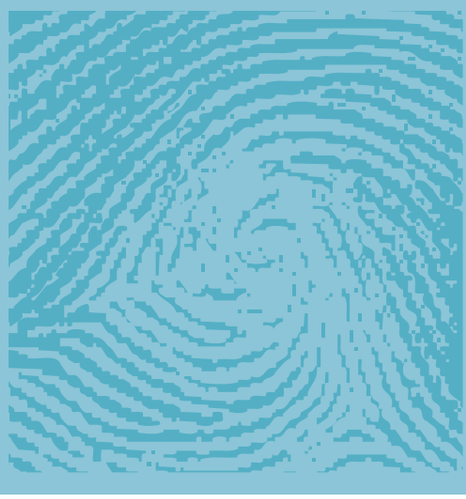
Legionella Link
Managing the health risks

September 2004



Message from the Chief Health Officer

Dr Robert Hall
Director Public Health
and Chief Health Officer
Department of
Human Services

It is now three-and-a-half years since the government's highly successful Legionella Reform Strategy came into effect.

Until recently, each phase of the strategy's implementation has seen a marked reduction in the number of confirmed cases of Legionnaires' disease in Victoria. Notifications of infections caused by *Legionella pneumophila* have progressively fallen–from a high of 239 in 2000, to 111 in 2001, 86 in 2002, and 65 in 2003. However there were 51 notifications from 1 January to 24 August 2004, indicating a possible increase this year. While the trend has been downward for infections since the new legislative package was introduced, some fluctuations are expected in this trend.

In this issue of *Legionella Link,* information is provided to stakeholders on Legionnaires' disease outbreaks and cases in Victoria; also on the prevalence of Legionella in cooling tower systems inspected and sampled by the department's Legionella Program. The aim of disseminating this information to industry is to achieve a better understanding of the incidence of *Legionella* bacteria, and risks associated with its amplification in a water environment, such as a cooling tower system.

The Legionella Program is continuing to review cooling tower system legislation and guidelines, and is consulting with industry to improve documents developed to manage the risks of Legionnaires' disease.

Information is provided on risk management plan audits, with the view to minimising costs, and encouraging compliant audits. Revised guidelines for risk management plan auditors are now in place to better identify higher risk issues for follow-up by the Legionella Program. Also, RMP auditors have recently formed an association to represent and further their profession.

Continual improvement is also occurring with the water treatment service providers special interest group, under the auspices of AIRAH (Australian Institute of Refrigeration, Air-conditioning & Heating). These organisations have indicated their commitment to *all* eligible cooling tower maintenance staff completing an enhanced water treatment training program before the end of this year. The groups are currently developing higher-level water treatment training programs, as well as industry accreditation.

Currently the department's Public Health Group is undertaking a review of the *Health Act 1958*. This provides us with the opportunity to consider changes to improve the effectiveness of the legislation, including the *Legionella* regulatory scheme. Submissions to the review are due by 5 November 2004. Further information is available on www.dhs.vic.gov.au/healthactreview

Reduction of Legionnaires' disease in Victoria is dependant on continued improvements, leading to greater levels of best practice by industry, in partnership with the Department of Human Services.

For more details on *Legionella* risk management, please feel free to contact the Legionella Program on 1800 248 898.

Dr Robert Hall
Director Public Health
And Chief Health Officer
Department of Human Services

Recent cooling tower system surveys

During August 2004, the department's Legionella team carried out a number of surveys across the state. These included inspections and sampling at locations with cooling tower systems at Colac, Echuca, Cobram and a number of metropolitan locations.

Several of these surveys were carried out as part of case investigations. It is pleasing to report that generally satisfactory levels of compliance and test results were observed for all locations visited.

PLUMBING INDUSTRY COMMISSION

Building Commission

State Government Victoria Department of Human Services

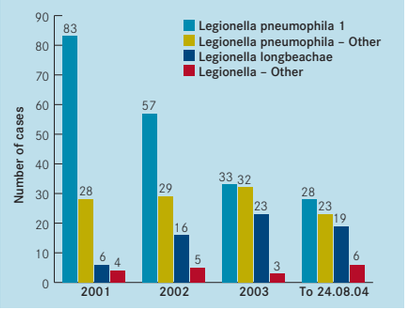
Notifications of Legionnaires' disease in Victoria

Legionellosis is any infection caused by *Legionella* bacteria. Legionnaires' disease is the pneumonic form of legionellosis, which is required to be notified to the Department of Human Services under the *Health (Infectious Diseases) Regulations 2001*.

