



Public Health Wales
Office of the Chief Executive
2 Capital Quarter
Tyndall Street
Cardiff
CF10 4BZ

Reference: KH/4839842/01

Date: 02nd September 2025

**Chemical, Explosive and
Microbiological Hazards
Division**

Ms Kathryn Howarth

HSE Microbiology and
Biotechnology Unit
2nd Floor
7-8 Wellington Place
Leeds
LS1 4AP

Tel: 07920183065

<http://www.hse.gov.uk/>

Principal Inspector:
Dr Keith Stephenson

For the attention of Tracey Cooper (Chief Executive, Public Health Wales)

Dear Madam,

**REPORTING OF INJURIES, DISEASES AND DANGEROUS OCCURENCES REGULATIONS (RIDDOR)
2013. THE CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH (COSHH) REGULATIONS 2002.**

1. I am writing following my investigation of a dangerous occurrence notified to HSE under Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) 2013, that occurred in the Containment Level (CL)3 laboratory at Public Health Wales Glan Clwyd Microbiology (Report Number: 16411FD110), located at Glan Clwyd Hospital, on 29th April 2025. As part of my investigation, I met with Michelle Peters (Network Health and Safety Manager, Microbiology Division) and Rachel Roper (Network Health and Safety Deputy Manager, Microbiology Division) on MS Teams.
2. This letter is intended to raise matters identified during my investigation that fell below the minimum legal requirements, and which must be addressed to ensure compliance with current health and safety legislation.
3. You are required to provide a written response to this letter by **21st November 2025**. Please send the response by email to Kathryn.Howarth@hse.gov.uk.

Details of the incident under investigation

4. Microbiological Safety Cabinets (MSC) are one of the key controls for the protection of operators from exposure to hazardous biological agents, when processing patient specimens or cultures with biological agents of unknown hazard group (HG) or known or suspected to contain HG3 biological agents. MSCs use a combination of airflow (fan) and filtration to contain airborne droplets generated during handling of biological agents or infectious material, thereby preventing their escape from the enclosure and exposure of workers and the local environment. Furthermore, the design of the CL3 laboratory is such that, due to the airflow of the MSC, the air pressure within the CL3 is negative to

the air pressure outside the room. Air pressure in the CL3 which becomes too negative can lead to breaches in structural integrity of the CL3 lab, e.g. cracks in walls.

5. At Glan Clwyd Hospital, there are 2 CL3 laboratories, 1 used for processing Microbiology diagnostic samples and the other used primarily by Betsi Cadwaladr University Health Board Cytology department, the Cytology CL3 also acts as a backup CL3 laboratory for PHW Microbiology if their own laboratory is out of use. On 29th April 2025, due to the air pressure within the Microbiology CL3 becoming too negative, a decision was undertaken by PHW Microbiology to suspend work within the Microbiology CL3 and transfer all Microbiology work to the Cytology CL3. A Biomedical Scientist (BMS) who had no prior training in how to oversee the transfer of work undertook the task of completing the tasks outlined in the 'Checklist for converting cytology CL3' form.
6. The dangerous occurrence occurred when the fan for the MSC was not switched on, when following the procedure outlined on the 'Checklist for converting cytology CL3' form, and the MSC was used to process routine respiratory and enteric diagnostic specimens, which may have contained HG3 biological agents. As a result, several members of staff were potentially exposed to HG3 biological agents via uncontrolled processing of the respiratory and enteric diagnostic samples and subsequent aerosol transmission.
7. I was informed that once the BMS staff identified that the fan in the MSC was not switched on, they immediately turned the fan on and left the CL3 Laboratory as per the emergency response procedure
8. Since this incident, members of the Network Health and Safety Microbiology Division team, have taken action to implement a system to ensure that staff are provided with suitable and sufficient information, instruction and training in how to convert the cytology CL3 for work with Microbiology samples and have implemented a system to ensure that control measures i.e., MSCs are properly applied and used.

Issue 1: Emergency response arrangements

9. Regulation 13(1) of the Control of Substances Hazardous to Health (COSHH) requires that every employer put in place appropriate arrangements to deal with accidents, incidents and emergencies and that safety drills are undertaken and tested at regular intervals. This should include procedures to deal with foreseeable scenarios including remedial actions and restore to normal procedures.
10. Laboratory air changes refer to the rate at which the air in a laboratory is replaced with fresh air, typically measured in air changes per hour (ACH). This is a critical aspect of laboratory ventilation, ensuring the removal of contaminants and maintaining a safe working environment.
11. During my investigation I was informed that a Senior BMS entered the CL3 laboratory immediately after the dangerous occurrence, without waiting the recommended time for the laboratory air changes to remove potential contaminants from the CL3, thereby potentially exposing themselves to hazardous biological agents.
12. On reviewing the emergency response arrangements SOP, I identified that this document did not have procedures in place for incidents when work is inadvertently undertaken in an inactive MSC, either through fan failure or the fan not switched on.
13. Therefore, by failing to ensure appropriate emergency response arrangements were in place, employees could be put at risk of harm if a situation had arisen that required the enactment of an emergency response. As a result, Public Health Wales have breached Regulation 13(1) of COSHH.

Action:

In order to comply with the requirements of Regulation 13(1) of COSHH you must:

- Revise your emergency response arrangements to ensure you include action to be undertaken during the recovery phase once the room has been evacuated. You must consider foreseeable incident scenarios, including inactive MSC, and determine the appropriate remedial actions and return to normal procedures for these scenarios.

In your written response you must describe how the above have been achieved and provide supporting documentary evidence.

Information for employees

14. Under section 28(8) of the Health and Safety at Work Etc Act 1974 I am required to bring factual information on the above matters to the attention of the employees and therefore I have sent a copy of this letter to, Joanna Kronda, Unite Union Representative.
15. If you have any questions, please do not hesitate to contact me.

Yours faithfully



Ms Kathryn Howarth
HM Specialist Inspector

CC: Michelle Peters, Rachel Roper, Joanna Kronda and Keith Stephenson