Import Health Standard For The Importation Of Frozen Argali Sheep (*Ovis ammon polii*) Skin Tissue Into New Zealand From The Singapore Zoo

Issued pursuant to Section 22 of the Biosecurity Act 1993
Dated: 20 April 2005

1 IMPORTER'S RESPONSIBILITIES

1.1 The use of frozen Argali sheep (*Ovis ammon polii*) skin tissue imported into New Zealand for the cloning of an Argali sheep or the creation of interspecific hybrids with Argali sheep must also comply with the Hazardous Substance and New Organism (HSNO) Act 1996 and requires approval under the HSNO Act. This requirement is independent of the import health standard requirements and is managed by The Environmental Risk Management Authority (ERMA New Zealand). Importers are advised to contact ERMA or consult the ERMA website: www.erma.govt.nz. Any ERMA controls associated with an ERMA approval will be additional to this import health standard.

1.2 The costs of MAF in performing functions relating to the importation of frozen Argali sheep (*Ovis ammon polii*) skin tissue shall be recovered in accordance with the Biosecurity Act and any regulations made under that Act.

1.3 All costs involved with documentation, transport, storage and obtaining a biosecurity direction and/or biosecurity clearance shall be borne by the importer or importer's agent.

2 PERMIT TO IMPORT

2.1 A permit to import must be obtained from Border Standards Team, Pre-Clearance Directorate, Biosecurity New Zealand, Ministry of Agriculture and Forestry, PO Box 2526, Wellington, New Zealand.

2.2 The importer must supply the following information:
- name of the containment and transitional facility for holding the skin tissues in New Zealand.
- name and address of exporter
- identification of donor animal.

2.3 Permits will be issued for a single consignment.

3 DOCUMENTATION

3.1 The permit and all the required zoosanitary certification must accompany the consignment to New Zealand.

4 ELIGIBILITY FOR IMPORT

4.1 The donor animal must be an Argali sheep (*Ovis ammon polii)*, more than six years old, resident in Singapore Zoo for at least 6 months and be clear of any quarantine restrictions at the time of tissue collection for New Zealand. The tissue collection must have been prior to 1 January 2005.

5 IDENTIFICATION

5.1 The identification of the donor animal and the date of collection must be shown on the veterinary certificates accompanying the consignment.

5.2 Vessels containing tissue must be permanently marked with identification of the donor animal and the date of collection.

6 COLLECTION OF BIOASSY TISSUE

6.1 At least two large mesenteric lymph nodes shall be collected by aseptic surgical means from the donor animal for scrapie bioassay.

7 HEALTH CERTIFICATION

7.1 All serological tests were conducted at a Government laboratory or a laboratory approved by the Government Veterinary Service of Singapore.

8 TRANSPORT TO NEW ZEALAND

8.1 The tissue for export to New Zealand must be transported in a sealed dewar. The number of the seal must be recorded in the Veterinary Certificate B.

9 BIOSECURITY DIRECTION

9.1 On arrival in New Zealand the certification will be checked by an Inspector under the Biosecurity Act 1993 and, providing it complies with the conditions of the permit to import, a biosecurity direction will be issued directing the tissues to the containment facility approved to the MAF Standard 154.03.02 (Containment facilities for micro-organisms), as named on the permit.

9.2 On arrival at the facility the transport vessel will be opened in the presence of an Inspector and the contents verified against the certification documents. The tissue shall be transferred to a storage container in the facility and the transport vessel emptied taking care to recover any tissues that may have fallen to the bottom of the tank. The transport dewar shall then be sterilised either by autoclaving, processed by dry heat or subject to 5% formalin treatment in accordance with recognised international standards before releasing it to the importer.

10 POST-ARRIVAL TISSUE TESTING

10.1 Aliquots of cultured cells of imported tissue must be negative for the following species of Mycoplasma:

Mycoplasma capricolum subspecies *capricolum*
Mycoplasma bovigentalium
Mycoplasma agalactiae
Mycoplasma Serotype 11 (strain 2D)
Mycoplasma sp. Group 7
Mycoplasma bovis
Mycoplasma mycoides subspecies *mycoides* small colony (MmmSC),
Mycoplasma putrefaciens
Mycoplasma capricolum subspecies *capripneumoniae*
Mycoplasma sp. F38

10.2 Aliquots of cultured cells of imported tissue must be negative for *Ureaplasma* spp. and *Acholeplasma* spp. (with the exception of *A. laidlawii*).

