#### Warm water system - Legionella Regulations compliance inspection report form

Version 1.3 January 2012

Inspection form summary

Section	Name	Actions required
1.0	Registration and notification	Confirm registration particulars
2.0	System plans	Assess plans for compliance
3.0	Operating and maintenance manuals	Assess manuals for compliance
4.0	Reporting detection of Legionella in water samples	Obtain copies of all notifiable results (18 months)
5.0	Maintenance log books	Assess log books for compliance and determine compliance with maintenance requirements
6.0	Physical aspects	Detail system information
7.0	Storage of heated water	Determine compliance with requirement relating to storage of heated water
8.0	Systems serving susceptible populations	Detail susceptibility of exposed population and presence of risk management strategies.
9.0	Microbiological testing	Collect water samples for Legionella testing
10.0	Systems to be operated and maintained by competent persons	Assess competence of responsible person
11.0	Independent inspector declaration	Completed and signed by independent inspector
12.0	Assessment details and acknowledgement	Completed and signed by system owner or responsible
		person, inspector and assessing authorised officer
	Compliance summary	One page summary of regulatory compliance findings.
	Inspection and assessment of plans, manuals, procedures and records.	
	Inspection and assessment of physical system infrastructure.	

Colour coding instructions

Do not alter grey shaded sections of the form
Independent inspectors or local council authorised officers: complete all unshaded sections of the form prior to providing system owner with a copy of the completed report.
Independent inspectors or local council authorised officers: indicate compliance (✓), non-compliance (✗) or not applicable (N/A)
These sections should <u>not</u> be completed by an independent inspector. Local council authorised officers should complete these sections only.

#### Suggested guidelines for setting and adjusting inspection frequency

Regulation 15 of the Public and Environmental Health (Legionella) Regulations 2008 requires the local authority to 'at least once in every 12 months' cause an inspection of each high risk manufactured water system registered with the authority to be carried out' by an authorised officer of the authority or a competent independent inspector.

When extensive or serious non compliance is identified as a result of a routine inspection, routine inspection frequency (in addition to followup inspections) should be increased until the system is found to be fully compliant as a result of a further routine inspection.

Inspection frequency according to risk factors for Legionella susceptibility:

Likelihood of individuals	Inspection frequency (months)						
potentially exposed to aerosol generated by the system having risk factors for Legionella susceptibility	Starting point	Maximum	Minimum				
Very high (likely that susceptible individuals could be exposed).	12	3	12				
Moderate (unlikely that any susceptible individuals could be exposed)	12	6	12				
Low (very unlikely that any susceptible individuals could be exposed)	12	12	12				

Due to the prevalence of individuals with risk factors for Legionella susceptibility (see below) in the general population in Australia, nearly all cooling water systems located in workplaces and populated areas and warm water systems serving workplaces, hospitals, care facilities and public buildings would have a very high likelihood of exposing susceptible individuals to aerosol generated.

Risk factors for an individual's Legionella suscentibility:

	Community acquired	Travel associated	Nosocomial (hospital acquired)
Risk factors (personal/individual)	Age >40 years; male; underlying disease such as diabetes; chronic heart disease; smoking; immunosuppression (especially with glucocorticosteroids and chronic debilitating illness); structural pulmonary comorbidity; chronic renal failure; recent travel; haematological malignancy; iron overload; other immunosuppression	Age >40 years; male; heavy smoking, alcohol abuse; change in lifestyle; underlying disease such as diabetes; chronic heart disease, other immunosuppression	Age >25 years; transplant patient; other immunosuppression; surgery, especially head and neck; cancer, including leukaemias/ lymphomas; diabetes; treatment with respiratory devices; chronic heart/lung disease; smoking, alcohol abuse

Adjustment of inspection frequency:

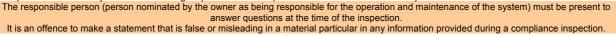
Adjustment of inspection requency.					
Inspection frequency adjustment	Number and type of non compliance				
Increase if	Five or more non-compliances (not serious), or				
	One or more serious non-compliances				
Decrease if	No non compliances				