There are many species of Legionella bacteria. Of these, *Legionella pneumophila* and *Legionella longbeachae* are the most likely to cause Legionnaires' disease. Legionella pneumophila has a number of sero-groups. Sero-group 1 (LP1) is responsible for more serious illness than other sero-groups (LP other).

L. pneumophila are the only types of *Legionella* bacteria that have been associated with outbreaks in Australia. Since 2000, notifications of infections caused by *L.Pneumophila* in Victoria have progressively fallen– from a high of 239 in 2000, to 111 in 2001, 86 in 2002, and 65 in 2003. Fifty one notifications were received between 1 January and 24 August 2004.

Confirmed cases of legionellosis – Victoria 2001 – 14 Aug 2004



While cases associated with LP1 have generally decreased, cases of LP other have remained consistent.

During the same period, the incidence of *L. longbeachae* has risen. This bacteria is usually associated with the use of potting mixes. In some states of Australia, *L. longbeachae* causes about 50 per cent of the total notifications of Legionnaires' disease.

During 2003, the proportions of cases caused by the different Legionella species/sero-groups in Victoria were:

LP 1	37%
LP other	36%
L.longbeachae	24%
L. other species	3%.

The following table shows the number of *L.pneumophila* cases notified in Victoria during the periods 1 January to 24 August for 2003 and 2004.

Region	LP Cases 2003	LP Cases 2004
North & West Metro	25	18
Eastern Metro	9	11
Southern Metro	7	9
Rural Regions	10	12

More detailed information regarding legionellosis, including case definition, notifications and notification rates per 100,000 population by age and sex, outbreak and investigation information, and notifications by employment/ occupation status for 2002, is available in the department's annual report *Surveillance of Infectious Diseases in Victoria, 2002* which can be accessed at www.health.vic.gov.au/ideas/surveillance/annual.htm#download

Outbreaks of Legionnaires' disease

Between 1 March 2001 and 30 June 2004, the following outbreaks of Legionnaires' disease occurred in Victoria. The outbreaks were investigated by the department's Environmental Health Unit and Communicable Diseases Section, often with support from regional and local government environmental health officers.

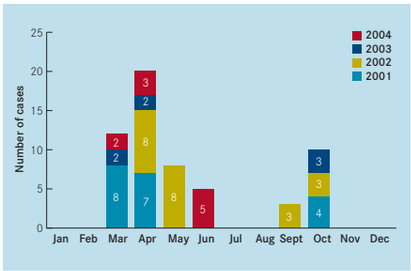
Note: An outbreak is defined as more than one case related in time and place.

Although the total number of Legionnaires' disease cases in Victoria has diminished under the new regulatory package, the above table serves as a reminder that outbreaks (as well as single cases) continue to occur, and are not restricted to:

- any one area in Victoria
- areas with high populations
- areas with high densities of cooling tower systems
- any particular month of the year, although the following graph shows recent strong seasonal patterns.

Date	Cases associated with outbreak	General location of outbreak
Mar 2001	2	CBD western extremity, Melbourne
Mar 2001	6	CBD West, Melbourne
Apr 2001	7	Prahran and Toorak
Oct 2001	4	Mitcham
Apr 2002	8	CBD Central, Melbourne
May 2002	8	Moonee Ponds
Sep 2002	3	Brunswick
Oct 2002	3	Clayton
Mar 2003	2	Dandenong South
Apr 2003	2	Healesville
Oct 2003	3	Reservoir
Mar 2004	2	Port Melbourne
Apr 2004	3	Dandenong South
Jun 2004	5	Cobram

Cases of Legionnaires' disease associated with outbreaks in Victoria - March 2001 to June 2004



One aspect that the department's investigational work has shown, however, is that outbreaks of Legionnaires' disease are consistently linked to cooling tower systems and maintenance issues associated with them.

Important tools for rapid investigation of outbreaks are the cooling tower system register, and a mapping system linked to the register. These enable the department to rapidly identify sites with cooling tower systems associated with the itineraries of outbreak cases during their exposure/incubation period, prior to onset of the illness.

