

# Cooling Tower Inspection Report

or  = YES    = NO

Date of first use 29 April 2002

Version 3.1 Issue Date 25/4/2002

Officers Initials		Registration OK	<input type="checkbox"/>	Priority (tick if yes)	<input type="checkbox"/>
Job Reference Number		Inspection Date		Time of Arrival	
				Time of Departure	
Part 2 Inspection Required		<input type="checkbox"/>	Part 3 Inspection required		<input type="checkbox"/>
Full Postal Address					
Is there a site engineer	<input type="checkbox"/>	Tel No of site	020 7	Site contact name	
Emergency Phone No1			Who does this contact + special information or emergency instructions		
Emergency Phone No 2			Who does this contact + special information or emergency instructions		
Number of Tower(s)		Type of Tower(s)		Adiabatic	<input type="checkbox"/>
Location of towers					
<b>Emergency procedures</b> – Are there any problems in shutting the system down for one hour, (turning pumps and fans off), at short notice in the event of an outbreak (details of problems)					<input type="checkbox"/>
Drained down at time of inspection?	<input type="checkbox"/>	Operational All year	<input type="checkbox"/>	From when to when	

Risk Rating	New Score	Old Score	Reasons if score is artificially high
System Condition - Max 30			
Op' and Maintenance - Max 20			
System Management - Max 20			
System Design - Max 10			
System Location - Max 20			
Projected date of next PI			

Leaflets left	HSC14	No HSC14 left - previously supplied	Are they aware of L8	Others
Client	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Maintenance Contractor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water Treatment Contractor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Action Taken & Proposed (tick where appropriate)							
	Verbal advice given	Letter	S.21	S.22	S22 served	Advised of proposed action	If notice served/to be served - Name & position of person consulted
Client	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Maintenance Contractor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Date Received by Q.A.		Approved By QA (Initials and date)	
Returned to Officer for comment/changes		2 <sup>nd</sup> Date Received by Q.A.	

Water Treatment Contractor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Revisit Proposed	<input type="checkbox"/>	When						

Date Received by Q.A.		Approved By QA (Initials and date)		
Returned to Officer for comment/changes		2 <sup>nd</sup> Date Received by Q.A.		

Persons met during Inspection names (+ position where appropriate)			Card left	Know me well
Client representative			<input type="checkbox"/>	<input type="checkbox"/>
Water treatment contractor's rep			<input type="checkbox"/>	<input type="checkbox"/>
M&E Contractor			<input type="checkbox"/>	<input type="checkbox"/>
Site Engineer			<input type="checkbox"/>	<input type="checkbox"/>
Others			<input type="checkbox"/>	<input type="checkbox"/>

Client Details			
Name of Employer & principal office address			
Principal Office Tel No.			
Responsible Person's: Name, position in organisation and address			
Tel' Number of Responsible Person:			
Does Responsible Person have sufficient executive authority to adequately control operation of the tower			<input type="checkbox"/>

M&E Contractor Details ( where applicable )			
Name & principal office address of employer			
Principal Office Telephone Number			
Main Contact + position in organisation			
Site Contact(s) (If different from above)			
Length of contract		Expiry date of contract	

Water Treatment Contractor Details				
Name of employer and principal office address				
Principal Office Tel No.		Main Contact		
Length of contract		Expiry date of contract	Directly employed by client?	
If not, does the client appreciate potential problems caused by close relationship between M&E and Water Treatment companies:				
Does the water treatment contractor subscribe to the Legionella Control Association Code of Practice				

Reporting Arrangements			
Are the lines of communication between client and the contractors clear and unambiguous		Comments where answer is no	
Are these arrangements included in client's safety policy			
Are the reporting arrangements to the Responsible Person from the contractors clear:			
Are these arrangements in written form:			
Does the Responsible Person receive regular routine reports from the contractors about the operation of the tower:			
What is the frequency of these reports			
Do these reports operate whether or not problems are discovered		Comments where answer is no	
Are significant defects reported to the Responsible Person at the earliest opportunity			
Do these reporting arrangements appear to work in practice		Comments where answer is no	
Is there a record of these reports in the log book		Comments	
Are there adequate arrangements in place to cover for holidays and sickness of key personnel		Comments	

Risk Assessment 1			
Date of most recent risk assessment or review of assessment			
Is the assessment kept on site			
Have there been any significant changes or loss of control since last assessed <b>Give details if YES or don't know</b>		Changes/loss of control/reasons for "don't know"	
Is the assessment/review less than 2 years old			
Have we reviewed that particular risk assessment/review and were we satisfied that it appeared to be acceptable			

**Do not complete "Risk Assessment 2" section where answer to above 2 questions is yes**

<b>Risk Assessment 2</b>	
Has it been carried out by an independent competent person	
Has elimination of the tower been evaluated	
Does the assessment note that it is reasonably practicable to replace the tower with a dry or adiabatic system	
Officer comments on elimination (where appropriate)	
<b><u>Has the assessment considered the following:</u></b>	
Overall risk of the tower operation at the time, including the location and the presence of vulnerable groups	
Pipe-work layout, including the presence or potential for dead-legs or other stagnant areas	
Construction of the tower and associated fittings, including drift control measures	
Adequacy of the routine maintenance, checking and testing, and the water treatment regimes, including the suitability of the chemical and physical agents used to control microbial growth, corrosion, scale etc	
Adequacy of the contact times and the frequency of use of chemical or physical agents	
Adequacy of the control limits used	
Adequacy of the description of actions to take in the event of unusual circumstances (e.g. loss of control, significant isolation or shut down of all or part of the system)	
Competency of all operatives responsible for the tower	
Physical condition of the tower and associated fittings	
Appropriate completion of the log book	
Adequacy of the management reporting arrangements	
The timely rectification of faults	
Is the assessment satisfactory in all respects:	
If not satisfactory specify weaknesses	