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Regis	Registered system details (to be completed from authority's register prior to inspection)						© Department of Health, Government of South Australia. All rights reserved.		
Premis	ses Name				correct	Ref No			
Premis	ses address					Date			
Owner	r of premises <sup>1</sup> - full name					Time			
Busine	ess address					Officer			
Reside	Residential address Inspe								
Respo	nsible person <sup>2</sup> - full name					Schedule	ed		
Busine	ess address					Random			
Busine	ess telephone					Complair	nt		
Reside	ential address					Investiga	ation		
Reside	ential telephone					Other			
	All relevant sections of this form must be com	npleted in	full as per the dire	ections provid	ded through	nout.	Date de	etails	
Enter	any changes to the system registration details below						chang		
	La Parte a consultant a (1) and a consultant		I. (N/A) (ON)	0) ! !! (			and the same		
	Indicate compliance (\( \struct \), non-compliance (\( X \)) or not a Competent Independent Inspectors should notify the								
1.0 R	egistration and notification								
#	Description	Reg.	Compliance	Comment	ts				
1.1	Is the system registered? (within 1 month of being brought into service) (SNC)	5							
1.2	Have any particulars changed with regards to registration of the system? (Changed over 1 month ago without notification?)	6(4)							
1.3	Has the system been permanently decommissioned or removed?	6(5)							
	(Over 1 month ago without notification?)								
	ystem plans								
A copy	ctober 2009, compliant plans of warm water systems must be kept on of the system plans must be attached to this report.	tne prem	ises in a readily a	ccessible pla	ce.				
2.1	On what date was the system installed?								
2.2	On what date was the system commissioned?								
2.3	Are plans of the system made readily available for inspection (and	•	•	place)?			Yes /	No	
	THE FOLLOWING QUESTION FOR SYSTEMS INSTALLED BEF  Do the plans show the location of all major components of the sys	stem, incl	uding: cooling tow						
2.4	automatic biocide dosing devices, drift eliminators, water inlets, was water storage facilities?	ste outlets	s and discharge p	oints, water h	eating dev	ices and	Yes /	No	
ANSWE	R THE FOLLOWING QUESTION FOR SYSTEMS INSTALLED ON On the plans show the location of all parts of the system, including				ndensers	filtration			
2.5	devices, automatic biocide dosing devices, drift eliminators, water in devices and water storage facilities?						Yes /	No	
Comm	· · · · · · · · · · · · · · · · · · ·						_		
			1						
#	Description	Reg.	Compliance	Comment	ts				
2.6	Are compliant plans for the system kept on the premises in a readily accessible place and made available for inspection on request by an authorised officer?	10(1)							
Comm	ents, non-compliance details and action to be taken with	due da	tes. (This section	should only	be complet	ted by an au	ithorised office	r)	

Please complete all actions listed above by the specified due dates





<sup>&</sup>lt;sup>1</sup> As per the *Public and Environmental Health Act 1987*, owner means occupier when the occupier is responsible for the system in question.
<sup>2</sup> This is the person nominated by the owner as being responsible for the operation and maintenance of the system.

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3.0 O	perating a	nd maintenance manuals							
Complia		d maintenance manuals for warm water							
3.1	place)?	g and maintenance manuals for the syste	em made readi	iy avallat	ole for inspection	on (a	and kept in a readily accessible	Yes /	No
		NFORMATION INCLUDED IN THE OPE				IUAI	LS?		
3.2	Physical deta	ails of the plant, equipment and systems	and pre-treatm	nent carri	ed out.			Yes /	No
3.3	Procedures	for maintenance including water treatmer	nt managemen	t and mo	nthly physical i	insp	ections. (refer 5.9)	Yes /	No
3.4	Schedule 3 F	sinfection and decontamination procedure Part 1 of the <i>Guidelines for the Control of</i> oproved by the Minister. (refer 5.12)						Yes /	No
** When		e applicable, a copy of the Minister's approval must be attached to this report **    Legionella sampling procedures as per Schedule 2 of the Guidelines for the Control of Legionella in Manufactured Water Systems   Vest / No.							
3.5	in South Aus		the Guideline	s for the	Control of Legi	ione	lla in Manufactured Water Systems	Yes /	No
3.6	Manufactured Water Systems in South Australia.							Yes /	No
3.7	Start-up, ope	erating and shut-down procedures.						Yes /	No
3.8		or the maintenance management program testing, decontamination and cleaning so				atme	ent, monthly physical inspection and	Yes /	No
Comm	ents								
#	Description			Reg.	Complianc	е	Comments		
3.9	kept on the p	nt operating and maintenance manuals for premises in a readily accessible place and inspection on request by an authorised of	d made	10(3)					
Comm		mpliance details and action to be		due de	too /This soot	tion	should only be sempleted by an outbe	riand offic	ar)
-		mphanos astano ana astron to be	tunon min	uuo uu	(11110 0000		onedia only so completed by an additi	71000 01110	01)
		Please complete	all actions li	sted abo	ve by the spe	cifie	ed due dates		
4.0 R	eporting d	letection of <i>Legionella</i> in w	ater sam	oles					
		reports for water samples taken from this water for samples collected during the las		e the res	ults indicated	d the	e presence of 10 or more colony for	ming unit	s of
	r of notifiable ella results	Frequency of Legionella sampling/testing	Sample colle	ection poi		Do the records indicate that the local authority was notified of attached results within 24 hours of the receipt of the reports?			
	-				Yes / No				
Comm	nents								
Jonnin	ionto								
(T	his section shou	uld only be completed by an authorised o	officer) Authorit	y records	should be che	ecke	ed to confirm that the listed notification	s were rec	eived
#	Description			Reg.	Complianc	е	Comments		
4.1	microbiologic	ority been notified within 24 hours of the cal testing of water taken from the system of 10 or more cfu of <i>Legionella</i> per mL of	n indicating	17(1)					
Comm		mpliance details and action to be		due da	tes. (This sect	tion	should only be completed by an author	orised offic	er)