Rapid investigations and remediation of potential sources prevent the development of further cases, who could be otherwise exposed to the source beyond the date of notification of an outbreak.

Some sites with registered cooling tower systems do not appear on the department's mapping system, because the sites have not been geo-matched with Land Victoria address sites. This is largely due to incomplete or inaccurate addresses given to the Building Commission on the cooling tower system registration forms. For these sites, owners will shortly receive a letter requesting further information on the exact address or location of the site, so that the mapping system can be made more complete.

Melbourne aquarium outbreak

Recently published in *The Medical Journal of Australia*[1] is a paper titled: *An outbreak of Legionnaires' disease at the Melbourne Aquarium, April 2000: investigation and case-control studies*.

The article describes the investigation of the source and risk factors of those affected (125 cases) by Australia's largest outbreak of Legionnaires' disease. During the outbreak, 95 patients were hospitalised and four died. *Legionella pneumophila* SG 1 (more commonly referred to in *Legionella Link* as LP 1) was the microorganism associated with this outbreak.

Testing of samples taken from both cooling towers[2] at the Aquarium on 27 April 2001 showed that the towers were respectively contaminated with:

- *Legionella pneumophila* SG 1: 3000–9600 CFU/mL (LP 1)
- *Legionella pneumophila* SG 2 – 14: 12000–15000 CFU/mL (LP other)
- *Legionella non-pneumophila*: 1500–10000 CFU/mL (L. other)

This evidence and the epidemiological investigation that followed confirmed that the Aquarium's cooling towers were the source of the outbreak.[3] The investigation established that there were problems associated with missed servicing and a faulty dosing pump.

The case control studies confirmed that current smoking was a critical risk factor.

A copy of the paper can be viewed at: www.mja.com.au/public/issues/contents.html

This is the MJA Archives site– the paper can be found under Volume 180, No. 11, 7 June 2004.

Cooling tower test results

The Department's Legionella Program undertakes targeted sampling of the water in cooling tower systems.

Sampling may occur:

- as part of a routine visit by our staff to a site with a cooling tower system
- as part of an investigation into a case of Legionnaires' disease
- when investigating complaints about the operation of a cooling tower system.

Samples are tested for the presence of *Legionella* and for heterotrophic colony count (HCC). While there is not necessarily a link between high HCC counts and the presence of *Legionella* in a cooling tower system, high HCC results can provide an early warning that the system may not have sufficient microbial control in place.

Results are now available for water samples taken from the commencement of the program on 1 March 2001 to 30 June 2004, and these are shown in the following graphs.

The number of samples taken varies considerably from month to month. During the first year of the program, intensive sampling was undertaken, resulting in approximately 1500 samples during that period. In recent times, the program's focus has been on risk management plans, auditing and renewal of registration. As a result, fewer samples have been taken this year.

Seasonal fluctuations are shown in the positive *Legionella* results. During the warmer months, *Legionella* positives are detected more frequently. At all times, but particularly between Spring and Autumn, it is important that maintenance

1 7 June 2004, Volume 180, Number 11, pages 566 - 572 (MJA 2004; 180: 566-572)

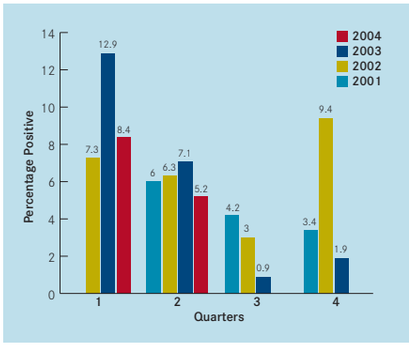
2 Shortly after this outbreak, the Aquarium management made a decision to replace the water-cooled air conditioning system with a new air-cooled system.

3 The fact that this outbreak occurred in a new building was instrumental in the development and introduction of the current legislation and risk management framework.

