

WEHI Biocontainment Course

Thursday 9 July 2015

8:30 to 8:40 Session 1. Welcome and Introductions

8:40 to 9:30 Principles of Biocontainment

This presentation will cover primary and secondary barriers, aerosol containment, PC1 to PC4 containment levels and practices, and international standards and guidelines. This presentation will also cover the causes of laboratory infections and how engineering controls assist in the prevention of these infections.

9:30 to 10:30 Session 2 - Standards and Regulations

This talk will cover AS/NZS243.3, AS/NZS2982, OGTR and Australian Department of Agriculture Quarantine Approved Premises (QAP) Regulations and what assessors often find wrong in facilities. This will summarise the differences between OGTR and QAP requirements for different types of facilities (microbiological, animal, invertebrate, aquatic and plant). Also cover animal welfare requirements, authority audits and PINs.

10:30 to 10:45 Morning tea

10:45 to 11:30 Session 3 - Air handling systems and controls

The design and requirements of air handling systems for PC2, PC3 and PC4 laboratories, animal and aquatic facilities. This presentation will include details on air flow rates, conditioning, directional air flow, maintaining pressure zones, duct system design and HEPA filtration requirements.

11:30 to 12:30 Sessions 4 - Waste Management Principles and Issues

This will cover the treatment waste and decontamination. It will cover autoclaves, disinfectants, sterilisation, and decontamination.

12:30 to 1:15 Lunch

**1:15 to 1:45 Session 5 - Electrical, Hydraulic, Fire Services,
Communications and Security**

These services often receive less attention in the design of higher containment facilities. Although their functions are often similar to

requirements of normal laboratory facilities, there are important installation differences as well as additional requirements for security, monitoring, control and indication.

1:45 to 2:45

Session 6 - Air tightness, air pressures. leakages, testing and penetrations

The standards and authorities require that a PC3 or PC4 facility must be able to support gaseous decontamination. This requires the facility to be sealed to a very high standard. This session looks at how this is achieved and measured. Correct penetration of electrical, hydraulic, air handling and other services is critical to the saleability of biocontainment facilities. We will describe and demonstrate penetrations that can be utilised in biocontainment facilities.

2:45 to 3:00

Afternoon tea

3:00 to 4:15

Session 7 - Animal and invertebrate facilities

This will detail the requirements for both small animal and for invertebrates. The use of ventilated animal isolation cage systems will be discussed. The relationship between these systems and the main air handling and waste treatment requirements will also be discussed.

4:15 to 4:30

Wrap up and any outstanding discussion