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Up to date, compliant, maintenance log books for warm water systems and associated plant and equipment must be kept on the premises in a readily accessible place.

5.1	Are maintenance log books for the system made readily available for ins			readily accessible place)?	Yes / No
	FOLLOWING INFORMATION RECORDED IN THE MAINTENANCE LOG				
5.2	For all cleaning, servicing and other work: date, item of plant, equipmen	nt or sy	stem and nature	of service or cleaning performed.	Yes / No
5.3	Details of defects found and rectification procedures undertaken.				Yes / No
5.4	The name of the person <b>AND</b> company performing the work.				Yes / No
5.5	Details of all microbiological test results (including non-detection) of same	mples	of water taken fro	m the system.	Yes / No
5.6	Details of all responses to Legionella detection in the system and the ou		<u> </u>		Yes / No
5.7	Evidence that the temperature of water in storage areas and throughout every month and recorded in the maintenance log book (refer 3.8).		Yes / No		
5.8	Evidence that water in storage areas of the system kept at a temperatur operation.	-	Yes / No		
5.9	Evidence that a physical inspection of the system is carried out at least mechanical condition of the system (refer 3.3, 3.8 & 5.11).	Yes / No			
5.10	Evidence that the system is thoroughly cleaned whenever an inspection impurities or foreign material present in the system.	n revea	als sludge, slime,	scale, foam, rust, dirt or other	Yes / No
5.11	Details and results of all monthly physical inspections (refer 5.9).				Yes / No
5.12	Evidence that decontamination of the system is carried out at least ever decontamination procedure (refer 3.4 & 5.13) <sup>3</sup>	ery 6 m	onths in accordar	nce with a prescribed or approved	Yes / No
5.13	Details of all decontaminations performed including all outlet testing rest	sults ar	nd testing equipm	ent used (refer 5.12).	Yes / No
#	Description R.	Rea	Compliance	Comments	
#	Are compliant maintenance log books for the system kept on the	Reg.	Compliance	Comments	

5.14	Are compliant maintenance log books for the system kept on the premises in a readily accessible place and made available for inspection on request by an authorised officer?	14(1)						
5.15	Have all maintenance log books been retained for a period of at least five years after the last entry in the log book is made (since October 2008)?	14(2)						
5.16	Is the system maintained in complete compliance according with the mandatory requirements of the regulations? (SNC)	13						
Comm	Comments, non-compliance details and action to be taken with due dates. (This section should only be completed by an authorised officer)							

Please complete all actions listed above by the specified due dates

<sup>&</sup>lt;sup>3</sup> The procedures employed must be adequate to decontaminate all <u>heated</u> sections of the system where temperatures are regularly in the range of ≥25°C to <60°C The responsible person (person nominated by the owner as being responsible for the operation and maintenance of the system) must be present to answer questions at the time of the inspection.

It is an offence to make a statement that is false or misleading in a material particular in any information provided during a compliance inspection.