10.3 Aliquots of cultured cells of imported tissue must be negative for *Chlamydia psittaci*.

10.4 Aliquots of cultured cells of imported tissue must be negative for bacteria including *Salmonella* spp. and other common pathogens.

10.5 If any batch of tissue is culture positive for an organism listed in 10.1, 10.2, 10.3 and/or 10.4, the Biosecurity Standards Group Manager must be notified.

11 POST-ARRIVAL QUARANTINE, CONTAINMENT AND TESTING

11.1 The animals derived from the imported tissues by cloning (referred to as the 'original imports') and all subsequent progeny shall be held in a transitional and containment facility meeting the following standards:

- MAF BA Standard 154.02.02: Standard for sheep and goat transitional facilities.
- MAF/ERMA Standard 154.03.06: Containment standard for field testing of farm animals.

11.2 The minimum fencing requirements shall be the 'Perimeter fencing for sheep' as described in both standards.

11.3 The 'original imports' must reside on a 'primary facility'. The primary facility may be a stand-alone transitional and containment facility or a physically separate transitional facility within a larger transitional and containment facility. The primary facility shall contain the animals derived from the imported tissues by cloning and the sentinel goats. None of these animals shall be permitted to leave this facility.

11.4 The 'original imports' must be held on the primary facility for a minimum of five years from the date of birth of the last lamb cloned from the imported tissue.

11.5 The 'original imports' on the primary facility shall be subject to annual testing for maedi-visna. Any seropositive animals are to be slaughtered within 30 days of identification.

11.6 Near the end of the quarantine period all 'original imports' shall be slaughtered, necropsied and examined for scrapie, visna/maedi, pulmonary adenomatosis and nasal carcinoma (as per the MAF BA Standard 154.02.02). In addition, immunohistochemistry techniques shall be used to examine mesenteric lymph node and brain tissues for PrP protein.

11.7 Lymph node material from the donor animal shall be inoculated into 5 sentinel goats using an approved intra-cerebral inoculation technique as a bioassay for scrapie. The sentinel goats shall be kept on the primary facility for a minimum of three years, after which they shall be slaughtered and examined for scrapie as described in the MAF BA Standard 154.02.02.

11.8 Embryos collected from the 'original imports' on the primary quarantine may be transferred into recipients held on a secondary transitional and containment facility also subject to MAF BA Standard 154.02.02. The embryos must be collected, handled, trypsin treated and washed as specified in the Manual of the *International Embryo Transfer Society*. The resultant offspring and subsequent progeny must be quarantined until animals on the primary facility have satisfactorily completed the requirements of the scrapie freedom assurance programme.

11.9 If any animal tests positive in the course of testing as detailed in 10.6, 10.7 and/or 10.8, the Biosecurity Standards Group Manager must be notified.

11.10 During the quarantine period animals may be subject to additional tests as required by the Biosecurity Standards Group Manager. The fate of animals that fail quarantine or testing will be assessed on the basis of the health risk they pose.

11.11 Compensation will not be paid for animals slaughtered as a result of failing quarantine or testing during any stage of quarantine.

12 QUARANTINE CLEARANCE

The animals in the secondary facility (i.e. recipients of embryos collected from the 'original imports' on the primary quarantine and their offspring) shall be eligible for quarantine clearance at the end of the quarantine period if:

12.1 The conditions of the import health standard have been met and the exporter's certification is in order.

12.2 All animals in the primary facility have been destroyed and have met the requirements of the scrapie freedom assurance programme i.e. no evidence of scrapie or other exotic diseases have been found in animals on both the primary and secondary facility.

12.3 The quarantine requirements described in MAF BA Standard 154.02.02 have been met.

12.4 The animals are healthy and there is no evidence of exotic disease.

12.5 The quarantine requirements will be lifted and the animals shall be directed to remain in containment as per MAF/ERMA Standard 154.03.06: *Containment standard for field testing of farm animals*, unless release is granted by ERMA.

ZOOSANITARY CERTIFICATE

Species: ARGALI SHEEP (*Ovis ammon polii)*
Animal product: SKIN TISSUE

To: NEW ZEALAND

Import Permit Number:.....

