

Chlorine reacts with 'contaminants' to form range of compounds described under the general term phenolic. Remedy was to fit non-return valve to washing machine hose connection.

6 Similar phenolic taste and odour problems due to:

dishwashers;

flexible hoses to drink dispensers (generally replacements and not those supplied as standard;

kettles and tea urns (particularly the rubber sealing washer for the element and in the case of tea urns and soft water, metallic taste due to internal corrosion);

tap washers; and

garden hoses where non-return valve not fitted.

7 High rise apartment block - complaint of 'strange' taste

Only a problem since local authority owner had refurbished header tank. GC - MS analysis shows the presence of bisphenol A and tert-butyl phenol. The cause was found to be a different epoxy resin lining used to that specified and although an approved material the contractor did not follow the preparation and curing instructions. Compounds leached from the un-cured coating. Remedy was to strip and re-line tank.

8 *Factory (wine bottler) - vinegar odour to mains water used for washing tanks.*

Only occurred after high water usage. Swabs showed the presence of *Acetobacter* in tanks after washing, not detected on swabs taken before washing. The cause was poor design leading to stagnation of surface water in storage tank. Alcohol fumes and bacteria in the air contaminate tank water. *Acetobacter* converted alcohol to acetic acid - vinegar. Remedy was to re-plumb mains feed to tank and improve ventilation.

9 *Other known problems but no specific examples*

- (i) Taste due to microbial growth in point of entry treatment devices (softeners).
- (ii) Excess sodium in softened water from point of entry devices.
- (iii) Corrosion from mixed metals.
- (iv) Cross contamination from private and non-potable supplies.

- (v) DIY plumbing.
- (vi) Storage tanks – access by birds, bats, mice, rats.
- (vii) Storage tanks – vandalism.
- (viii) Storage tanks – stale water due to lack of turnover.
- (ix) Lack of records of water supply system in large buildings.
- (x) Lack of technical knowledge in staff responsible for water supply systems in large buildings.

*Note: section 0 and 1 introduce the coming sections*

## ***Section 2 - Roles and responsibilities***

***Leader David CUNLIFFE***

There are a large number of stakeholders who can influence the safety of water systems within buildings.

The stakeholders include:

- developers, architects and design engineers who are involved before construction of new buildings or renovation of existing buildings,
- building managers and owners, occupiers and employers,
- service providers who provide technical assistance,
- professional bodies who develop guidance and training for members,
- infection control teams in hospitals and health care facilities,
- health regulators, occupational health and safety regulators, auditors,
- training providers

### Building commissioners

A range of stakeholders can be involved in the commission design and modification of buildings and installation of water systems including:

Developers

Developers have responsibility for oversight of the entire process of construction and installation. Developers need to be mindful of general responsibilities relating to construction of water systems and installation of associated fittings. This includes ensuring that appropriate design requirements and necessary approvals are obtained. Most countries have building and plumbing codes that include accreditation and approval requirements. However, these codes may prove insufficient for the proper design of complex systems (e.g. regarding the calculation of hot water return pipes)

Where buildings are intended for specific purposes, particular requirements associated with the uses should be determined through consultation with the end user and with relevant legislation such as building codes and plumbing codes. Architects, engineers and plumbers selected to design, construct or renovate buildings and associated water systems should be familiar with the requirements associated with the end-use.

Specific requirements for preventing the growth of microorganisms (notably avoiding long periods of stagnation of tepid water) should also be borne in mind, although they have not systematically been included into technical requirements yet.

#### Planning officers

Planning officers can play a role relating to appropriate design of buildings and the design and implementation of water systems. Planners need to be aware of requirements relating to water systems. It is good practice for planning or development applications to be referred to health agencies for assessment of potential public health risks prior to approval being issued.

#### Architects

Architects are responsible for the overall design of buildings and need to have an understanding of the operation and requirements associated with services including water supplies and with devices that use water such as cooling towers. Architects work in partnership with engineers and other professionals who are responsible for construction details, service installation and often final certification. Designs need to take into account requirements associated with specific end uses such as:

- residential health care
- hospitals
- dental surgeries
- medical surgeries

- renal dialysis clinics
- schools
- food retailers
- all kinds of hotels (e.g. ski stations, etc.)

In many countries there are codes and design standards that apply to a range of water systems and devices, including cold and hot water systems, cooling towers, ice machines, swimming pools and spas. In some cases requirements are incorporated within building and plumbing codes while in others codes and standards have been issued for specific components such as cooling towers hot/warm water systems.

In the case of renovation or modification of existing and occupied facilities, architects should consult with users of the building. The extent of consultation will be influenced by the complexity of the project, however, it should include all those involved in management and maintenance of water systems. In the case of hospitals and health care facilities it should involve consultation with infection control teams. Issues that need to be addressed include establishing a risk management plan to minimise risks to users of the building. This should include dealing with potential problems and disruptions to services as well as ensuring compliance with technical standards and regulations.