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### 6.0 Physical aspects of warm water system

SAAVSNZ HB32:1995 provides guidance to inspectors for the physical parameters and practices to be undertaken in order to effectively control microbial growth in warm water systems. Complete the following inspection checklist for the system. Where deemed unsatisfactory, the local authority may issue a notice under section 20 of the Regulations, requiring the owner to take specified action including: alter, repair, rectify or replace the system or components of the system, service, maintain or clean components of the system, decontaminate the system or shut-down the system immediately

Parameter		Comments
Are all hot water storage cylinders, calorifiers, expansion, feed and water storage tanks clearly labelled?	Yes / No	
Are all mixing valves (including TMVs) accessible for service and maintenance?	Yes / No	
Are all thermostatic mixing valves manufactured in compliance with AS4032.1?	Yes / No	
Is the warm water pipe work from thermostatic mixing valves to each associated outlet no less than 1m and no more than 6m long?	Yes / No	
Are all mixing valves associated with bathing facilities serviced, maintained and internally cleaned in accordance with the manufacturers' instructions and AS4032.3 (at least once every 12 months)? (including cleaning of any associated line strainers and inbuilt strainers)	Yes / No	
Concurrently with commissioning and servicing of mixing valves, is the temperature controlling device or thermostat removed from the valve and then the mixing valve and all associated taps and outlets decontaminated as per Part 2 of Schedule 3 of the Guidelines for the Control of Legionella in manufactured Water Systems in South Australia? (the temperature control mechanism should be washed separately and also decontaminated)	Yes / No	
If pasteurisation is used as a method of disinfection, does the documented procedure include steps to prevent scalding of end users during the process, and provision of adequate ventilation to aid in the removal of heated water vapour?	Yes / No	
Following pasteurisation, is the complete warm water system flushed thoroughly with cold water so as to remove any hot, scalding water?	Yes / No	
Comments		

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	torage of fleated water				
<b>AT THE</b> 7.1	TIME OF INSPECTION:  Is water in storage areas of the system at a temperature of at least	60°C?			Yes / No
omm					1
<u> </u>	<u></u>				
	Description	D	Camadianaa	Comments	
	Description  Is the temperature of stored heated water in the system	Reg.	Compliance	Comments	
2	maintained in complete compliance according to the regulations?	13			
omm	ents, non-compliance details and action to be taken with	due da	tes. (This section	should only be completed by an auth	orised officer)
					·
	Please complete all actions li	sted abo	ve by the specifi	ed due dates	
	Tioudo dompioto un aditorio il				
.0 S	ystems serving susceptible populations				
	and immune compromised people are particularly susceptible to Legio				
	stems in facilities serving susceptible populations, including, nursing has or 17 of the Public and Environmental Health Act may be issued in				acilities. A notice und
<b>ASED</b>	ON THE PHYSICAL INSPECTION, OPERATING AND MAINTENAN	ICE MAN	UALS, MAINTEN	ANCE LOG BOOKS AND INFORMA	TION PROVIDED E
HE RE	SPONSIBLE PERSON,				1
.1	Does the system serve susceptible people?				Yes / No
2	At least once a week, are all warm water outlets not used in the pre temperature is reached at the outlet?	vious sev	en days flushed ι	intil the correct operating	Yes / No
.3	Are any dead legs evident in the system?				Yes / No
.3	Has an effort been made to identify and eliminate dead legs in the s	system?			Yes / No
	, , , , , , , , , , , , , , , , , , , ,	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			100 / 110
omm	ents				
ŧ	Description	Reg.	Compliance	Comments	
	Is the system operated in accordance with the recommended	Ť	Compliance	Comments	
.4	practices for facilities serving susceptible populations?	n/a			
omm	ents, non-compliance details and action to be taken with	due da	tes. (This section	should only be completed by an auth	orised officer)
	,		,	, , , , , , , , , , , , , , , , , , , ,	



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#### 9.0 Microbiological testing

As part of the system compliance assessment, at least two water samples must be collected and tested for Legionella including one sample from the outlet most distal from the heat source. If the system contains more than 66 outlets, a number of samples should be collected for testing equivalent to 1 representative sample per each 33 outlets in the system rounded up to the next full number.

- Where possible, samples should be collected from outlets where the plans, pipe work, records and temperature profile indicate that stagnation may be occurring.
- Samples must be collected and transported as per Schedule 2 of the Guidelines for the Control of Legionella in Manufactured Water Systems in South Australia.
- Samples must be tested by a NATA accredited laboratory in accordance with AS/NZS 3896.

