

From: Greg.A.Smith@csiro.au [mailto:Greg.A.Smith@csiro.au]
Sent: Thursday, 21 March 2013 3:58 PM
To: Brown, Ainslie
Cc: Deborah.Middleton@csiro.au
Subject: FW: PC3 containment [SEC=UNCLASSIFIED]

Hi Ainslie

Deborah Middleton asked that I respond to your email. AAHL has 26 co-located PC3 animal facilities and has been operating a variety of experiments with a range of different animal pathogens in side by side PC3 facilities for almost 30 years with no recorded cross contamination occurring between adjacent rooms.

PC3 facilities require that air ventilation operates at least 50 Pa lower in the PC3 facility than it does in the adjoining areas. This in effect ensures that should a breach occur in the perimeter of the PC3 facility (such as a door opening) there is a directional air flow into the PC3 facility. There is also a requirement for the facility to have an airlock for entry and egress. The airlock is required to have interlocked doors that prevent both doors from opening at the same time and this helps maintain the pressure difference between the PC3 facility and adjoining outside areas. In the case of PC3 animal facilities this airlock is most often a 'shower-airlock' as under the Australian New Zealand Standards (2243.3:2010) if the room is used as the primary containment envelope a change of clothes and personal shower is required when leaving the facility. If primary animal HEPA filtered or individually ventilated caging is used then a personal shower may not be required.

Air being exhausted from PC3 facilities are required to be HEPA filtered, which removes any microbial contaminants that may be present. There are prescribed procedures and work practices detailed in 2243.3 and proper adherence to these is crucial to maintaining containment. The procedures employed are far more important in maintaining containment than the facility alone. Providing these are followed and the facility is properly maintained then there should be negligible risk of cross contamination between separate but adjoining PC3 animal facilities.

I have included some slides from a training presentation here that may assist with understanding some of the differences between different levels of containment.

Please let me know if you need clarification on any of this.

Regards
Greg

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