

AUSTRALIA

April 2005

REPORT BY AUSTRALIA IN ACCORDANCE WITH THE FINAL DECLARATION OF THE THIRD REVIEW CONFERENCE OF THE PARTIES TO THE CONVENTION ON THE PROHIBITION OF THE DEVELOPMENT, PRODUCTION AND STOCKPILING OF BACTERIOLOGICAL (BIOLOGICAL) AND TOXIN WEAPONS AND ON THEIR DESTRUCTION.

The Final Declaration of the Third Review Conference of the parties to the Convention contained a number of measures designed to strengthen the authority of the Convention and to enhance confidence in the implementation of its provisions. These included the introduction of new Confidence Building Measures.

Australia reports the following information in accordance with the Final Declaration, with the Annex to the Final Declaration on Confidence Building Measures, and with the recommendations of the Ad Hoc Meeting of Scientific and Technical experts from States Parties to the Convention.

1. Declaration Form on Nothing to Declare or Nothing New to Declare

Measure	Nothing to Declare	Nothing New to Declare
A, part I	<input type="checkbox"/>	<input type="checkbox"/>
A, part 2 (i)	<input type="checkbox"/>	<input type="checkbox"/>
A, part 2 (ii)	<input type="checkbox"/>	<input type="checkbox"/>
A, part 2 (iii)	<input type="checkbox"/>	<input type="checkbox"/>
B (i)	<input type="checkbox"/>	<input type="checkbox"/>
B (ii)	<input type="checkbox"/>	<input type="checkbox"/>
C	<input type="checkbox"/>	<input type="checkbox"/>
D	<input type="checkbox"/>	<input type="checkbox"/>
E	<input type="checkbox"/>	<input type="checkbox"/>
F	<input type="checkbox"/>	<input checked="" type="checkbox"/>
G	<input type="checkbox"/>	<input type="checkbox"/>

Date: **April 2005**

State Party to the Convention: **Australia**

2. Confidence Building Measure "A"

Part 1: Exchange of Data on Research Centres and Laboratories

Australia has three maximum containment units which meet the criteria for a "physical containment level 4" (PC4) laboratory specified on the Australian New Zealand Standards for Biocontainment (AS/NZS 2243:3:2002).

They are:

- The Australian Animal Health Laboratory
- The National High Security Quarantine Laboratory
- The Queensland Health Scientific Services Virology Laboratory

Data on these facilities is provided below in accordance with the Annex to the Final Declaration on Confidence Building Measures.

There are many other lower level containment facilities at Australian hospitals and university departments where diagnostic and research work is conducted.

The CSL facility declared in previous years does not meet PC4 requirements.

Exchange of Data on Research Centres and Laboratories

1. Name(s) of facility

Australian Animal Health Laboratory

2. Responsible public or private organisation/ company

Commonwealth Scientific and Industrial Research Organisation (Federal Government) and the Department of Agriculture, Fisheries and Forestry (Federal Government). Note: Australia has a two-tiered system of Government, with the Federal Government and, to a lesser extent, the six respective State Governments and two Territories all involved in the formulation and implementation of Government policy.

3. Location and postal address

5 Port Arlington Road
GEELONG VICTORIA

PO Bag 24
GEELONG VIC 3220
AUSTRALIA

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

No Department of Defence funding. Joint funding by the Commonwealth Scientific and Industrial Research Organisation (Federal Government) and the Department of Agriculture, Fisheries and Forestry (Federal Government). Minor funding by private rural industry organisations.

5. Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m²)

One maximum containment system and enclosure. Total floor space 11,000 m², comprising three main parts: a large-animal accommodation area, total floor area about 3,500 m² made up of 29 rooms – each of these with a floor area of about 6 m²– and with a service area, incinerator, and autopsy area.

A laboratory complex of total floor area about 3,500 m² made up of three functional laboratory suites – each of these with a floor area of about 1,100 m²– and each comprised of six laboratories and four attached small-animal rooms. The laboratory suites are for diagnosis, pathology and virology. There are attached service areas.

