

AQIS PEQ Workshop

DESIGN AND CONSTRUCTION OF LABORATORY BIOCONTAINMENT FACILITIES WORKSHOP

Wednesday 25th August 2010

- 8:30 – 8:45 **Welcome and Introductions**
- 8:45 – 10:00 **Principles of biocontainment** (Tony Della-Porta)
This presentation will cover primary and secondary barriers, aerosol containment, PC1 (BSL-1) to PC4 (BSL-4) 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.
- 10:00 – 10:45 **Standards and Regulations: Australian regulations, standards and what an assessor looks for.** (Neil Walls)
This talk will cover AS/NZS243.3, AS/NZS2982, OGTR and AQIS Regulations and what assessors often find wrong in facilities.
- 10:45 – 11:00 MORNING TEA
- 11:00 – 11:30 **Design principles – site factors, facility location, and a first pass at budgeting and construction principles.** (Neil Walls)
An introduction to the first decisions that are often made about these types of facilities and how to avoid common pitfalls. This session will include some suggestions of construction techniques and technologies that are appropriate for containment laboratories.
- 11:30 – 12:00 **Air handling systems** (Neil Walls)
The design and requirements of air handling systems for PC2, PC3 and PC4 laboratories and animal facilities. This presentation will include details on air flow rates, conditioning, directional air flow, maintaining pressure zones, duct system design and HEPA filtration requirements.
- 12:00 – 12:30 **Waste treatment principles and issues** (Tony Della-Porta)
This will cover the treatment waste and decontamination. It will cover autoclaves, disinfectants, sterilisation, and decontamination.
- 12.30-1.15 LUNCH
- 1:15 – 1:45 **Liquid waste treatment** (Neil Walls)
There are a number of alternative methods of dealing with potentially contaminated liquid waste. These vary greatly in cost, effectiveness against

different risk organisms and volume capacity. This session will examine current technologies that are available. It will also introduce some new methods that are being considered in this growing industry

1:45 – 2:15

Air Tightness, Air Pressures, Leakage and Testing (Neil Walls)

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.

2:15 – 3:15

Animal, invertebrate and plant facilities (Neil Walls)

This will detail the requirements for both small and large animals, for plants and for invertebrates. We will relate the presentation to the requirements of the AQIS PEQ facilities.

3:15 – 3:45

Gaseous Decontamination (Tony Della-Porta)

This introduction will cover the types of gaseous decontamination processes likely to be used in a biocontainment facility

3:45 – 4:30

Discussion

4:30

Leave for Airport

7:10

Flight to Adelaide