<ul> <li>Samples must be processed within 24 hours of collection.</li> <li>A copy of all sample result reports must be provided to the responsible person so that results can be recorded in the maintenance log books.</li> </ul>								
		ING SAMPLES SHOULD NOT BE COLLECTED WITHIN						
Date of la system decontan		Decontamination method (chlorination/pasteurisation/oth	ner)	Reason for last decontamination			ext scheduled system contamination	
			ļ					
RECORE	THE INFO	ple test results must be attached to this report ** RMATION ON ALL SAMPLES COLLECTED BELOW:		ı				
Unique s identifica number		Detailed description of sampling point.		Date collected	Time collec	ed Results:	Legionella cfu/mL and type	
Comme	ents and f	ollow-up upon receipt of sample results						
		to be operated and maintained by con		•	ANOT LOS BOOKS	AND INCORM	TION PROVIDED BY	
		YSICAL INSPECTION, OPERATING AND MAINTENAN EPERSON, IS THE RESPONSIBLE PERSON:	CE MAN	UALS, MAINTEN	ANCE LOG BOOKS	AND INFORMA	ATION PROVIDED BY	
10.1	Knowledg	eable in the operation and maintenance of the system?					Yes / No	
10.2	Sufficientl	y competent to ensure that the system is operated and ma	aintained	as required by the	e regulations?		Yes / No	
Comme	ents							
#	Descripti		Reg.	Compliance	Comments			
10.3	for the ope	con nominated by the owner as the person responsible eration and maintenance of the system competent as the regulations?	11					
Comme	ents, non-	compliance details and action to be taken with	due dat	tes. (This section	should only be comp	oleted by an auth	norised officer)	



# COMPLIANCE SUMMARY

System and contact details	d	© Department of Health, Government of South Australia. All rights reserved.	
Premises Name	Ref N		
Premises address	Date		
System name/description	Time		
Business telephone	Office	er	
1.0 Registration and notification	·		
# Description		Reg.	Compliance
Is the system registered? (within 1 month of being brought into service) (SERIOUS NON COMPLI.	<u> </u>	5	
Have any particulars changed with regards to registration of the system? (Changed over 1 month notification?)	ago without	6(4)	
Has the system been permanently decommissioned or removed? (Over 1 month ago without notifi	ication?)	6(5)	
2.0 System plans			
Are compliant plans for the system kept on the premises in a readily accessible place and made a inspection on request by an authorised officer?	vailable for	10(1)	
3.0 Operating and maintenance manuals			
Are compliant operating and maintenance manuals for the system kept on the premises in a readil and made available for inspection on request by an authorised officer?	ly accessible place	10(3)	
4.0 Reporting detection of <i>Legionella</i> in water samples		1	
Has the authority been notified within 24 hours of the results of all microbiological testing of water system indicating the presence of 10 or more cfu of <i>Legionella</i> per mL of water?	taken from the	17(1)	
5.0 Maintenance log books		1	
Are compliant maintenance log books for the system kept on the premises in a readily accessible	place and made	14(1)	
available for inspection on request by an authorised officer?  Have all maintenance log books been retained for a period of at least five years after the last entry in the log book is		14(2)	
made (since October 2008)?  Is the system maintained in complete compliance according with the mandatory requirements of the	ne regulations?	13	
(SERIOUS NON COMPLIANCE)		13	
7.0 Storage of heated water Is the temperature of stored heated water in the system maintained in complete compliance according to the temperature of stored heated water in the system maintained in complete compliance according to the temperature of stored heated water in the system maintained in complete compliance according to the temperature of stored heated water in the system maintained in complete compliance according to the temperature of stored heated water in the system maintained in complete compliance according to the temperature of stored heated water in the system maintained in complete compliance according to the temperature of stored heated water in the system maintained in complete compliance according to the temperature of stored heated water in the system maintained in complete compliance according to the temperature of stored heated water in the system maintained in complete compliance according to the temperature of stored heated water in the system maintained in complete compliance according to the temperature of stored heated water in the system maintained in complete compliance according to the temperature of the temperat	rding to the	140	
regulations? (SERIOUS NON COMPLIANCE)		13	
8.0 Systems serving susceptible populations		Ι,	
Is the system operated in accordance with the recommended practices for facilities serving susception.	ptible populations	n/a	
10.0 Systems to be operated and maintained by competent persons  Is the person nominated by the owner as the person responsible for the operation and maintenance appropriate as defined by the respectations?	ce of the system	11	
competent as defined by the regulations?  COMMENTS/ACTIONS TO BE TAKEN (This section should only be completed by an authorised office	er)		
	,		