A common support area for glass washing, tissue culture, laundry and other services.

6. If no maximum containment unit, indicate highest level of protection

N/A

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate.

The high security laboratory works on research and diagnosis of animal diseases caused by organisms which are largely exotic to Australia, of which some may present a risk to laboratory workers. Organisms under investigation are pseudorabies virus (Aujeszky's Disease), bluetongue virus (attenuated vaccine strains), avian influenza virus (fowl plague), Newcastle disease virus (low to high virulence strains), rabies virus, classical swine fever (hog cholera) virus, *Mycoplasma mycoides* (bovine pleuropneumonia), *Brucella melitensis* and a range of other brucella strains, swine vesicular disease virus, vesicular exanthema virus, vesicular stomatitis virus (a range of isolates), transmissible gastroenteritis virus, African swine fever virus, rabbit haemorrhagic disease virus, porcine respiratory and reproductive syndrome virus, Japanese encephalitis virus, Hendra virus, Nipah virus, Australian bat lyssavirus, a wide range of fish pathogens (both bacterial and viral), SARS and Glanders (caused by *Burkholderia mallei*) and the scrapie agent. All agents are of Risk Groups 2 and 3 (under WHO classification scheme) except Hendra virus and Nipah virus (Henipahviruses in the family *Paramyxoviridae*), SARS and Glanders which has been classified as a biological Risk Group 4 agent (by Standards Australia, AS/NZS 2243:3:2002).

Exchange of Data on Research Centres and Laboratories

1. Name(s) of facility

National High Security Quarantine Laboratory.

2. Responsible public or private organisation/company:

Department of Health and Ageing (Federal Government), Department of Human Services (State Government), specifically, the Victorian Infectious Diseases Reference Laboratory

3. Location and postal address:

Victorian Infectious Diseases Reference Laboratory,
10 Wreckyn St, North Melbourne
Victoria, Australia, 3051

c/o
Victorian Infectious Diseases Reference Laboratory
Locked Bag 815
Carlton South
Victoria 3053
AUSTRALIA

4. Source(s) of financing, of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

No Department of Defence funding. Federal and State (health) Government funding only.

5. Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m²)

One high security laboratory, containing two portable isolation units. Total area 90 m².

6. If no maximum containment unit, indicate highest level of protection

N/A.

7. Scope and general description of activities, including type(s) of micro-organism and/or toxins as appropriate

The diagnosis of possible imported cases of viral haemorrhagic fever or other quarantinable viral diseases such as yellow fever.

Development of laboratory tests and protocols for exotic respiratory viral diseases, including SARS.

Exchange of Data on Research Centres and Laboratories

1. Name(s) of facility

Queensland Health Scientific Services.

2. Responsible public or private organisation/company:

Queensland Department of Health (State Government).

3. Location and postal address:

39 Kessels Road
Coopers Plains
Queensland 4108
Australia

PO Box 594
Archerfield QLD 4108

4. Source(s) of financing, of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

No Department of Defence funding. State (health) Government funding only.

5. Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m²)

Two. Total area 150 m².

6. If no maximum containment unit, indicate highest level of protection

N/A.

7. Scope and general description of activities, including type(s) of micro-organism and/or toxins as appropriate

The maximum containment facilities service a state government public health virology laboratory which has both a diagnostic and a research function. The laboratory is a WHO Centre for Arbovirus Reference and Research. The maximum containment facilities are used for the development and performance of diagnostic tests on patients with suspected exotic or endemic viral illness requiring such containment facilities, such as Hendra virus or exotic haemorrhagic fever viruses. The laboratory currently has no other PC4 pathogens but has introduced the SARS coronavirus into this facility for diagnostic purposes. The laboratory intends to introduce reagents useful for the diagnosis of a number of exotic viral diseases including Ebola, Lassa, Junin, Rift Valley fevers and Hantavirus among others. These reagents will consist of either inactivated diagnostic reagents, cloned viral subunits or live virus.