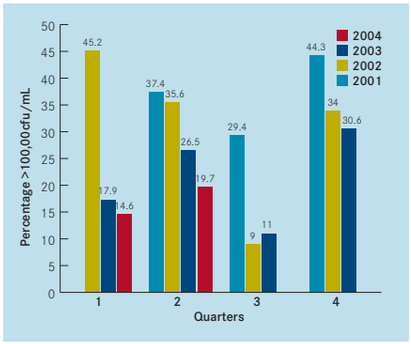
and treatment of cooling tower systems is sufficient to ensure compliance with the *Health (Legionella) Regulations 2001*, and to minimise the risk of Legionnaires' disease. Many businesses close for extended periods over the Christmas–New Year season. After cooling tower system shut-down periods, it is important that start-up processes be implemented according to the Regulations.

Copies of the Regulations, Departmental guidelines and the program's most recent cooling tower system test results may be viewed at www.health.vic.gov.au/environment/legionella/

DHS Cooling Tower System Water Samples – Percentage Legionella Positive



DHS Cooling Tower System Water Samples – Percentage Heterotrophic Colony Count (HCC) >100,000cfu/mL



RMP audits

Many owners will now be arranging second or third annual audits of their cooling tower system risk management plans (RMPs). The department has observed that notifications from auditors of second-year RMPs show improved risk management arrangements, compared with the first audits completed.

Factors likely to have contributed to these improvements are:

• the experience of the first audit

• the revised guidelines for auditing RMPs, introduced in April 2004.

An article discussing the revised guidelines for auditing RMPs is included in this issue of *Legionella Link*.

The following information is provided to achieve better understanding of RMP audit arrangements, and to assist industry to achieve the best possible results.

The legal need for an audit

Section 75FA of the *Building Act 1993* states: "The owner of any land on which there is a cooling tower system must take all reasonable steps to ensure that a risk management plan audit is conducted in relation to the risk management plan prepared in respect of the system in the 3 months before the registration of the system is due to expire."

This means that annual audits must be conducted for each cooling tower system RMP.

Purpose of the audit

The audit is to determine two questions:

- whether the RMP addresses the risks specified in the *Building (Legionella Risk Management) Regulations 2001*
- whether the RMP is being implemented.

What the auditor needs

- To enable an auditor to form a view as to whether the RMP addresses the risks, the auditor requires a copy of the RMP to check that it contains references to the specified risks, including the sub-categories mentioned in the Regulations. The auditor is not required to visit the property, nor to determine the extent to which the risks are being managed.
- To enable the auditor to form a view that the RMP is being implemented, the auditor requires repair, maintenance and testing records–and any other relevant records for the interval between the commencement of the current registration period and the date of the audit.

Auditors

The *Building Act 1993* specifies that audits may only be conducted by **approved auditors**. See the Legionella website for a list of approved auditors: www.health.vic.gov.au/environment/legionella/risk-plans.htm

Check with the auditor as to the level of service provided–some may provide a one contact-only service, which does not provide the opportunity to locate missing documents. With this service, there is an increased risk of the auditor forming the view that the RMP is not being implemented.

Note: To avoid conflicts of interest, the auditor cannot be the owner of the land or the cooling tower system, or be associated with the water treatment service for the system, the design of the system, or the development of the RMP.

To keep an RMP audit straightforward, to keep the costs down and to assist compliance:

- Make sure that the RMP is clearly set out, addresses the five critical risks specified in the *Building (Legionella Risk Management) Regulations 2001*, is dated and is signed by the person responsible for the cooling tower system. If the RMP has been reviewed and changes made, a record of this should be kept and attached to the RMP.
- Show in the RMP, the target dates and timelines for proposed actions.
- Work towards showing the relevant registration (CTS) number on all maintenance and testing records (avoid using local names for each cooling tower system, unless the auditor is provided with a link between the CTS numbers and the local names).
- Where possible, keep all service records for a cooling tower system separate from other cooling tower systems on-site.
- Keep all service records on-site in chronological order, making sure they are each dated and correctly identify the CTS number. If records are sent off-site for audit, copies **must** be kept on site with each respective RMP.
- Some complex sites with multiple systems have employed an auditor to conduct the first audit on-site. Although not required under the legislation, some companies will elect to continue with this practice in future audits.
- Remember that the auditor can only audit an RMP for the period that it was in operation. In other words, an RMP cannot operate retrospectively.

Outcomes of an audit

The auditor will provide a certificate for each RMP, stating whether the RMP addresses the specified risks and whether the RMP is being implemented. The auditor's reasons for a finding of non-compliance will be stated on the certificate.

