Guide', and any other requirements of the local water undertaker.
- ii. The Water Supply (Water fittings) Regulations 1999.
- iii. The Water Supply (Water Quality) Regulations 2000.
- iv. HSE Legionnaires' disease The control of legionella bacteria in water systems. Approved Code of Practice and guidance on regulations: L8 (Fourth edition) Published 2013
- v. HSE Legionnaires' disease: Technical guidance Part1: The control of legionella bacteria in evaporative cooling systems: HSG274 Part 1 Published 2013
- vi. HSE Legionnaires' disease Part 2: The control of legionella bacteria in hot and cold water systems: HSG274 Part 2 Published 2014
- vii. HSE Legionnaires' disease: Technical guidance Part 3: The control of legionella bacteria in other risk systems: HSG274 Part 3 Published 2013
- viii. BS 1710 – 1984 - Specification for identification of pipeline services.
- ix. BS 8558:2015 provides complimentary guidance to BS EN 806 . It is a guide to the design, installation, testing, operation and maintenance of services supplying water for domestic use within buildings and their curtilages.
- x. BS EN 806-5:2012 Specification for installations inside buildings conveying water for human consumption - Operation and maintenance.
- xi. BS EN 806-1:2000 Specifications for installations inside buildings conveying water for human consumption -General.
- xii. BS EN 806-2:2005 Specifications for installations inside buildings conveying water for human consumption – Design.
- xiii. BS EN 806-3:2006 Specifications for installations inside buildings conveying water for human consumption - Pipe sizing. Simplified method.
- xiv. BS EN 806-4:2010 Specifications for installations inside buildings conveying water for human consumption – Installation.
- xv. BS 8551-2015 Provision and management of temporary water supplies and distribution networks
- xvi. BSI PD 855468-2015 Guide to the flushing and disinfection of services supplying water
- xvii. BS 8558-2015 Guide to the design, installation, testing and maintenance of services
- xviii. BS EN ISO 5667-1 2006 Water Quality - Sampling
- xix. BS 8554 2015 - Code of practice for the sampling and monitoring of hot and cold water services in buildings
- xx. BS7592:2008 – Sampling for Legionella bacteria in water systems – Code of practice.
- xxi. BS 8580:2010 – Water Quality – Risk assessments for Legionella Control – Code of Practice.
- xxii. PWTAG CodeofPractice1.13v5_000

Appendices

APPENDIX 1. STFC LEGIONELLA MANAGEMENT GUIDELINES

APPENDIX 2. ISIS COOLING TOWERS AND EVAPORATIVE CONDENSERS (R11 AND R80) WATER SAFETY PLAN

APPENDIX 3. CLOSED LOOP WATER SYSTEMS

APPENDIX 4. OTHER LEGIONELLA RISK SYSTEMS

All managers must identify all systems which contain water where there is a risk from Legionella. It must be ensured that a risk assessment is undertaken for all such systems, with controls in accordance with the HSE guidance document L8 (Fourth Edition).

The following are examples of systems which should be included, together with suggested controls:

- Sprinklers and hose reel systems: Consider regular draining and replenishing of the water, particularly if connected to the mains water system; when testing, ensure aerosol generation is minimised.
- Water Softeners: Clean and disinfect resin and brine tanks as directed by manufacturer.
- Lathe and machine tool coolant systems: Clean and disinfect storage and distribution of coolant system as directed by manufacturer.
- Emergency showers and eyewash: Flush through and purge to drain six-monthly or as directed by manufacture. Check operation of thermostat to ensure water is not heated above 20°C.
- Vehicle Washers: These are usually operated at less than 20°C and may re-cycle water. The filtration and cleaning systems should be checked regularly, cleaning and disinfection should be undertaken in according to manufacturer's instructions.
- Vehicle screen wash systems: should have recommended concentration of Screen Wash fluid added.
- Air scrubbers
- Ice Machines

APPENDIX 5. RECORD KEEPING AND WATER SYSTEM REGISTERS

The LRP shall ensure that appropriate records are kept, including details of:

