

CIEH Buckinghamshire Branch
Legionella Seminar 26 October 2009

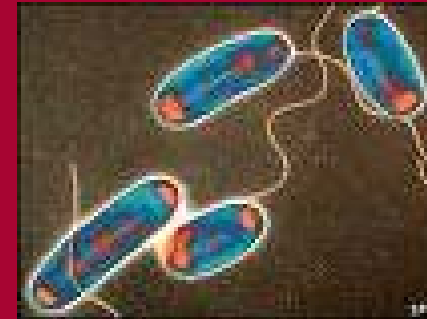
2002 Barrow-in-Furness outbreak

Dr Paul McDermott
HSE Specialist Inspector
Biological Agents Unit

Content



- The Barrow outbreak
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 - The Barrow Report
 - Key findings of the report



Barrow-in-Furness outbreak

- 495 suspected cases
- Up to 25 000 affected?
- 180 confirmed cases
- 7 deaths
- Forum 28
 - Arts and leisure centre
 - Barrow Borough Council

Battle to contain worst-ever Legionnaires' outbreak

130 VICTIMS OF KILLER BUG

BRITAIN was on the brink of its biggest ever outbreak of Legionnaires' disease last night.

A man of 89 has already died of the killer bug, 18 other cases have been confirmed, and another 11 suspected victims have been identified.

And experts are warning that up to 130 could be struck down by the pneumonia-like illness.

Urgent investigations are under way to identify the source of the outbreak in Barrow-in-Furness, Cumbria.

Last night the Forum 28 arts complex, in the busy town centre, emerged as the most likely culprit.

Police cordoned off the building and were standing guard outside.

The complex, the only town centre building with the type of water-cooled air conditioning system associated with Legionnaires', has up to 1,000 visitors a day. Tests are being

By Jenny Hope
Medical Correspondent

carried out on water samples from the system and if it proves to be the source then anyone who has passed through the centre of Barrow recently could be at risk.

Legionnaires', which has an incubation period of ten days and is a particular threat to the elderly and unfit, is carried by water droplets which are pumped out by air-conditioning systems.

On average the disease can kill up to 15 per cent of its victims, although an outbreak in Stafford in 1985 affected 68, of whom 23 died.

Dr Nigel Calvert, a consultant in communicable disease control, who is in charge of tracking down the source, said: "This is the largest outbreak I am aware of.

Anyone who has visited Barrow since July 1 could have contracted the disease and if they display any

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On guard: Police outside the building at the centre of the outbreak

YELLOW MAGENTA CYAN BLACK

Forum 28 at time of the investigation



- One chiller and one cooling tower out of service
- Fan damper on operational cooling tower in closed position
- **Biocide drums empty (from December 2001 onwards)**



Key findings of the investigation

- Between 1994 and early 2001 cooling towers treated by WTC appropriately and under control
- Late 2000 WTC contract cancelled and alternative contractors sourced
- New contract:
 - No chemical treatment
 - No microbiological monitoring
 - No system checks