<b>Risk Assessment 3</b>	
Did the assessor make any recommendations	
Have all recommendations made by the assessor been actioned within a reasonable period	
Is there a maximum time limit set for review of the assessment	
If so, what is the time period	
Does the main duty holder know the circumstances under which a review of the assessment should be carried out within the designated review period	
Do the management arrangements clearly allocate responsibility to an individual (by name or position) for arranging a review of the assessment	
Do the management systems appear to ensure that the person with management responsibility for ensuring the assessment is reviewed is advised if the original assessment is no longer valid	

<b>Monitoring checks and tests</b>			
Frequency of checks and tests carried out by:	a) on site operator/maintenance Co:	b) water treatment company	
Checks carried out : <b>d=daily, w=weekly, m=monthly, q=quarterly, b=biannually a=annually \</b> <b>=not done n/a=not applicable</b>			
water clarity/suspended matter		Condition of fill pack/tube bundle	
water temperature		Presence of scale/corrosion/algal growth/biofilm	
Chemical usage		Degree of above contamination	
water usage		pH	
TDS/Conductivity		Dip slides	
TVC		Legionella	
Automatic pump operation		Bleed off valve	
Water leakage		Operation of softener	
Free bromine (where appropriate)		Others (specify)	
Does the log book appear to be completed satisfactorily (Give details if No)			
Does the specified frequency of the above routine maintenance appear to be satisfactorily (give details if No)			

<b>Clean and Disinfection</b>			
Frequency of clean and disinfection			
Date of latest clean and disinfection			
Is a detailed protocol available for clean and disinfection			
Does it conform to L8 (If not, specify defects)			

Additional notes (if any)			
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<b>Results of Monitoring and Adequacy of Action Taken</b>	
Any adverse dip slide results since last visit - If so, give details	
Was appropriate action taken at the time	
Were additional dip slides or TVC's taken to check that control has been regained	
Any adverse TVC results since last visit - If so, give details	
Was appropriate action taken at the time (if action taken but inappropriate please comment)	
Any adverse Lp results since last visit (if yes give details)	
Was appropriate action taken on adverse Lp results (if no give details)	

<b>Action on discovery of non bacteriological problems that increase the risk</b>
In general, is appropriate action taken if faults are discovered (if not give details)

<b>Physical Condition</b>	
Fill pack/tube bundle	
Pond	
Drift eliminators	
Any signs of leakage	
Chemical treatment drums OK?	
Any access problems?	
Any manual handling problems?	

<b>Falls from heights</b>	
Are there falls from heights problems?	Comments where applicable:

## PART 2

Complete this part every other PI or where water treatment has changed since last PI

Water Treatment Details		
Biocides used (tick all applicable)	Br <input type="checkbox"/> Single non oxidising <input type="checkbox"/> Two non oxidising <input type="checkbox"/> UV <input type="checkbox"/> <input type="checkbox"/> Other (details)	Cu/Ag <input type="checkbox"/> ClO <sub>2</sub> <input type="checkbox"/>
Biocide Dosing	Automatic <input type="checkbox"/> Primary automatic & secondary manual <input type="checkbox"/>	Fully manual <input type="checkbox"/>
REDOX control used?		Dispersant (may be in biocide) <input type="checkbox"/>
Corrosion/Scale inhibitor		
Inhibitor Dosing	Proportional <input type="checkbox"/> Timed <input type="checkbox"/> Manual <input type="checkbox"/>	
Is the system volume known <input type="checkbox"/>		
Is it marked on the tower in a conspicuous position <input type="checkbox"/>		
Is a time-lock fitted on the dosing equipment or are other precautions taken to prevent premature dumping of treatment chemicals <input type="checkbox"/>		

Automatic Alarms	
Are malfunction alarms fitted to critical components where checks are not on a daily basis	<input type="checkbox"/>
Does the alarm sound or light up in an area where it is likely to be noticed	<input type="checkbox"/>

Additional Notes (if any)	
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### **PART 3**

**Complete this part every other PI or where Client, Water Treatment or M&E Contractor have changed since last visit.**

<b>Routine Operation and Maintenance – Manuals and Logs</b>		
Is there a suitable operation/maintenance manual/schematic kept on site		
Does the schematic appear to identify the location of all valves		
<b>Training/Competency</b>		
Records of operator training kept on site		
Do all persons involved in the operation of the tower, including the Responsible Person, appear to have the necessary competence		
<b>Start up Procedures</b>		
Is there a detailed written procedure for start up of the tower after a significant shut down period		
Is it satisfactory (If not satisfactory, give details of deficiencies)		
<b>Emergency Procedures</b>		
Are there any detailed written procedures for dealing with a significant loss of control of the tower or serious contamination		
Do these procedures cover the discovery of positive Legionella or in the event of an outbreak of Legionnaires Disease?		
Are the emergency procedures satisfactory (If No, give details of deficiencies)		
Additional Notes (if any)		

Attach additional sheets where applicable