- a) The person or persons responsible for conducting the risk assessments, managing, and implementing the associated written scheme(s) and the training records of such personnel.
- b) The significant findings of the risk assessment.
- c) The written scheme and details of its implementation. This should include:
 - The physical treatment programme - for example, the use of temperature control for hot and cold water systems;
 - The chemical treatment programme, including a description of the manufacturer's data on effectiveness, the concentrations and contact time required;
 - Health and safety information for storage, handling, use and disposal of chemicals;
 - System control parameters (together with allowable tolerances); physical, chemical and biological parameters, together with measurement methods and sampling locations, test frequencies and procedures for maintaining consistency;
 - Remedial measures to be taken if the control limits are exceeded, including lines of communication; and
 - Cleaning and disinfection procedures.
- d) The results of any monitoring, inspection, test or check carried out, and their dates. This should include details of the state of operation of the system, i.e. in use/not in use. This should include the checks detailed in Appendices 1-4.
- e) Details of remedial work and precautionary measures that have been carried out, including sufficient detail to show that they were carried out correctly and the dates on which they were carried out.
- f) A log detailing all visits by relevant contractors, consultants and other personnel.
- g) Cleaning and disinfection procedures and associated reports and certificates.
- h) Results of the chemical analysis of the water.
- i) Information on other hazards, eg treatment chemicals.
- j) Local environmental health authority cooling tower notifications.

APPENDIX 6. TRAINING

Role	Initial Training	Refresher	Frequency	Comments
Legionella Responsible Person (LRP) or Deputy	Legionellosis: Role of Responsible Person, 2 day - e.g. Develop Training - WS1 Plus Legionella: Hot and Cold Water Systems, 2 day - e.g. Develop Training - WS2 Or Legionella Cooling Towers & Equipment, 1 day - e.g. Develop Training - WS3 Dependent on water systems managed, and optionally Water Systems Hazard Identification & Risk Assessment, 3 day - e.g. Develop Training - WS8	Ditto	3 yearly or when legislation changes	
Courses Available from:	Develop Training Ltd. , HYDROP E.C.S,			
Staff and others working in areas where Legionella hazards exist	Short Legionella Awareness on-line training course	As required, and while awaiting initial attendance at tutored 1 day course		
	Legionella Awareness, 1 day course - e.g. Develop Training - WS11	Ditto	3 yearly or when legislation changes	
Courses Available from:	Develop Training Ltd. , HYDROP E.C.S.			

APPENDIX 7. EMERGENCY ACTION IN THE EVENT OF AN OUTBREAK

A suspected *Legionella* outbreak is likely to be identified by the health authority who will communicate with all relevant local industrial premises, in order to attempt to identify the source of the bacteria. Where a STFC premises is approached in this way, the following action must be taken:

- 1) Co-operate fully with the investigating authorities providing them with access to sampling points etc. in order that they can take water samples.
- 2) Provide access to all relevant records, in particular to plans of cooling towers and hot and cold water services and records of inspections, cleaning and disinfection regimes.
- 3) Shut down any systems capable of generating aerosols, which have been implicated in an outbreak.
- 4) Undertake emergency disinfection of systems suspected of harbouring *Legionella* bacteria. This should only be carried out as directed by the Local Environmental Health Departments.
- 5) Where relevant, investigate the health status of staff or other persons who could have been affected.

Further detailed requirements can be found in the HSE Guidance document L8 (Fourth Edition).

APPENDIX 8. AUDIT CHECKLIST

General Programme management

Ref.	Question	Comments
1. Programme management		
1.1	Is there a responsible person agreed for every water system nominated in writing?	
1.2	Is there an appointed deputy?	
1.3	Are the duties of all persons involved clearly defined and communicated?	
1.4	Are all persons involved adequately trained?	
1.5	Are the responsibilities of the occupier and contractor(s) clearly defined?	
1.6	Has it been ensured that the contractors are adequately trained and competent?	
1.7	Have the other relevant health and safety issues - COSHH assessments for chemicals, safe access etc. been addressed?	