#### Engineers

Engineers are responsible for implementation of building design, ensuring structural integrity, material selection, compliance with building standards and plumbing standards. Standards do exist and are being developed for many products used in plumbing installations. Using certified products allows making sure of the conformity of products to these standards. Engineers are often responsible for final certification of satisfactory completion of building, construction and installation of water systems. In the case of renovations or modification of existing structures engineers provide a key role in establishing risk management plans to minimise risks to existing users of buildings. Risk management plans should include education of maintenance and construction workers.

#### Plumbers

Protection of water quality and proper operation of water systems relies on the actions of plumbers. It is important that plumbers are appropriately qualified and have the competence to design, install and maintain plumbing systems. Plumbers need to ensure compliance with applicable standards and codes of practice such as building and

plumbing codes. However, the work of a plumber goes beyond the provision of plumbing systems. Most importantly, they play a key role in managing risks associated with plumbing installations. Finally, plumbers and other plumbing professionals play a vital role in water conservation.

The three main roles a competent plumber must assume are:

To design, install, and maintain water supply and waste removal systems

To manage the health and financial risks associated with plumbing

To help conserve limited supplies of clean water

Plumbers have the responsibilities to design, install and maintain modern plumbing systems. To examine the microbiological, chemical, physical and financial risks associated with plumbing, to outline the major risk management strategies that are used in the plumbing industry and to emphasize the importance of measures to conserve supplies of clean water.

Good design of plumbing systems is necessary to ensure that the installations are efficient and safe. Good design will also ensure that the installations are appropriate for the different circumstances they serve. The design of a good plumbing service must be based on an understanding of the technical requirements and relevant regulatory restrictions.

Plumbers have to ensure that water systems are intact and that intrusion of microbial and chemical contaminants is minimised. Protection against cross-connections has to be ensured and where necessary backflow prevention has to be provided. Only approved materials and devices should be used or installed.

Plumbing systems have to comply with building plans.

Designers, manufacturers, installers, suppliers

Anyone involved in the design, manufacture, supply and installation of water systems should ensure that it is designed and constructed in a manner that is safe when used for its designated purpose. These functions should be undertaken in compliance with codes and design standards as discussed above. Systems need to be constructed from materials that are appropriate for the function of the water system and device. In addition systems should be designed to enable ease of operation, cleaning, inspection and maintenance.

## Plumbing materials

Devices and materials used in water systems need to meet quality requirements and comply with applicable standards and codes of practice. Some countries have established certification systems to provide assurance that when used in accord with design specifications devices and materials will perform as required and be safe.

Certification programmes can incorporate:

product testing by the producer or by a third party to ensure suitability for purpose and to determine that they do not give rise to unacceptable contamination of water or support microbial growth

testing by the producer or by a third party to ensure that devices meet performance requirements

quality assurance to ensure consistent condition of products

## Building Management

Building owners, managers, occupiers and employers

There are a range of potential stakeholders that can be involved in building management depending on ownership and tenancy agreements. Building management can be the responsibility of a building owner, leasing agency, building manager, an occupier of a building, employers or combinations of these parties. In some cases building owners maintain control over infrastructure including water systems but in other cases this task might be undertaken by a leasing or building management agency or alternatively occupiers and tenants may install and manage water devices. Regulations and codes of practice often identify responsibilities for a number of parties. For example, the Victorian Health Legionella Regulations (2001) identify responsibilities for:

owners of land to register certain types of water devices and to take all reasonable steps to ensure that a risk management plan is prepared, reviewed and audited on an annual basis

owners/occupiers of buildings to prevent conditions that may represent a risk to public health

owners, managers or controllers of water devices to undertake appropriate levels of maintenance

employers to maintain a safe workplace

In other jurisdictions the responsibilities may vary but the tasks remain generally

consistent. The tasks and responsibilities should be described in a water safety plan. Whoever takes the lead role in building management needs to be responsible for the design and implementation of the water safety plan.

As part of a water safety plan risk, assessments should be undertaken incorporating identification of likely sources of hazards and routes of exposure, together with identification and evaluation of control measures, establishment of operational procedures including maintenance regimes and monitoring.

The mechanisms by which tasks are undertaken can vary. In some cases the tasks could be undertaken by an owner, manager or employer but they could also be delegated or assigned to competent individuals employed within a building or business or to specialist contractors. For example, CSTB has developed technical guidance that describes responsibilities and expertise required for management and maintenance of water systems (see Appendix). When tasks are either delegated or contracted the owner, manager or employer retains the responsibility to ensure that those charged with performing designated functions are competent and that required tasks identified in the water safety plan are completed and documented appropriately.

