



## **SAFETY PROCEDURE/GUIDELINES Sheep Containment Unit**

**NUMBER: Procedure Guideline SF-01  
SUBJECT: Entry Requirements for Personnel  
Occupational Health and Safety**

**PAGES: 5  
EFFECTIVE DATE: January, 2007  
SUPERSEDES: September, 2006  
APPLIES TO: All Personnel  
APPROVED: January, 2007, Biosafety Committee Chair**

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### **1.0 Introduction**

- 1.1 Sheep are a common reservoir of the zoonotic agent *Coxiella burnetti*, a rickettsial micro organism which, if transmitted can infect humans and may cause an illness called Q fever. About one half of people infected with *C. burnetti* show signs of clinical illness with a small percentage of clinical cases developing pneumonia and some cases developing liver disease or rarely, endocarditis.

Human infection usually occurs through inhalation of contaminated dusts and aerosols generated by infected animals, their waste products, placental tissues and fluids and contaminated straw or bedding.

The risk of exposure for personnel is significantly higher when working with pregnant sheep where large numbers of organisms may be present in placenta, birth tissues and amniotic fluids of infected animals. Persons at risk (i.e. those with valvular heart disease, persons who are immune suppressed or pregnant women) should be advised of the risk of serious illness that may result from Q fever and should seek medical advice before working with pregnant sheep.

For more information on Q-Fever, please see:

(Health Canada) <http://www.phac-aspc.gc.ca/msds-ftss/>  
(CDC) <http://www.cdc.gov/ncidod/dvrd/qfever/>

## 2.0 Measures to Reduce the Risk of Exposure to Q Fever

- 2.1 Sheep will only be admitted to the facility where there is no record of Q fever infection in the originating flock as determined by the best available testing methodology (See SOP 169).
- 2.2 The sheep housing facilities and operating rooms at Western will be designed and operated at the standard required by Health Canada as stated in the “*Guidelines for Biomedical Facilities using Sheep as Research Animals*” December 2000”. This standard is available at: [www.phac-aspc.gc.ca/ols-bsl/aminres\\_e.html](http://www.phac-aspc.gc.ca/ols-bsl/aminres_e.html)
- 2.3 Entrance to the sheep facilities will be limited to approved persons only.
- 2.4 ***These procedures and SOPs are intended to reduce the risk of exposure to Q-Fever for all personnel who work in the Sheep Containment Facility at the Western University. It is essential for the protection of all, that all procedures are followed at all times by all personnel.***

## 3.0 Approved Personnel:

The following requirements must be completed before access to the sheep facilities will be allowed:

### 3.1 Research Personnel and Trainees (Including Visiting Scientists or Trainees)

Personnel must have a Western Position Hazard Form completed by their research supervisor. This form must be submitted to Workplace Health: [www.wph.Western.ca](http://www.wph.Western.ca)

3.1.1 The Western Medical Surveillance Programme must be completed and documented by Workplace Health. The medical surveillance programme will involve a description of the causative organism, *Coxiella burnetii*, the symptomology of Q fever and the potential risks to personnel. The programme will involve giving a blood sample to be tested for antibody titres to Q fever and possible immunization. Upon request, medical surveillance participants may be required to provide documentation such as past serology results or proof of vaccination. Persons who do not provide documentation upon request will be assumed to be non-vaccinated and without immunity. They will need to wear all personal protective equipment, including respirators.

3.2.1 The cost of the medical surveillance programme will be borne by Western for Western employees or by the employer\* for non-Western employees. Vaccination, if available, may be charged back to the employee's department.

\*employer: name of institution on pay stub.

## 4.0 Required Training

The following Western training sessions are mandatory for all personnel, records will be kept by OHS and the Research Supervisor:

- a) Q. Fever Information Session given by OHS
- b) Sheep Facility and SOP Training Session given by ACVS and OHS
- c) Radiation Safety (for users of radioisotopes only)
- d) WHMIS
- e) Laboratory and Environmental Waste Management Safety Workshop
- f) Biosafety
- g) Employee Health and Safety Orientation
- h) Animal Care and veterinary services training
- i) Faculty/Supervisors Safety Responsibilities Seminar (Faculty and Supervisors only)

## 5.0 Trades and Maintenance Personnel

Trades and Maintenance personnel who are required to enter the SCU when it is in use must participate in the medical surveillance programme as stated in 3.1.1 (above) and attend the training sessions given for trades and maintenance personnel before entering the unit. These personnel are accompanied in the unit.

All trades and maintenance personnel must be signed into two documents – the binder to enter the ACVS facility and the binder to enter the sheep unit specifically.

## 6.0 Visitors (including Service Technician)

- 6.1 Visitors including those who do not regularly work in the unit, such as a service technician or researcher touring the facility.
- 6.2 Visitors to the SCU are discouraged when it is in operation.
- 6.3 Visitors who require entry may participate in the Western medical surveillance programme as stated in 3.1.1 (above). Costs of the medical surveillance programme for visitors will not be borne by Western.
- 6.4 Visitors not in the medical surveillance programme must be advised of the health and safety risks of the unit by the Biosafety Officer and sign a waiver to enter into the unit. The following documents will be reviewed:
  - (Health Canada) <http://www.hc-sc.gc.ca/pphb-dgsp/psp/msds-ftss/msds43e.html>
  - (CDC) <http://www.cdc.gov/ncidod/dvrd/qfever/>
- 6.5 All visitors to the SCU must be approved by the Director, ACVS and Biosafety Officer, OHS prior to entry.
- 6.6 All visitors must be signed into two documents – the binder to enter the West Volley facility and the binder to enter the sheep unit specifically. They are accompanied while in the unit.

## **7.0 Laboratory Staff**

- 7.1 Laboratory staff at Western or at off campus locations required to work with non-decontaminated sheep tissues and/or blood from the SCU must participate in the WESTERN medical surveillance programme as stated in 3.1.1 (above)
- 7.2 Containment Level 2 facilities and procedures are required to handle non-decontaminated sheep blood and/or tissues from the SCU in laboratories out side the SCU. (see Procedure Guideline SF-06)
- 7.3 Permission must be obtained in writing from the laboratory supervisor and given to Occupational Health and Safety at Western and at the off campus location (if appropriate) where the sheep tissues or blood is to be used.
- 7.4 Laboratory staff handling radioisotope labelled materials in or from the SCU must be name on the isotope licence and are required to attend radiation safety training at Western before handling any labelled materials.

## REQUIRED TRAINING

Name of worker: \_\_\_\_\_

The following training sessions must be signed as completed before access to the Western sheep facility will be authorized:

Training session	Date Attended	Signature (verified by OH & S)
a) Q. Fever Information Session given by OHS	_____	_____
b) Sheep Facility and SOP Training Session given by ACVS and OHS	_____	_____
c) WHMIS	_____	_____
d) Biosafety	_____	_____

The following training sessions must be taken at the next available session

		Signature (verified by Supervisor)
e) Laboratory and Environmental Waste Management Safety Workshop	_____	_____
f) Radiation training (for users of radioisotopes only)	_____	_____
g) Employee Health and Safety Orientation	_____	_____
h) Transportation of Dangerous Goods (if applicable)	_____	_____
i) Faculty/Supervisors Safety Responsibilities Seminar (Faculty and Supervisors only)	_____	_____