

DAFF Training Course for Approved Containment Facilities

DAY 1 TUESDAY 11 DECEMBER 2012

- 8.30-9.00 COFFEE / REGISTRATIONS
- 9.00-9.20 **Welcome and Introductions**
- 9.20-9.30 **Purpose of Workshop** (Jon Webber)
A brief description of the purpose of the workshop
- 9.30-10.30 **Session 1 - 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.
- 10.30-10.50 MORNING TEA
- 10.50-11.50 **Session 2 – General Compliance, QC2 and Upwards – What TPAs look for** (Neil Walls)
- What Inspectors look for
- Common failures
This will cover the experiences of a Third Party Inspector and give examples of issues encountered during inspections. This session will also point out issues which may be found by DAFF Biosecurity officers in the future.
- 11.50-12.40 **Session 3 - Air Handling Systems** (Neil Walls)
The 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, pressure zones, duct systems and HEPA filtration systems.
- QUIZ 1**
- 12.40-1.20 LUNCH
- 1.20-2.50 **QC2 Microbiological Facility Visit**
- 2.50-3.10 AFTERNOON TEA

DAY 1 TUESDAY 11 DECEMBER 2012 continued

- 3.10-4.10 **Session 4 - 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. Correct penetration of electrical, hydraulic, air handling and other services is critical to the sealability of biocontainment facilities. We will describe and demonstrate penetrations that are utilised in biocontainment facilities.
- 4.10-4.50 **Session 5 - Case Study 1: Identify what can go wrong (GROUP EXERCISE - Tony Della-Porta & Neil Walls)**
In this group exercise participants will each be issued a set of photographs to discuss in table groups. Groups will present their findings based on faults that should be picked up by third party assessors.
- 4.50-5.10 Wrap up, questions & discussion

DAY 2 WEDNESDAY 12 DECEMBER 2012

- 8.30-9.20 **Session 6 - Laboratory Furniture and Equipment, including Biological Safety Cabinets** (Tony Della-Porta)
This will give an overview of the usual equipment found in containment facilities and some of the requirements of this equipment including biological safety cabinets.
- 9.20-9.55 **Session 7 - Waste Treatment Principles and Issues**
(Tony Della-Porta)
This will cover the treatment waste and decontamination. It will cover autoclaves, disinfectants, sterilisation, and decontamination.
- 9.55-10.10 **Session 8 - Solid and Carcass Waste Treatment** (Neil Walls)
Some waste includes a mixture of solids and liquids, such as animal waste material and infected carcasses. A number of methods of dealing with this difficult waste material will be discussed in line with DAFF Biosecurity approved methods.
- 10.10-10.30 MORNING TEA
- 10.30-12.15 **Session 9 - Animal, Invertebrate and Plant Facilities** (Neil Walls)
This will detail the requirements for both small and large animals, for plants and for invertebrates. The use of ventilated animal isolation cage systems will be discussed, with discussion of the two main systems currently being used in Australia. The relationship between these systems and the main air handling and waste treatment requirements will also be discussed.

QUIZ 2

DAY 2 WEDNESDAY 12 DECEMBER 2012 continued

12.15-1.00 LUNCH

1.00-2.45 **QC2 Plant & Invertebrate Facility visit**

2.45-3.05 AFTERNOON TEA

3.05-4.45 **Session 10 - Case Study 2: Examination of microbiological incidents in contained laboratory facilities and the identification of the causes (GROUP EXERCISE)**

Participants will work in groups to identify four different types of plant quarantine facilities. The aim will be to identify the main facility features required for each type. Participants will also be required to propose any special SOPs that may be required to deal with any layout deficiencies. Each group will report back at the end of the session.

4.45-5.10 Wrap up, questions and discussions

DAY 3 THURSDAY 13 DECEMBER 2012

8.30-8.50 **Session 11 - Power, Fire Services, Laboratory Gases, Communications and Security (Neil Walls)**

These services often receive less attention within higher containment facilities. Although their functions are often similar to requirements of normal laboratory facilities, there are important differences as well as additional requirements for security, monitoring, control and indication.

8.50-9.20 **Session 12 - Building Monitoring and Control Systems (Neil Walls)**

Neil will talk about the principles of control systems for biocontainment facilities.

9.20-9.50 **Session 13 - Liquid Waste Treatment (Neil Walls)**

There are a number of methods of dealing with potentially contaminated liquid waste. These vary greatly in effectiveness against different risk organisms and volume capacity. This session will examine current technologies that are available in line with DAFF Biosecurity approved methods. It will also introduce some new methods that are being considered in this growing industry

9.50-10.10 MORNING TEA

DAY 3 THURSDAY 13 DECEMBER 2012 continued

10.10-11.10 **Session 14 - Gaseous Decontamination** (Tony Della-Porta)
This introduction will cover the types of gaseous decontamination processes likely to be used in a biocontainment facility. It will cover in some detail formaldehyde, vaporised hydrogen peroxide and chlorine dioxide. Safety considerations will also be covered.

QUIZ 3

11.10-12.10 **Session 15 – Concluding Session – Case Study 3: A Typical Scenario of Assessment for Auditors**

12.10-1.00 LUNCH

1.00-2.30 **QC3 Facility Visit**

2.30-2.50 CONCLUSION