Part 2 : Exchange of Information on National Biological Defence Research and Development Programs

1. Is there a national program to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere?

Yes. Australia has a science and technology program in defence against biological agents, which is detailed below.

[Form A, part 2(ii)]

National Biological Defence Research and Development Program

Description

1. The objective of the program is to provide the Australian Government with an appropriate understanding of the issues pertinent to protection against biological weapons. The program also assists in the provision of a defensive capability for the Australian Defence Force (ADF) and contributes to Defence support to the civil power in the management of biological threats to the community. The program enhances the ability of the ADF to operate in parts of the world where biological weapons might be used. It also enhances Australia's ability to contribute to biological arms control verification. The principal research activities are concerned with the detection and analysis of biological species that have been identified as potential biological warfare agents and development of medical countermeasures to those agents. The program also covers toxins that are considered threats in terms of both the Biological and Chemical Weapons Conventions.
2. The program is funded solely by the Australian Department of Defence, with an allocation for the current financial year (July 2004-June 2005) of approximately AUD2 500 000.
3. Yes, work is contracted to non-defence facilities.
4. For the Financial Year (04/05), the following payments were made;
 - AUD25 000 to James Cook University
 - AUD20 000 CSIRO (diagnostic reagent development)
 - AUD80 000 to the Cooperative Research Centre (CRC) for Diagnostics.
5. The James Cook University of Technology performs work under contract to assess the effectiveness of vaccines. The CSIRO performs work under contract to develop reagents for use in identifying biological materials.

The program includes an association with the CRC - Diagnostics, that aims to produce high affinity reagents that can be used in the treatment or detection of biological agents. This interaction is through the funding of two PhD students, one located at the Commonwealth Scientific and Industrial Research Organisation (CSIRO) - Health Science and Nutrition, Parkville, Victoria, and the other at LaTrobe, University, Bundoora, Victoria.

6. The organisational structure is as follows. There is a single active research cell operating within the Department of Defence within the hierarchy represented below.



7. A declaration in accord with Form A, part 2 (iii) follows.

[Form A, part 2 (iii)]

Facilities

There is one facility

1. **Name** Chemical Biological Radiological and Nuclear (CBRN) Defence Centre

2. **Location**

Address Platform Sciences Laboratory (PSL)
PO Box 4331
Melbourne, 3001 Australia

Physical Location 506 Lorimer St
Fishermans Bend
Victoria, Australia (formerly at Maribyrnong, Victoria)

3. **Floor Area**

BL2	150 square metres
BL3	60
BL4	nil

4. **Personnel**

- (i) Total of 18 staff years effort for the combined biological defence and arms control programs, with contributions from 22 personnel.
- (ii) All are civilian.
- (iii) 21 scientists, 1 technician, nil engineers, shared administrative and support staff.
- (iv) Biochemistry, molecular biology, microbiology, immunology, chemistry, pharmacology.
- (v) Yes—there are two PhD students working as contractors on this program at the facility.
- (vi) Wholly financed by the Department of Defence.
- (vii) Research funded at ca. AUD2 500 000 per annum.

- (viii) Publication in scientific journals is encouraged, and staff are expected to maintain their professional status by such publication.
- (ix) The publications are listed in Attachment 1.

5. Description of Biological Defence Work

Detection of biological entities recognised as potential biological warfare agents

Immunological and gene based techniques for rapid identification of BW agents are being investigated.

Recombinant and colostrum derived antibodies, and combinatorial peptides are being produced to a number of BW agents, including *B. pseudomallei*, *Bacillus anthracis*, anthrax toxins and ricin. Platforms for the amplification of antibody avidity, such as dendrimers and self-assembling gels, are also being investigated. Binding inhibition and cytotoxicity assays are being developed to assess the usefulness of potential therapeutic agents such as antibodies, peptides and aptamers.