Competence can be supported by training, and owners, managers or employers should ensure that those who are assigned to undertake specific tasks are provided with appropriate levels of training. In some countries certification programmes have been established to provide evidence of training. Where such programmes have been established owners, managers or employers should ensure that work is undertaken by employees or contractors with relevant certificates.

Building managers and employers should communicate with occupiers of buildings and employees in relation to

- potential risks associated with water systems,
- management plans developed for these systems, and
- provide notification and information relating to any incidents that give rise to potential or perceived risks to public health. Such incidents should also be reported to the appropriate regulatory agency(ies).

Technical Contractors/Service Providers (treatment etc)

It is common practice to use service providers to undertake a wide range of technical services associated with water systems from installation to management and

maintenance. Service providers need to be able to demonstrate competence in undertaking tasks for which they contract. In some cases training certification programmes have been established. In other cases levels of service or training may be specified by industry associations.

Service providers should ensure that they or their employees have received appropriate training and that, where available, appropriate certificates have been obtained. Requirements established by industry associations should be identified and implemented.

Service providers should provide evidence in the form of formal reports or certificates of completion to demonstrate that tasks have been completed in accord with requirements.

#### Risk assessors

Building owners, managers and occupiers may use specialist consultants to undertake risk assessments of water systems and to develop or assist in the development of water safety plans. Risk assessors need to have the expertise, knowledge and resources to undertake the task competently. Risk assessors should have expertise in:

- local legislative requirements, standards and codes of practice
- development of water safety plans,
- identification of hazards and potential sources of these hazards,
- determination of risk,
- identification and assessment of appropriate control measures
- operational monitoring procedures to ensure that the control measures remain effective

verification procedures.

Risk assessors need to comply with formal requirements including certification and approval conditions established by regulatory agencies. If unacceptable risks are identified they should be reported immediately to whoever commissioned the assessment. If a serious and potentially immediate risk to public health is identified then notification of the regulatory authority may be required.

#### Professional bodies

Dentists, medical associations, hospital engineers, nurses etc

Professional bodies can perform a number of functions including:

- training for members and their employees,
- advocacy in development of policies and codes of practice relating to water systems,



- establishment of practice guidelines to support implementation of water safety plans,
- identification of practical issues associated with implementation,
- a mechanism for gathering information relating to incidence of infection that may be related to water systems and
- a mechanism for gathering information on successful management approaches

## Infection control

### Infection control teams

Hospitals and other health care centres use infection control committees and teams to prevent nosocomial infections including those arising from water systems. The committees should include representatives from all relevant sections including management, nursing, physicians, hospital engineers, maintenance, cleaning and microbiology

### Management

Management is responsible for:

- establishing and supporting the infection control team,
- ensuring that a water safety plan has been developed and implemented,
- ensuring that staff involved in this process are appropriately trained and competent
- internal review of the water safety plan, including periodic review of nosocomial infections as an assessment of effectiveness of the plan.

### Nursing

The nursing administrator is responsible for ensuring that staff:

- are aware of how water systems are to be used
- how they should operate
- report faults immediately

### Maintenance/hospital engineers

Maintenance and hospital engineers are responsible for operational monitoring and maintenance of water systems to ensure that they function as required at all times. Whenever faults are detected they should be rectified immediately and reported to the infection control team.

### Physicians

Physicians are responsible for investigating potential cases of nosocomial infection and identifying the nature of the infection. All cases should be notified to the infection control committee

### Microbiologists

Microbiologists are responsible for:

- establishment of methods for collection, transport and handling of samples
- development and application of appropriate methods for sample analysis
- use of serological or genetic typing where necessary
- timely communication of results

#### Infection control coordinators

In small facilities, clinics or surgeries infection control coordinators could be appointed to manage established control programmes. The coordinator could be the head of the facility or could be an employee trained to undertake the task. The head of the facility is responsible for establishing the program, ensuring that it is implemented and that the coordinator has or receives appropriate training.

#### Surveillance

Independent surveillance of water supplies is an important element of quality assurance. Surveillance of water systems in buildings will include similar features to those applied to drinking water supplies but may also incorporate additional elements such as requirements associated with specific uses of the water and with occupational health and safety needs. These requirements could broaden the range of auditors involved in surveillance.

#### Regulators.

In most countries the primary agency involved in public health surveillance of water systems is the ministry of health and its regional or departmental offices. In some countries surveillance can be undertaken by an environmental health section within an environment protection agency. Environmental health departments of local government may also play a role.

The lead public health agency may act in a number of areas, including surveillance and auditing as well as involvement in the setting of standards and codes, detection and investigation of disease, and monitoring of disease trends. Actions undertaken in response to disease are discussed below.

Surveillance and auditing should include processes for approving water safety plans as well as processes for assessing that water safety plans are being implemented appropriately and are effective in protecting public health.