For audits that are found to be non-compliant, a copy of the certificate will be forwarded by the auditor to the department, for follow-up.

A non-compliant audit may have adverse effects on site industrial relations, quality programs and site/business insurances.

Audit feedback

To date, the department has received notices of approximately 1300 non-compliant audits.

Many audits were found to be non-compliant due to a lack of documentation (such as missing service reports, test results, invoices or proof of work completed).

Where management believes that an activity has occurred, but is not able to locate the record for the audit, the service provider should be contacted to obtain a copy of the relevant document.

Keeping better and more practical records will ensure a higher success rate in future audits.

Revised guidelines for RMP auditing

The revised *Guidelines for the auditing of risk management plans for cooling tower systems* (dated 13 April 2004) replace the original guidelines of 2 December 2002.

The guidelines were reviewed following analysis of the non-compliant audits. This established that a considerable number of non-compliances were the result of minor defaults, which generally would not have affected the *Legionella* risk presented by those systems.

It was therefore desirable to review the guidelines, to acknowledge the improvements and upgrades implemented by owners and to better identify higher risk issues for follow-up by the department. A draft of the proposed revision was distributed to all approved auditors for comment.

The major changes now in effect are:

- There is a table of **prescribed time tolerances** for any action required by the RMP.

  These tolerances should benefit the site owner/manager and the service provider

The two most common reasons for non-complying audits are:

1. Recommendations in the RMP have not been translated into statements of the owner's intent, and target dates/timelines have not been included for proposed actions.

   Where this advice has not been followed, auditors are required to read recommendations in the RMP as statements of the owner's intent. Also, in the absence of relevant timelines, auditors are required to read the RMP as though:

   a. operational programs will be begin from the commencement date of the RMP; and

   b. proposed system improvements will be completed by the end of the following audit period.

   Action statements should not be included in RMPs as recommendations; all proposed actions should include timelines. If your RMP does not follow this advice, please review and amend the RMP as soon as possible.

2. Relevant system review and upgrade documents, and system inspection, maintenance and water test reports, have not been provided to the auditor.

   Be aware of what documents the auditor requires, and have them ready for the audit. If in doubt about what is required, please discuss this with the auditor.

in circumstances where some difficulty has been encountered in obtaining a service by a specific date. This new procedure will overcome some of the difficulties associated with an action or service, particularly following a long weekend or holiday period.

- A **90 per cent compliance rate is applied** to each type of action identified in the RMP.

  Some industry audits are based on achieving at least a 90 per cent compliance rate, followed by a note on the non-compliant issues. This approach is now being applied in the auditing process for cooling tower system RMPs.

  A table of the number of actions required for a 90 per cent compliance has been provided in the guidelines.

Where the auditor is satisfied that the RMP does address the specified risks and has been implemented, the auditor may wish to include as observations a list of actions that were found to be non-compliant and provide these to the owner and/or the department.

The two major changes referred to above also apply to specific systems that have been granted a variation to the method of maintenance or testing under Regulation 24 of the *Health (Legionella) Regulations 2001*. However, any non-conformance of the extra conditions imposed by a variation will be reported to both the department and the system's owner. Non-conformances in these circumstances will be regarded by the department as significant breaches.

The department is currently investigating changes to audit reporting arrangements. In future, auditors will advise the department of RMP reviews and all audits conducted. This will enable the department to contact owners who may not have developed an RMP, or may not have had the RMP reviewed and/or audited.

A copy of the new guidelines may be viewed at: www.health.vic.gov.au/environment/legionella

Cooling tower auditors form new association

On 4 August 2004, a group of approved auditors met and agreed to form an Association to represent their profession.

The elected committee consists of 5 members, with Chris Connelly as chairman. Auditors interested in joining this association should contact:

Chris Connelly
(mobile) 0412 559 379,
or email:
chris.connelly@coolingtowers.com.au, or

Call the Legionella Hotline on 1800 248898.

Review of the *Health Act 1958*

The Public Health Group, Department of Human Services is conducting a review of the *Health Act 1958*, to ensure that Victoria has a modern legislative framework to support current and future directions for public health, under a new *Public Health Act*.