PCR assays for the rapid detection of potential BW agents are available to date, and further assays for other agents are under development. Current research focuses on the evaluation of diagnostic tools that enable rapid detection of microbial antibiotic resistance and genetically manipulated bacteria.

Physical methods for rapid detection of bio-aerosols

Methods of particle characterisation for provision of rapid warning of a bio-aerosol are being assessed.

Treatment/Toxicology

Cultured human lung cells are being developed as a test bed for examining potential therapeutic compounds against toxin agents. Compounds for treatment of ricin intoxication are currently being examined.

A program for the development of DNA vaccines against selected agents has been initiated.

Detection of biological material using physico-chemical methods

Studies on detection of biological material using mass spectrometry and other physico-chemical methods are being conducted to determine their utility for field detection of biological agents and BWC verification procedures. This work has included the analysis of inactivated anthrax Sterne strain, which was purchased from the Department of Primary Industry (Victoria).

Attachment 1 - Publications

Alderton, M.A. & Gauci, P.J. (2004). Methods for the production of antibodies against potential biological warfare agents. DSTO TR-1619, DSTO Platform Sciences Laboratory.

Shahin, S. & Proll, D.F (2004). Adhesion and invasion of human lung epithelial cells by *Burkholderia pseudomallei*. DSTO TR - 1584, DSTO Platform Sciences Laboratory.

McAllister, J. & Proll, D.F. (2004). Comparison of intramuscular versus intradermal delivery of DNA vaccines. DSTO TN - 0567, DSTO Platform Sciences Laboratory.

Proll, D.F. & Gauci, P. (2004). Production of gene expression cassettes for the rapid production of DNA vaccines. DSTO TR - 1597, DSTO Platform Sciences Laboratory.

3. CONFIDENCE BUILDING MEASURE 'B'

Exchange of Information on Outbreaks of Infectious Diseases and Similar Occurrences caused by Toxins

Australia has had no outbreaks of infectious diseases and similar occurrences caused by toxins, that deviate from the normal pattern. For that reason there is a Form B (i), but no Form B (ii), attached under this confidence building measure.

Human diseases

The Australian Government Department of Health and Ageing has overall responsibility for national disease surveillance. The Department's Communicable Diseases Branch routinely receives diagnostic data from key medical laboratories throughout Australia.

Each Australian State and Territory has legislation which requires doctors, hospitals and/or laboratories to report the occurrence of certain diseases, known as "notifiable diseases". Under the auspices of the Communicable Diseases Network of Australia (the Network), the State and Territory health authorities provide data on an agreed set of notifiable diseases to the Australian Government Department of Health and Ageing. The data are collated by the Department and published monthly in the *Communicable Diseases Intelligence* and includes 'notifiable diseases' statistics. *Communicable Diseases Intelligence* is sent to the World Health Organization, and is distributed to approximately 3,400 health professionals and researchers both nationally and internationally.

The Network meets fortnightly by teleconference. It provides a forum for information exchange on communicable disease activity in Australia and New Zealand and enables Federal and State health authorities to cooperate in taking prompt action to control outbreaks.

Animal diseases

The Australian Government Department of Agriculture, Fisheries and Forestry is responsible for national coordination on animal health matters and for providing reports on Australia's animal health status, including a joint annual return to the Office International des Epizooties (OIE), the Food and Agriculture Organization (FAO) and the World Health Organization.

Plant diseases

The Australian Government Department of Agriculture, Fisheries and Forestry, through the Office of the Chief Plant Protection Officer, is the peak organisation that gathers information on pests and diseases of plants. The Department is notified of exotic incursions through State Government agricultural, forestry and natural resource agencies. It also provides national leadership in responding to incursions of exotic pests and diseases of plants.

Background Information on Outbreaks of Reportable Infectious Diseases

In accordance with the requirements agreed at the Third Review Conference, a summary table of notifiable diseases for Australia for the years 1998 to 2004 is attached as Form B (i).