Country of collection: Singapore

Competent authority: .....

Competent local authority:.....

I. IDENTIFICATION OF DONOR ANIMAL

Identification of donor animal	Breed	Date of Birth	Date(s) of tissue collection

II. ORIGIN OF DONOR ANIMAL

Address of the Singapore Zoo: .....
.....

III. DESTINATION OF TISSUE

The tissue will be sent from:.....(place of loading),
to: ..... (country and place of destination).

Means of transport (route and flight no.):.....

Name and address of consignor:.....
.....

Name and address of consignee:.....
.....

IV: SANITARY INFORMATION

VETERINARY CERTIFICATE A:

I, ... being the veterinarian appointed to the Singapore Zoo certify with respect to the donor animal and tissue identified in the Zoosanitary certificate that:

1. THE SINGAPORE ZOO

1.1 has never had a confirmed case of rabies.

1.2 is under the supervision of a registered veterinary surgeon.

1.3 is not subject to any quarantine or other official restriction on account of any disease.

2. DONOR ANIMAL REQUIREMENTS

2.1 The donor animal was imported into Singapore and has subsequently been free of all quarantine restrictions.

2.2 The donor animal has not been vaccinated against foot and mouth disease within the twelve months prior to collection of tissue.

2.3 At least two large mesenteric lymph nodes have been collected by aseptic surgical means from the donor animal. These nodes were placed in a sterile container, labelled, the air excluded, and stored at a maximum temperature of minus 70^{o}C.

3. PRE-COLLECTION DONOR TESTING AND ISOLATION

3.1 The donor animal has been isolated from direct contact with other sheep and goats, unless they have the same health status, for 30 days prior to tissue collection.

3.2 During the 30-day isolation period the donor animal was subjected to the following tests with negative results:

3.2.1 Q fever: using indirect immunofluorescence, ELISA or complement fixation test.

3.2.2 Maedi-visna using the agar gel immunodiffusion test or ELISA test.

3.2.3 Bluetongue using agar gel immunodiffusion test or competitive ELISA.

4. POST-COLLECTION DONOR TESTING

4.1 The following tests were repeated with negative results on sera taken from the donor animal not less than 21 days and not more than 60 days after the collection of the tissue:

4.1.1 Q fever using indirect immunofluorescence, ELISA or complement fixation test.

4.1.2 Bluetongue using agar gel immunodiffusion test or competitive ELISA.

4.2 Negative diagnostic test results for enzootic abortion of ewes (ovine chlamydiosis) were obtained on sera taken from the donor animal 2 to 3 weeks after tissue collection.

5. TISSUE PROCESSING AND STORAGE

5.1 On the dates of collection of the tissue the donor animal showed no clinical evidence of infectious or contagious disease notifiable by order or regulation in the country of origin.

5.2 The tissue described above was collected using an aseptic surgical technique and processed in a manner that did not expose it to contamination.

5.3 The sterility of all biological products was maintained.

5.4 Only sterilised* dewars and fresh nitrogen not previously used for any other purpose have been used for the storage of the tissue.

* For the purposes of these conditions sterilised means autoclave, processed by dry heat or subject to 5% formalin treatment in accordance with recognised international standards.

6. EXPORT OF TISSUE

6.1 The tissue has been stored in quarantine at the Zoo before shipment to New Zealand.

6.2 Prior to export, the transportation dewar containing the tissues was locked and sealed, using seals bearing the marks: .....

.....

Veterinary Surgeon appointed to the Singapore Zoo Date

Address: .....
.....

.....

Government Veterinary Officer Official stamp and date

Address: .....
.....

VETERINARY CERTIFICATE B:

I, ... an Official Veterinarian employed by the Government of Singapore certify that:

1. Singapore is free from foot and mouth disease, rinderpest, peste des petits ruminants, sheep and goat pox, Rift Valley fever and vesicular stomatitis.

2. No case of rinderpest or vesicular stomatitis has occurred in Singapore during the twelve months prior to the collection of the tissue.

3. Prior to export, the transportation dewars were locked and sealed, using seals bearing the marks: .....

.....

Government Veterinary Officer Official Stamp and Date
Singapore

Note: Official stamp must be applied to all pages

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