

Ethylene Glycol Incident Update March 15<sup>th</sup> 2012

## **Background**

This update is presented in accordance with the requirements of the Tayside NHS Board Problem Assessment Group following contamination of the wholesome drinking water in the Sir James Black Centre (JBC) at the University of Dundee. It also covers testing of wholesome drinking water in the Wellcome Trust Biocentre (WTB).

## **Objective**

To confirm that actions taken to date by the University of Dundee have removed the identified source of the cross-contamination and also all traces of ethylene glycol within the wholesome water system in the JBC building.

## **Methodology**

Immediately following the incident on the 21<sup>st</sup> February, the secondary filling loop linking the JBC chilled water system pressurisation unit to the wholesome water system was physically separated.

Independent forensic engineering examination on 23<sup>rd</sup> February has confirmed that all the evidence available points to the fact that this secondary filling loop on the JBC pressurisation unit was the source of the cross-contamination with ethylene glycol. A consultant engineer will carry out a full engineering re-design assessment of this system in due course. However, as highlighted above, both systems are now physically separated such that it is not possible for cross-contamination to occur.

All drinking water cooler dispensers, dish washing machines, ice cube makers, tea/coffee machines that were physically disconnected from the wholesome water supply at the time of the incident will be disposed of and replaced with new equipment. All of the equipment that has been removed is being treated as special waste and will be disposed of using the University special waste contractors.

An aggressive cleanse of the wholesome water system has been carried out, followed by a clean fresh water flush, all as reported to the Problem Assessment Group on 22<sup>nd</sup> February 2012. Physical and intrusive examination of the wholesome water pipework distribution system, from the identified contamination source to all outlet points, has confirmed that no hidden dead-legs are present.

Further fresh water flushing of all twenty-four wholesome water outlets in JBC has been carried out on three separate occasions, with associated water samples from each outlet sent through for laboratory analysis. This process has shown that all of these sample results are <10mg/l.

Additional sampling in the adjacent building (WTB) has also confirmed all sample results are <10mg/l.

Initial pre-cleanse samples within the JBC which show high traces of ethylene glycol are submitted for reference.

Attached A3 drawings 01 to 03 inclusive identify sample reference locations within the WTB and JBC buildings.

### **Control Measures**

All ethylene glycol anti-freeze 'top-up' works within University buildings on the City Campus have been suspended pending a review by our consulting engineers. Furthermore, all Estates mechanical engineering staff and external contractors have been instructed to ensure no work takes place on these systems pending the review. All City Campus buildings have been checked to ensure that all heating and chilled water systems that are linked to wholesome water supplies are installed in full compliance with current Scottish Water By Laws (2004).

### **Training and Development**

A full training programme will be identified and rolled out to refresh all mechanical engineering staff on the requirements of the water bylaws. The duty of care of individuals and statutory requirements will also be covered.

### **University Investigation**

A formal University investigation has been established following the incident which will make recommendations to the University's governing body, the Court. The findings of this investigation will be shared with the Public Health Team on request.

### **Conclusion**

The sampling regime requested by the NHS Tayside Problem Assessment Group has now been completed and no adverse readings have been identified from the twenty-four wholesome water outlets. There is thus no analytical evidence that any contamination of the wholesome drinking water supply within the Sir James Black Centre remains.

The University is therefore confident that the wholesome water supply to the JBC building can now be re-established and formally requests clearance from the Public Health Team to allow it to do so.

A final water chlorination in accordance with British Standard BS6700 and Health & Safety Executive document ACOPS L8 remains to be carried out. This work will only be instigated once all interested parties have had the opportunity to review the analytical water sampling results.

Campus Services  
University of Dundee