The review provides an opportunity to consolidate the *Legionella* regulatory scheme into the new Act, and to simplify the regulatory process. It is also timely to consider whether other changes could improve its effectiveness.

The current regulatory scheme aimed at reducing the risk of Legionnaires' disease commenced in Victoria on 1 March 2001.

These control mechanisms were introduced as a component of the existing building surveillance systems, by amendments to the *Building Act 1993* and the regulation-making powers in the Health Act.

Parts 5A and 5B of the Building Act established a register of cooling tower systems and the requirement for preparation and annual review and auditing of RMPs in respect of those systems.

The Health *(Legionella)* Regulations 2001 prescribe procedures for maintaining and testing cooling tower systems and warm water systems, and for keeping maintenance and testing records.

Under the Health *(Legionella)* Regulations 2001 and the Health (Infectious Diseases) Regulations 2001, authorised officers of the Department of Human Services inspect cooling tower systems for the purposes of:

- examining records, including maintenance and testing records
- physical examination of facilities and equipment
- testing for bacteriological, chemical or physical parameters.

The Health Act review discussion paper seeks your comments on:

- whether Parts 5A and 5B of the Building Act should be transferred to the new *Public Health Act*
- whether there are any other amendments that should be made to provisions currently in Parts 5A and 5B of the Building Act to improve the effectiveness of the legislative scheme.

The discussion paper and legislation is available at:
http://www.health.vic.gov.au/healthactreview

The legislation can be downloaded via the Victorian Legislative and Parliamentary Documents home page at:
www.dms.dpc.vic.gov.au
Click on the 'Victorian Law Today' link.

Written submissions are invited from health and industry professionals, community organisations, academics, lawyers and the public. Briefings are being conducted in metropolitan and regional locations to assist stakeholders to frame their submissions. The consultation itinerary is available at the above website.

Submissions are due by 5 November 2004.

Submissions should be sent to:

Dr Jacqueline Goodall
Legislation and Policy Officer
Legislation Review Unit
Tel: (03) 9637 5508
Fax: (03) 9637 4695
Email: jacqueline.goodall@dhs.vic.gov.au

Public Health
Department of Human Services
GPO Box 1670N
MELBOURNE VIC 3000

Note: all submissions received will be regarded as public documents unless marked 'private and confidential'.

False Sampling

The department is aware that there is potential for false sampling and that this could have the effect of masking sub-standard maintenance of systems.

Microbiological testing is an important measure used to assess the performance of water treatment programs. These programs are vital in managing the risk of Legionnaires' disease.

Improper collection or handling of water samples is therefore a serious concern. We are monitoring for instances of improper practice, and would consider legal action if examples came under notice, and were proven.

Cooling tower systems register

The *Building (Legionella) Act 2000* requires all cooling tower systems in Victoria to be registered with the Building Commission, to help track potential sources of Legionnaires' disease.

Registration is for a period of twelve months. The *Application for Renewal of Registration* will be sent to the notified postal address of the owner of the land, before the current registration expires. The cost to renew the annual registration is $85 for each cooling tower in the system.

It is important to return the completed application form and registration fees prior to the registration expiry date. *The registration fee must be paid at the time of lodging the application for registration or renewal. Registration fees are exempt from GST.*

If you do not receive the application form at least a month before the registration expiry date, or it has been misplaced, please telephone (03) 9285 6498 immediately to arrange for a duplicate to be prepared.

The primary purpose and benefit of registration is to enable the development and maintenance of a database with details of the locations of all cooling tower systems, for reference by the Legionella Program. The database enables more rapid and thorough identification and investigation in the event of a notification of an outbreak of Legionnaires' disease, and ongoing management, targeted prevention and compliance monitoring.

To check the status of a cooling tower system, log on to www.buildingcommission.com.au/ and go to the Find a CTS section.

Correct details

The Building Commission keeps an up-to-date register of all registered cooling tower systems. Any changes to registration must be notified to the Building Commission. Changes such as:

- ownership of land, on which the cooling tower system is located
- addition or removal of a cooling tower to or from the cooling tower system
- relocation of the system on the lot of land on which it stands.

Applicants are required to notify the Building Commission within 30 days of a change. For convenience, a *Cooling Tower Systems Details Change Form* may be downloaded from the website.