Cooling towers servicing Forum 28



Chemical dosing drums



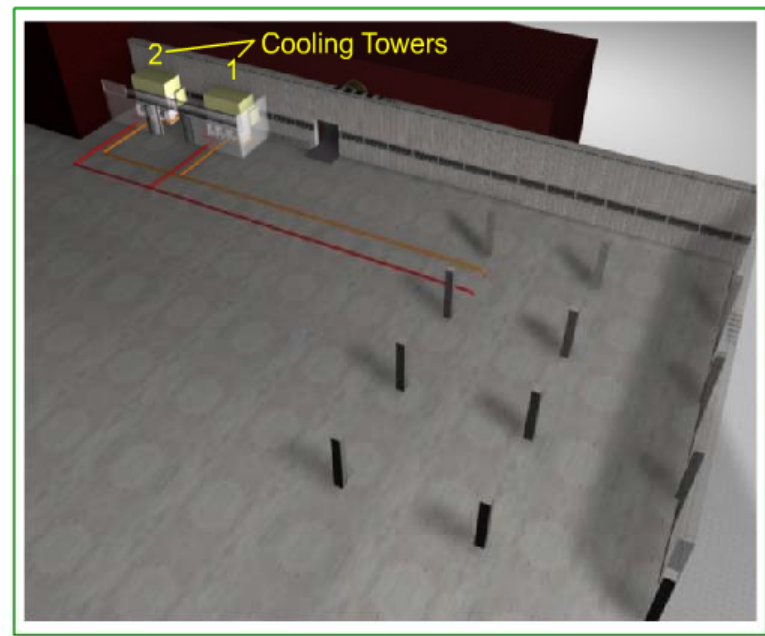
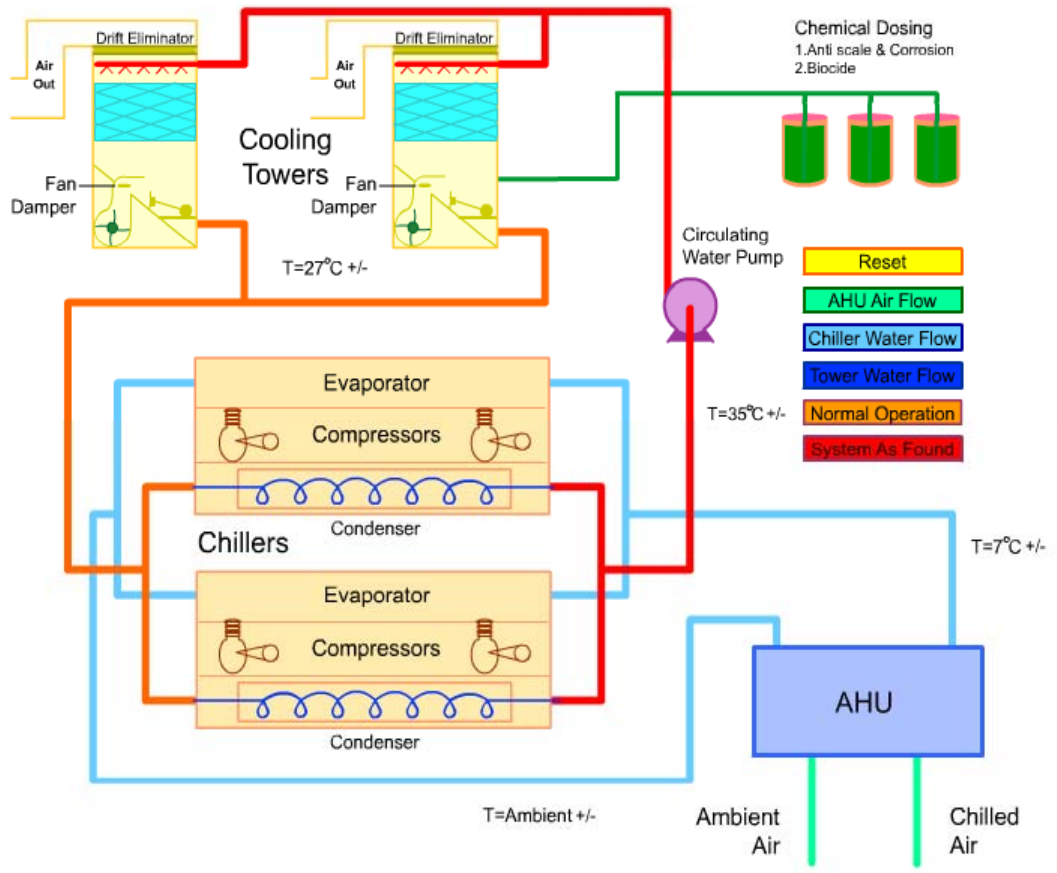
CT venting to Alley to Portland walk



Display

Reconstructions Limited
 Plant Schematic
 Forum 28
 Barrow-in-Furness

©Virtual Reconstructions Limited 2006



Legal proceedings



- BBC and GB charged with manslaughter
- HSWA 1974
 - Section 3
 - Section 7
- First trial February 2005
- Appeal by GB upheld March 2006
- Retrial of GB (both counts) July 2006



Legal proceedings



- BBC
 - Guilty of HSWA Section 3
 - Acquitted of manslaughter
 - £125 000 + £90 000 costs
- GB
 - Guilty of HSWA Section 7
 - Acquitted of manslaughter
 - £15 000 no costs