Surveillance and auditing may be undertaken directly by regulators or may be

undertaken by contractors or registered auditors in a manner prescribed by regulators. In some cases programmes undertaken by registered auditors may be supplemented by random inspections by regulators.

#### Independent auditors

Some jurisdictions use and certify independent auditors to determine the effectiveness of water safety plans. Levels of knowledge and expertise as well as the need to comply with formal requirements are similar to those described for risk assessors. Auditors should also have expertise in assessing documentation and reporting mechanisms. Auditors may be required to submit reports of their findings to the regulatory agency.

#### Health and Safety Management

Employers have a duty to protect the health and safety of workers and this is often subject to regulation and legislation. Occupational health and safety regulations can be administered by specific departments or agencies within government. In some jurisdictions these regulations are the primary legislative mechanism applied to water systems while in others they support or supplement public health legislation.

Administration of occupational health and safety requirements should be coordinated with other functions and regulations designed to provide protection of public health from water systems. Administration may include either random or routine inspections of workplaces and occupational health and safety inspectors should be aware of other requirements developed to control risks associated with water systems.

#### Reactive Public Health

##### Public health agencies

The role of public health agencies normally includes detection and investigation of disease and monitoring of disease trends. Detection of clusters of disease or in some cases single cases of diseases such as water borne legionellosis can prompt investigations of potential sources of the cause. Public health authorities need to establish criteria that would initiate an investigation, procedures on how such investigations will be performed and who will be involved. The public health agency may undertake such investigations directly or in conjunction with local environmental health officers. Other personnel may be involved depending on the potential sources of disease. For example, in hospitals infection control teams may be enlisted to assist in the investigation.

Detection of outbreaks may require implementation of immediate action to prevent further cases. This could include decontamination and/or decommissioning of water systems. In the case of such investigations public health agencies should consult with building managers and users of buildings. Advice and warnings may need to be issued to occupants and employees of buildings as well as the general public. This should be done in a timely manner to reduce or contain public health impacts and to provide appropriate information about the level of risk, responses and about triggers for seeking medical attention.

Information from disease investigations should be used to assess the suitability of risk management approaches, standards and codes of practice.

Monitoring of disease trends can provide evidence of the need to improve management of water systems or following implementation of new strategies could provide evidence of the impact of these strategies.

Professional Bodies (dentists, medics, nurses etc)

Professional bodies can also provide information relating to risks associated with water systems. This could arise from occurrence of disease in patients, co-workers or employers. Information on unusual occurrence of potentially waterborne disease should be provided to the appropriate health authority.

Training Providers

Water companies, professional associations (building, plumbing, engineers, environmental health institutes, dental and medical associations etc), technical colleges. Design, installation and management of water systems can involve a range of personnel. All need to be competent to undertake assigned or required tasks. Training providers can provide courses to support competence. Training should be consistent with existing regulations, standards, codes of practice and requirements of regulatory authorities.

Training providers should regularly review the content of their courses and should consult with those seeking training to ensure that their needs are being met.

Training can be provided by specialist colleges and institutes or professional associations. In some countries training programmes are subject to certification programmes. Training providers should ensure that they comply with the requirements

of such programmes.

このドラフトには各国の問題事例が掲載されておりこの一部を紹介する。

## Case study 5

### Long-persistent *Pseudomonas aeruginosa* contamination in a new haemodialysis ward

Thomas Kistemann

A fourth floor was constructed upon a wing of an existing three-floor hospital building in Hesse (Germany) to serve as an additional ambulant haemodialysis ward. Water supply of the entire building is provided by the municipal water supplier. The new floor's water distribution net was connected to an existing, however never used fire pipe (80 mm diameter) in the cellar of the building through a new, approximately 25 m long steel pipe. Steel had also been chosen as material for the entire new installation net. The distribution net has been checked by use of compressed air, i.e. definitely not by use of water. The construction of the installation was finished in December 2003, and the new ward was planned to be opened in early spring 2004.

The history of the distribution net continued as follows:

- 10-03-2004 Flooding of the new distribution net with drinking water
- 17-03-2004 regular spooling of the cold water distribution net with drinking water within one day; strong brown colour and particular matter in the water were detected for the first time; taps had to be cleaned or even to be exchanged
- 25-03-2004 routine sampling showed increased colony counts (> 500/mL) and *Pseudomonas putida* in the water distribution net of the new ward
- 05-04-2004 first short-term, high concentration disinfection with hydroxyperoxid – no maintaining effect
- 14-04-2004 *P. aeruginosa* in 3 out of 6 water samples from the haemodialysis ward
- 24-04-2004 beginning of continuous low concentration chlorine disinfection (0.3 mg/L) – no maintaining effect;  
installation of a sterile filter in the new supply pipe (cellar-ward);  
beginning of daily spooling of all taps of the fourth floor for at least 10 minutes