More information on cooling tower systems may be obtained from the website www.buildingcommission.com.au, or by contacting the Registrations Coordinator on (03) 9285 6498, or email ctreg@buildingcommission.com.au

Site address

The site address for the cooling tower system must be correct, to enable the Legionella Program to quickly pinpoint the site/s of potential sources of *Legionella*. When completing the *Application of renewal of a Cooling Tower System form*, care should be taken to ensure the details are correct, or that the details of any necessary corrections are entered on the form.

It would be appreciated if a 'building name' is provided, as this often helps to identify the premises on which the system is situated. For example, this could be the name of the business, such as 'ABC Dry Cleaners', or any other identifying feature of the building. Rural addresses should be more specific and street numbers provided if possible.

AIRAH helps move Code of Practice forward

Important industry issues were raised at a Melbourne briefing for water treatment service providers, hosted by the Australian Institute of Refrigeration, Air Conditioning and Heating (AIRAH) on Friday 16 July 2004.

AIRAH has been involved with the development of the *Victorian Code of Practice for Water Treatment Service Providers (Cooling Tower Systems)* from its inception. It has specific responsibilities for provisions relating to training, accreditation, insurance requirements and contracts.

To assist with developing these provisions, AIRAH formed a special interest group for water treatment service providers (WTSP – SIG). Working with this group, AIRAH has developed a range of positive initiatives and is working on several others.

"The WTSP special interest group was initially formed by companies who felt that such a group could have a positive influence on industry and government, to improve standards", says Jennifer Pelvin, AIRAH chief executive.

The group has developed a level 1 training program for water treatment technicians. At the July briefing, WTSP special interest group members committed to having all their eligible employees complete the level 1 training program by September 2004.

Level 2 and 3 training programs (for supervisors and managers, respectively) will be developed in the near future. An accreditation program for WTSP companies is also in development, and accredited companies will be actively promoted to industry. All eligible member companies have committed to completing a third-party audit by September 2004.

"As with the voluntary code, membership of AIRAH is not required. Companies may choose to participate in this program, or not", says Ms Pelvin. "For those companies wishing to join AIRAH as company members, significant discounts on training will apply. They will also have the opportunity to participate in committee activities and have a direct influence on industry issues, through this united voice."

For more information, visit www.airah.org.au or contact the AIRAH office on 03 8623 3000.

PACIA presentation

On 12 August 2004, a presentation was given to the Plastics & Chemical Industry Association (PACIA) at Victoria University. Approximately 45 representatives attended, from a wide variety of industries.

The presentation updated the industries on the department's Legionella Program, and feedback indicated it was well received. The talk covered the success of the government's legionella strategy to date, and the issues that the program is now able to address.

Water conservation

A number of businesses are in the process of conducting energy audits. While this may not be unusual in itself, these audits now include aspects such as water usage - and attempting to identify actual consumption of water by each individual equipment/process. This is, in part, due to the emerging issue of sustainability and the continuing long-term drought we are experiencing.

If you feel that your cooling system is unnecessarily wasting water, your company's services engineer, consultant or water treatment service provider may be able to advise you on methods of water conservation.

A new publication that may assist has recently been released by Sydney Water - *Water conservation. Best Practice guidelines for cooling towers in commercial buildings*.

This publication can be viewed at and downloaded from : http://www.sydneywater.com.au/SavingWater/SaveInTheBusiness/OfficeAndShoppingComplexes.cfm

INVITATION TO COMMENT ON Code of Practice For Water Treatment Service Providers (Cooling Tower Systems)

The Code of Practice for Water Treatment Service Providers (Cooling Tower Systems) is currently under review as endorsed by Government and all key stakeholders in the January 2002 publication.

An invitation to provide comment on suggested changes or updates to the current publication is open for all interested parties.

The document can be accessed at www.health.vic.gov.au/environment/legionella/resources.htm

Comments can be sent to Department of Human Services on email: lrmp@dhs.vic.gov.au and should be received by 31 October 2004.

NEW LEGIONELLA WEB ADDRESS

Please note that the Legionella website has now changed address:

www.health.vic.gov.au/environment/legionella

You will still be redirected to this new site if you use the old address.

State Government Victoria Department of Human Services