Cooling Towers

1. Physical Condition and design					
1.1	Are the drift eliminators suitable, in good condition and effective?				
1.2	Is the system water in good condition?				
1.3	Is the sump free from sediment?				
1.4	Are all visible surfaces free from slime or algae?				
1.5	Are all visible surfaces free from scale deposits?				
1.6	Are all visible surfaces free from corrosion?				
1.7	Is the water flow even across the whole of the tower fill?				
1.8	Have all the dead legs or poor flow areas been eliminated?				
1.9	Has all redundant plant been isolated from the system?				
1.10	Are all pipe runs as short and direct as possible?				
1.11	Is the tower constructed of impervious materials?				
1.12	If constructed of wood, is this in good condition?				
2. Risk Assessment (General)					
2.1	Has the existence of the cooling tower/evaporative condenser been notified to the local authority?				
2.2	Is there a written risk assessment for the system?				
2.3	Does it contain an up to date schematic plan of the system?				
2.4	Does it contain details of the precautions to be taken?				
2.5	Does it contain instructions for the operation of the system?				
2.6	Does the assessment conclude that the risk?				
2.7	Does the assessment consider the tower's physical condition?				
<table border="1"> <tr> <td>Issue Number: 1.11</td> <td>Issue Date: 09/02/2023</td> <td>Page 17 of 23</td> </tr> </table>			Issue Number: 1.11	Issue Date: 09/02/2023	Page 17 of 23
Issue Number: 1.11	Issue Date: 09/02/2023	Page 17 of 23			

2.8	Does it consider the tower's positioning?	
2.9	Does it consider the population density near the premises?	
2.10	Does it consider any 'at risk' groups of persons?	
2.11	Has elimination or replacement with a lower risk system been properly considered?	
3. Schematic Diagram		
3.1	Does it show all system control valves?	
3.2	Does it show standby plant (spare pumps etc)?	
3.3	Does it show any associated storage tanks?	
3.4	Does it show system bleed valve?	
3.5	Does it show chemical dosing pumps and injection points?	
3.6	Does it show system drain valve?	
3.7	Does it show the origin of the water supply?	
4. Cleaning and Disinfection		
4.1	Is there a written cleaning and disinfection procedure?	
4.2	Is it carried out at least every six months?	
4.3	Does it specify chlorine level at start of pre-clean chlorination?	
4.4	Does it specify contact/circulation time?	
4.5	Does it specify chlorine level at end of pre-clean chlorination?	
4.6	Does it give the method for cleaning all accessible parts?	
4.7	Does it specify chlorine levels at start of post-clean chlorination?	
4.8	Does it specify contact/circulation time?	
4.9	Does it specify chlorine level at end of post-clean chlorination?	
4.10	Is the removal of the tower fill/pack for cleaning and disinfection specified in the assessment?	
4.11	Are they removed for cleaning and disinfection in practice?	
4.12	Are there suitable health and safety procedures for carrying out cleaning and disinfection?	
5. Ongoing Water Treatment		
5.1	Is a water treatment programme in place?	
5.2	Does it use chemicals to control scale?	
5.3	Does it use chemicals to control corrosion?	
5.4	Does it use chemicals to control bacterial and algae (biocides)?	
5.5	Are alternating biocides used?	
5.6	Are the chemicals automatically dosed?	
5.7	Is there an automatic bleed to control dissolved solids?	
6. Ongoing Safe Operation		
6.1	Are there procedures for circulation of all parts once per week?	
6.2	Is there a shutdown of the installation at least once per year? How long does it last?	
6.3	Are there procedures for start up after shutdowns?	

6.4	Instructions for draining during long shutdowns?	
6.5	Instructions regarding valve settings for normal operation?	
6.6	Procedures for switching duty/standby pumps.	
7. Monitoring and Record Keeping		
7.1	Daily check to ensure conformance with operating procedures?	
7.2	Daily visual check made on the cleanliness of the system water?	
7.3	Chemical water quality checks carried out at least monthly?	
7.4	System physical condition checks carried out at least weekly?	
7.5	Dip slide tests taken at least weekly?	
7.6	Are Legionella tests carried out every quarter?	
7.7	Records of all tests undertaken maintained?	
7.8	Recommendations for remedial action recorded?	
7.9	Completion of remedial action recorded?	