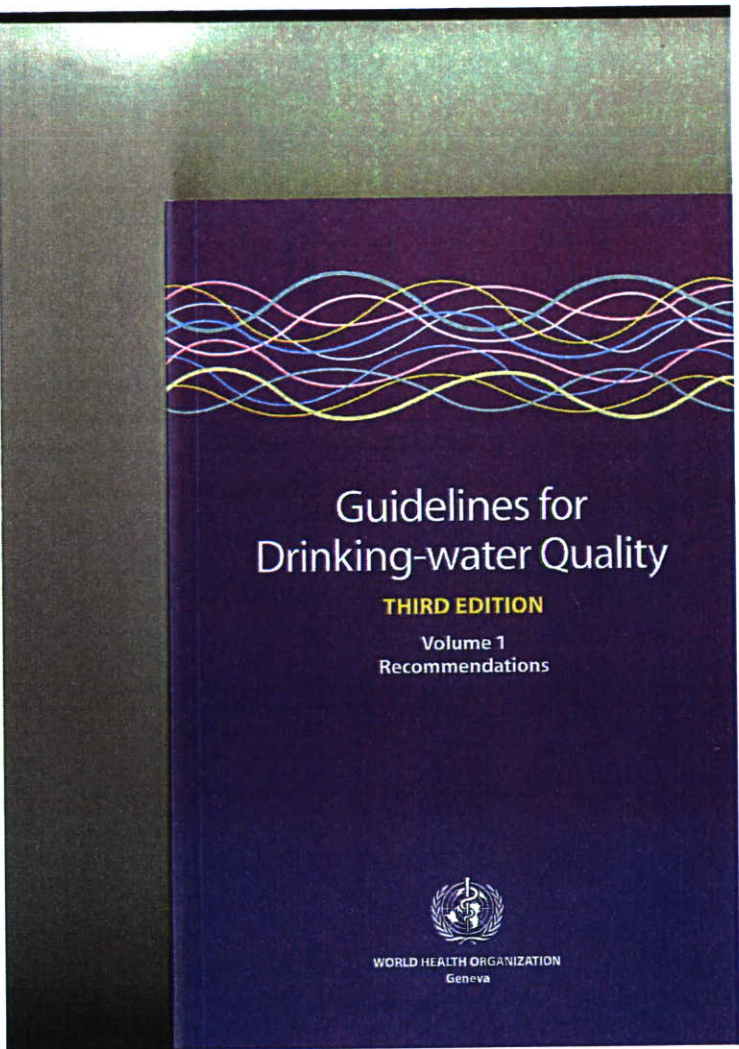
- 26-04-2004 end of continuous low concentration chlorine disinfection;  
second short-term, high concentration disinfection, by use of  
natriumhypochlorit (50 mg/L)
- 28-04-2004 *P. aeruginosa* not detectable
- 07-05-2004 *P. aeruginosa* again detectable in 6 out of 20 samples
- May-Jul several press fittings were de-installed from the contaminated  
installation system and intensively tested for microbial contamination;  
results were differing and could not verify a causal role of these fitting  
types
- 13-07-2004 third short-term, high concentration disinfection, by use of  
natriumhypochlorit (50 mg/L)