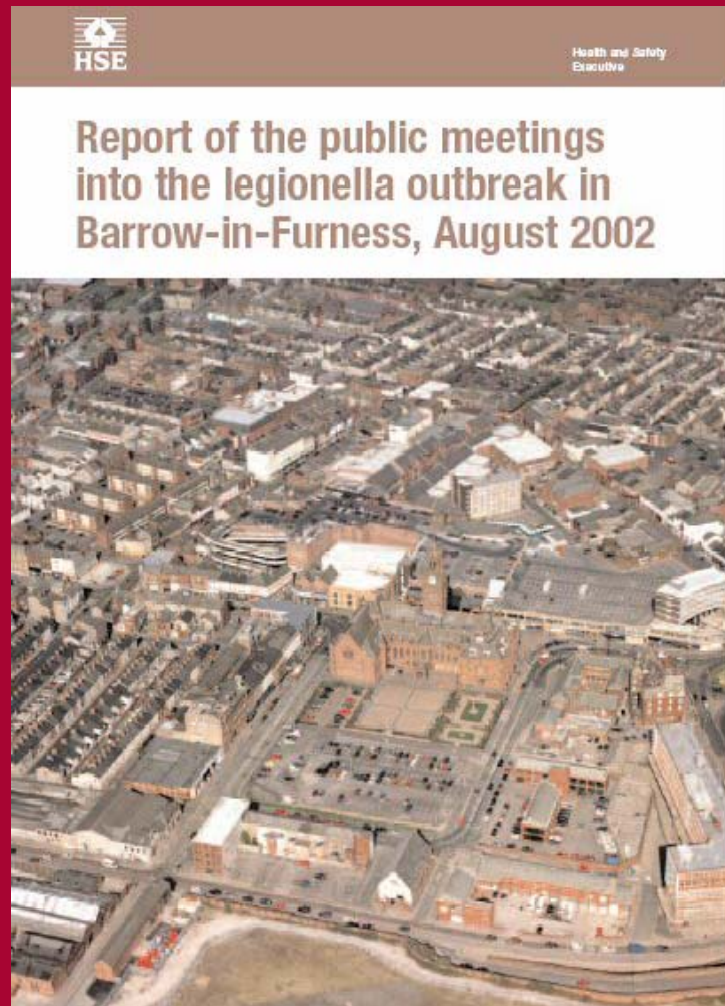
Public hearings



- 04 and 11 December 2006
- Abbey House Hotel (Barrow-in-Furness)
- Colin Pickthall
- Barrow Borough Council (Tom Campbell)
- Health Protection Agency
- Crown Prosecution Service
- Health and Safety Executive
- Victims, relatives, wider community



Barrow report: 6 key findings



- Poor lines of communication and unclear lines of responsibility
- Failure to act on advice and concerns raised
- Failure to carry out risk assessments
- Poor management of contractors and contract documentation
- Inadequate training and resources
- Individual failings

<http://www.hse.gov.uk/legionnaires/barrowreport.pdf>

Key findings of the report

1. Poor lines of communication and unclear lines of responsibility

- General lack of leadership and direction within BBC
- No 'responsible person' appointed
 - Authority, competence, knowledge of system
 - Manage, control and communicate necessary requirements

Key findings of the report

2. Failure to act on advice and concerns raised

- On two separate occasions, a heating and ventilation engineer raised concerns regarding the lack of water treatment with the Design Services Group (DSG) Manager
- “Water treatment to be performed in-house”
- Told to progress a quote for the work

Key findings of the report

3. Failure to carry out risk assessments

- External auditors engaged by BBC identified a lack of health and safety risk assessments
- Management post vacancies delayed assessment process for Forum 28
- (No written risk assessment for legionella control produced on installation of cooling towers)

Key findings of the report

4. Poor management of contractors and contract documentation

- Failure to agree specification for work
- Failure to request and exchange contract documentation
- Failure to check what was being done
- Procurement was by DSG

Key findings of the report

5. Inadequate training and resource

- Reactive deployment of resources
- Vacancies in management posts
- Insufficient suitably trained, competent staff to cover absences or shortages

Key findings of the report

6. Individual failings

- Number of failings by different officers
- DSG Manager's acts and omissions more significant than others
- Gillian Beckingham
 - Contract procurement
 - Failed to act on advice
 - Failed to seek assistance