Hot and Cold Water Services

Ref.	Question	Comments
1. Physical Condition and Design		
1.1	Is the cold water storage tank adequately lagged?	
1.2	Is the cold water storage tank adequately covered, insect screened and reasonably clean?	
1.3	Is the hot water storage tank/calorifier adequately lagged?	
1.4	Are there any materials that do not comply with the water fittings regulations?	
1.5	Does the Cold Water tank hold more than can be used in 24 hours?	
1.6	Is the stored cold water temperature above 20°C?	
1.7	Is the stored hot water temperature below 60°C?	
1.8	Is the cold water temperature at the furthest draw-off point above 20°C?	
1.9	Is the hot water temperature at the furthest draw-off point below 50°C?	
1.10	Are there any dead ends?	
1.11	Are there any little used outlets (for example outhouses etc.)?	
1.12	Are showers fed from storage tanks (as opposed to electric)?	
1.13	Are there systems other than showers that can generate aerosols?	
2. Risk assessment		
2.1	Is there a written risk assessment for the system?	
2.2	Does it contain an up to date schematic plan of the system?	
2.3	Does it contain details of the precautions to be taken?	
2.4	Does it contain instructions for the operation of the system?	
2.5	Does the assessment conclude that there is a significant risk?	
2.6	Does the assessment consider the physical condition of tanks, calorifiers and pipework?	
2.7	Has elimination or replacement with a lower risk system been properly considered?	

Ref.	Question	Comments
3. Inspection and Maintenance		
3.1	Are the temperatures of hot water calorifiers regularly monitored?	
3.2	Are Cold water tank temperatures regularly monitored?	
3.3	Are tap outlet temperatures regularly monitored?	
3.4	Is the physical condition of Calorifiers and Water tanks regularly checked, cleaned and disinfected as necessary?	
3.5	Are Shower heads regularly de-scaled?	
3.6	Are little used outlets flushed through regularly?	

APPENDIX 9. STFC SITE WATER SAFETY GROUP TERMS OF REFERENCE (TOR)

The Site Water Safety Group aims to minimise the risk of illness associated with water born hazards (including legionella) for all site residents: staff; tenants; contractors; and visitors. While the scope and focus of this group is domestic water systems it includes any system in which Legionella hazards may arise for example lathe cutting fluids, cooling systems etc.

Site Water Safety Groups are multidisciplinary teams formed to undertake the commissioning, development, implementation and review of the site's water safety plan.

It provides a forum to support Legionella Responsible Persons undertake their responsibilities under SHE Code 38 'Control of Legionella' in which people with a shared interest and understanding of the site's water hazards meet to take collective ownership for ensuring it identifies microbiological hazards, assesses risks, identifies and monitors control measures and develops incident response protocols.

The Site Water Safety Group will review, and as appropriate take action to ensure, the site's compliance with STFC SHE Code 38 'Control of Legionella' and associated legislation and codes of practice.

Responsibilities:

- Ensure the Legionella Risk Assessments for all entries in the site register of water systems, domestic water systems and other sources of Legionella, are reviewed two yearly or more frequently following significant change to these systems or external good practice;
- Identify responsibility areas through demarcation of equipment assets, Identify new water, or other liquid born, hazards introduced to the site ensuring they are listed in the site register of water systems and as appropriate risk assessments and written schemes are developed for them;
- Review reported water system/Legionella incidents ensuring root cause and remedial actions arising from them are suitable and sufficient to minimise the potential for recurrence, and these actions carried out in a timely manner;
- Provide advice and guidance in the event of a Legionellosis outbreak, as appropriate assisting site emergency controllers/site management in managing the incident;
- Review the findings of specialist water systems/Legionella audits ensuring their recommendations are acted upon and agreed actions are carried out in a timely manner; and
- Provide quarterly reports on the status of water safety management and to the site Health and Safety Committee (through SHE Group reports), and present annually a review of site water safety management to the site Health and Safety Committee.

Membership:

- Representative from site CSD Estates team;
- The site Legionella Responsible Person(s);
- Representatives from any STFC Department whose activities/operations/equipment may affect site domestic water systems;
- Representatives from any STFC Department whose activities/operations/equipment may be a source of Legionella hazards independent of site domestic water systems;

- Representative from STFC SHE Group;
- Representative from the site's Facilities Management contractors for Hard and/or Soft Services;
- Representative from site water treatment contractor(s); and
- Representative from the site's Legionella Management Contractors.

Meeting administration:

- Quarterly; and
- Chaired by site LRP (or a senior member of CSD Estates).

Reports to:

- Site Health and Safety Committee.

APPENDIX 10. DOCUMENT RETENTION POLICY

Records established	Minimum retention period	Responsible record keeper	location of records	Comments/ Justification
Water Systems Register	Current + 5 years	Estates Teams	Local Record Systems	
Audits	Current + 5 Years	Estates Teams	Local Record Systems	
Appointments:				
Legionella Responsible Person	Most Recent	Director	SHE Directory	Appointment Letter