### **Outbreak of legionnaires' disease associated with visits to Belgium**

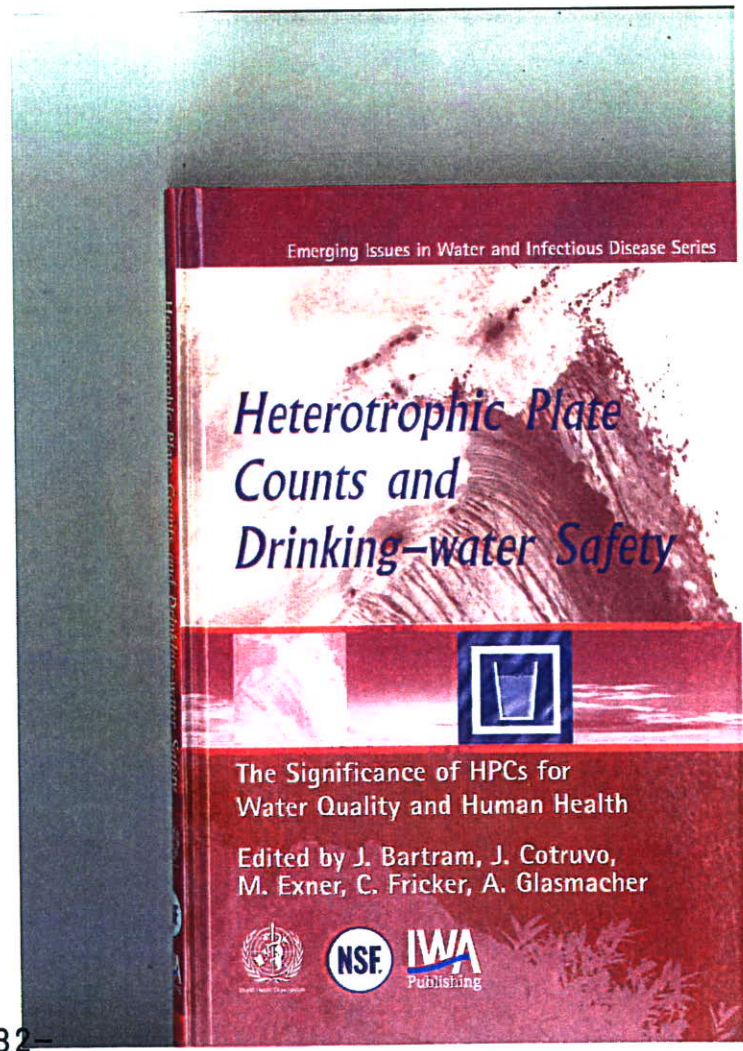
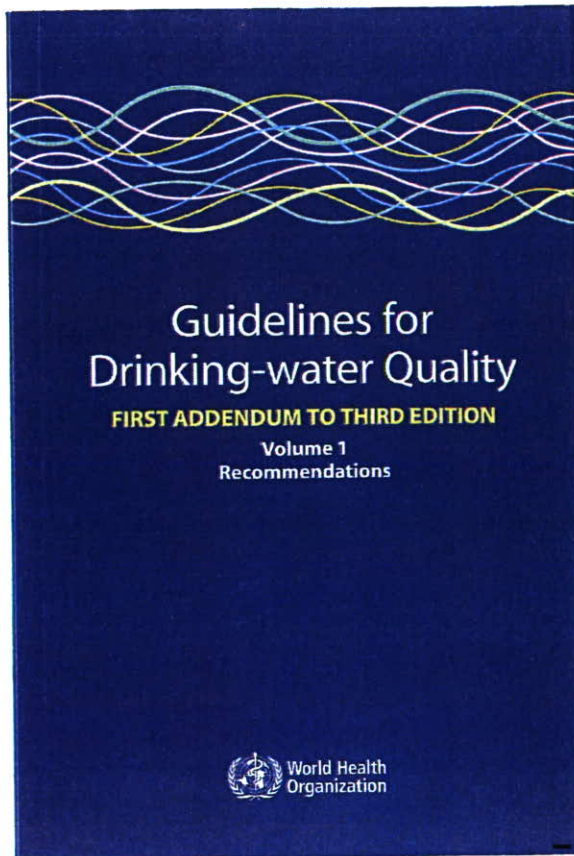
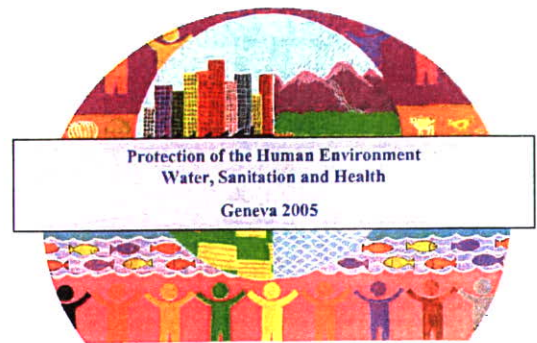
Five cases of legionnaires' disease have been reported in British people who all stayed at a hotel in Belgium in the ten days before onset of illness. All have been confirmed as *L. pneumophila* serogroup 1, one by culture of the organism and four by urinary antigen detection. The first case, who died, was a 63 year old man who became ill on 7 September 2002. He travelled with a small group of ten people, two of whom were reported to have had respiratory symptoms but were negative on testing for legionella infection. Three cases, one male and two female aged between 74 and 84 years were in a party of 46 people on a coach tour to Austria. They became ill between 21 and 24 September and two were hospitalised in France and one in England. The fifth case became ill on the 28 September and is also in hospital in France. This patient (female aged 65 years) was from a third group of 40 British tourists on another Austrian tour. All cases stayed only one night at the hotel in Belgium.

All members of the three tour groups have been informed about the outbreak and advised to seek medical attention if they develop symptoms for legionnaires' disease. All countries participating in the European Surveillance Scheme for travel associated legionnaires' disease (EWGLINET) have been informed of the outbreak together with tour operators in the UK and elsewhere.

Health inspectors from the Flemish Community of Belgium have visited the hotel to carry out investigations and take water samples. Control measures have been implemented, pending results from the water samples. The hotel remains open.



**Water Safety Plans**  
*Managing drinking-water quality  
from catchment to consumer*



Emerging Issues in Water and Infectious Disease Series

# *Pathogenic Mycobacteria in Water*

A Guide to Public Health Consequences,  
Monitoring and Management



Edited by S. Pedley, J. Bartram, G. Rees,  
A. Dufour, J. A. Cotruvo



## **LEGIONELLA** and the Prevention of Legionellosis

Edited by:  
Jamie Bartram  
Yves Chartier  
John V. Lee  
Kathy Pond  
Susanne Surman-Lee



World Health  
Organization



## V. 国内調査

### 1. 京都市保健福祉局保健衛生推進室生活衛生課における実地調査の 議事概要

1. 日 時 : 平成19年11月6日(火) 11:30~15:30
2. 場 所 : 京都市保健福祉局保健衛生推進室生活衛生課 (京都市庁舎会議室) 等
3. 対応者 : 吉田 巧 京都市保健福祉局保健衛生推進室生活衛生課課長補佐  
水谷 淳 同上 主任
4. 訪問者 : 奥村明雄 分担研究者 全国給水衛生検査協会会長  
田崎一幸 研究班委員 (社)全国建築物飲料水管理協会専務理事  
本間 豊 研究班委員 横浜市環境創造局環境保全部規制指導課  
湯浅義三 研究班委員 (社)京都微生物研究所環境衛生部長  
鈴木保美 事務局 全国給水衛生検査協会事務局長
5. 内 容 :

概略次の事項に沿って会議が進められた(議事次第)。

- ①京都市における貯水槽水道の施設数(概数、規模別)
- ②京都市における貯水槽水道の検査、清掃の状況
- ③貯水槽水道施設の管理に係る条例・要綱・要領等の制定と施行状況
- ④上記に関する問題点
- ⑤貯水槽水道施設の視察

提出された資料は次のとおり

#### [京都市資料]

- ・貯水槽水道の施設数(概数、規模別)について(京都市平成19年3月末現在)
- ・京都市簡易専用水道事務取扱要領(平成7年2月23日制定7年3月10日局長通知)
- ・京都市小規模受水槽水道及び飲用井戸衛生管理指導要領(平成2年10月29日制定2年11月9日局長通知、改正5年11月16日、6年3月3日、16年3月31日)
- ・飲用水の衛生対策(京都市HP)
- ・簡易専用水道の衛生管理(京都市パンフレット)
- ・小規模受水槽水道の衛生管理

#### [早川班資料]

- ・早川班平成18年度研究結果概要及び平成19年度研究計画概要
- ・早川班平成19年度シンポジウムパンフレット

#### 議事概要

奥村分担研究員：早川班京都市現地調査のご協力謝辞があり、続いて配布資料に沿った説明をした。

京都市：吉田課長補佐から歓迎の言葉に続き、京都市における飲料水衛生対策の重要性が述べられ、配布資料の説明があった。

京都市：京都市の簡専水及び小規模貯水槽水道は年間計画に基づき実施している  
まず、重要月間を設定し、施設の把握、衛生指導、立ち入り等を実施している。  
重要月間とは年3回にわけた、前期5・6月、中期9・10月、後期1・2・3月としている。

- ・前期実施事項は施設の把握、適正維持管理指導、簡専水の法定受検指導、特に、前年度未受検施設(5.5%200弱残)への指導。小規模については管理状況の指導、パンプ等による説明。

- ・中期実施事項は簡専水が当年度未受検施設指導、小規模は衛生指導月間とし、パンプを郵送、約50施設をピックアップ立ち入り水質検査(12項目を衛生研究所で検査)している。

- ・後期実施事項は基本的に前期、中期と同じ内容であるが、当該年度の未受検について再度受験指導を行う。

#### 委員からの質問事項

質問：立ち入りの方法について

- ・立ち入り件数：簡専水1,694件、小規模7,101(郵送も指導としている)。また、要改善が9件と少ない理由は確実に改善をするよう指導している。

質問：京都市の小規模受検率(4.1%)が全国平均に比べて高い理由は

- ・飲料水に対する京都市民の意識が高いと評価している。なお、施設の把握はローラー手法でおさええている。

質問：小規模の検査について条例は計画があるか

- ・いまのところ、指導要領で目的を達しているので条例までは考えていない。

質問：小規模の管理のあり方について

- ・現状の指導で精一杯実施されていると考えている。これからは小規模の管理について出前講習会等依頼があれば積極的に実施していきたい。また、設置者への指導の方が小規模管理についてはより効果的だと考えている。

質問：京都市における通報について

- ・法改正により通報が行政まで上がらないが、京都市では受検者の同意を得て行政とともに処理するようにしている。今後、法により検査内容が行政にスムーズにあがるようにしてほしい。

質問：京都市における貯水槽の清掃の状況は

- ・京都市が調査している範囲では簡専水、小規模ともに95%が清掃している。

〔貯水槽水道施設視察〕 ホテルハーヴェスト京都 支配人 引野宏紀氏

京都市中京区烏丸通丸太町下ル大倉町 205-1

- ・受水槽は地下1階に設置(2層で78トン、三菱FRP平成5年5月製)通常の管理は問題ない状況であるが、部屋に入るところが奥行きのあるハッチ式で出入りに困難を極める。
- ・高置水槽は7階屋上に設置(15.4トン、三菱FRP平成5年9月製)通常の管理が行き届いている状況。ただし、FRP樹脂表面(外気部分)が飛散しやすい劣化が進んでいる状況であった。

### (社) 全国建築物飲料水管理協会近畿ブロックにおける実地調査の議事概要

1. 日時 : 平成19年11月6日(火) 16:00~18:30
2. 場所 : 京都府中傷企業会館会議室
3. 対応者 : 八木克征 (社)全国建築物飲料水管理協会 京都支部長  
濱崎義信 同上 京都副支部長  
竹本輝司 同上 奈良県支部長  
竹内彌吉 同上 兵庫県支部長
4. 訪問者 : 奥村明雄 分担研究者 全国給水衛生検査協会会長  
田崎一幸 研究班委員 (社)全国建築物飲料水管理協会専務理事  
本間 豊 研究班委員 横浜市環境創造局環境保全部規制指導課  
湯浅義三 研究班委員 (社)京都微生物研究所環境衛生部長  
鈴木保美 事務局 全国給水衛生検査協会事務局長
5. 内容 :

概略次の事項に沿って会議が進められた(会議次第)。

- ①団体の会員数、事業活動など団体の概況
- ②団体会員の清掃受託件数の総数、対象規模別など事業の概況
- ③清掃事業を通じて感じられる貯水槽水道管理の問題点

提出された資料は次の [早川班資料]

- ・早川班平成18年度研究結果概要及び平成19年度研究計画概要
- ・早川班平成19年度シンポジウムパンフレット

#### 議事概要

奥村分担研究員：早川班現地調査の謝辞、メンバー紹介に続き、配布資料の説明をした。

八木京都支部長から代表して調査の歓迎と近畿ブロックメンバー紹介があった。

質問：各機関について

- ・京都支部、会員数：7社(組織率10%)、従事者研修会等により水の管理に務めている。

- ・兵庫県支部、会員数40社(組織率14%、多い時は60社)、活動は京都支部に同じ。
- ・奈良県支部、会員数11社、活動は他ブロックと同じ。

質問：簡専水施設の清掃数は

- ・八木支部長の会社では宇治市を中心に年間約400件、内小規模は約60件(毎年依頼される物件は約半分。宇治市は小規模も条例施行されているが反映されていないと感ずる。また、個人オーナーより、複数オーナーの方が清掃等に理解がある。)

質問：清掃実施についての問題点

- ・清掃が終わってからのクレームが全て清掃実施者のせいにされるケースが多い。
- ・清掃業務を逸脱した要求がある。たとえば故障、破損箇所の修理の要求等。これに対し、ある程度応えないと後の依頼がもらえるかに影響するので、積極的に教育をしている業者もある。

近畿ブロック：小規模の検査が急に増加した場合に検査体制は大丈夫か

近畿ブロック：清掃と検査を同時に実施しているところがある。組織的に別になっていることと思うが問題だ。

近畿ブロック：貯湯槽の検査(レジオネラ)について

近畿ブロック：貯水槽のランキングについて皆がとりたくなるような仕組みにしてほしい。

近畿ブロック：検査内容を実態に合うような、また、誰が検査しても同じ結果となるようにしてほしい(例えば残留塩素の検査が日程時間帯によって違う施設など)。

近畿ブロック：検査済証を不適事項がありながら張っているケースがあるのでは

- ・通常は不適があったら検査済証は張らず、処理後に張ることになる。

## (社) 京都微生物研究所における実地調査の議事概要

- 日時：平成19年11月7日(水) 10:00～13:00
- 場所：社団法人京都微生物研究所会議室
- 対応者：小林敦司 (社)京都微生物研究所環境企画管理部環境衛生業務課課長  
若林幹生 同上 係長
- 訪問者：奥村明雄 分担研究者 全国給水衛生検査協会会長  
田崎一幸 研究班委員 (社)全国建築物飲料水管理協会専務理事  
本間 豊 研究班委員 横浜市環境創造局環境保全部規制指導課  
湯浅義三 研究班委員 (社)京都微生物研究所環境衛生部長  
鈴木保美 事務局 全国給水衛生検査協会事務局長
- 内容：

概略次の事項に沿って会議が進められた(議事次第)。

### ①事業概要