Background Information on Outbreaks of Reportable Infectious Diseases

(A) Human diseases

Nationally Notifiable Communicable Diseases in Humans 1998 – 2004

Number of cases per year

Diseases	1998	1999	2000	2001	2002	2003	2004 ^P
AIDS	265	139	177	158	195	NA	NA
HIV	721	660	694	721	808	NA	NA
Anthrax	NN	NN	NN	0	0	0	0
Ross River virus infection	3079	4386	4288	3372	1447	3841	4483
Barmah Forest virus infection	556	629	633	1162	896	1370	1094
Dengue	560	124	231	183	219	868	369
Australian encephalitis	0	0	0	3	2	0	0
Arbovirus (NEC)	84	67	65	38	22	81	78
Botulism	1	0	2	2	0	1	1
Brucellosis	45	52	26	21	40	17	43
Campylobacter infection	12997	12745	13516	16068	14605	15372	15621
Chancroid	1	0	0	0	NN	NN	NN
Chlamydial infection	11272	13897	17906	20258	24039	30161	36577
Cholera	5	4	1	3	2	0	6
Diphtheria	0	0	0	1	0	0	0
Donovanosis	36	16	13	37	16	16	11
Gonococcal infection	5293	5528	6118	6461	6247	6611	7484
<i>Haemophilus influenzae</i> type b	35	41	31	27	29	19	15
Hepatitis A	2530	1537	838	526	388	418	339
Hepatitis B (incident)	265	311	425	419	390	337	315
Hepatitis B (unspecified)	6715	7210	8909	8701	6916	5833	7520
Hepatitis C (incident)	348	345	504	601	434	460	382
Hepatitis C (unspecified)	19661	20754	20765	16209	15981	14169	16384
Hepatitis (NEC)	4	0	1	91	0	0	1
Hydatid disease*	46	30	28	NN	NN	NN	NN

NA - not available

NN - not notifiable

NEC - not elsewhere classified

* Not notifiable in all States and Territories

2004^P provisional figures only

Diseases	1998	1999	2000	2001	2002	2003	2004^P
Legionellosis	268	247	474	299	318	328	348
Leprosy	3	6	5	3	3	4	8
Leptospirosis	192	318	244	249	155	125	177
Malaria	698	708	975	717	466	601	565
Measles	327	230	110	135	31	92	83
Meningococcal infections	466	563	603	671	684	550	435
Ornithosis**	56	88	104	136	199	211	238
Pertussis (whooping cough)	6054	4373	5886	9329	5388	5106	8722
Plague	0	0	0	0	0	0	0
Poliomyelitis	0	0	0	0	0	0	0
Q fever	581	513	533	743	761	550	464
Rabies	0	0	0	0	0	0	0
Rubella	782	374	315	266	255	53	43
Salmonellosis	7892	7096	6142	7168	7756	7011	7989
Shigellosis	609	539	488	572	496	440	538
Syphilis	1032	1876	2015	1390	1627	2056	2748
Tetanus	7	3	9	3	3	4	6
Tuberculosis	1303	848	1047	955	975	944	1073
Typhoid	75	69	68	85	73	51	76
Viral haemorrhagic fever	0	0	0	0	0	0	0
Yellow fever	0	0	0	0	0	0	0
Yersiniosis	208	145	74	57	NN	NN	NN

NA - not available

NN - not notifiable

NEC - not elsewhere classified

** Not notifiable in all States and Territories in 1998 to 2001

2004^P provisional figures only

Animal Diseases – 2004

(ii) Information on Outbreaks of Infectious Diseases in 2004

The following sections contain information on significant animal disease events/issues in 2004. Australia publishes quarterly reports¹ and annual reports² on animal health incidents and status, as well as providing emergency, monthly, quarterly and annual reports to the World Organisation for Animal Health (OIE)³.

Australia's animal disease status for Lists A and B diseases for 2004 are shown in the tables that follow⁴.

1. Australia's status for OIE list A diseases

Disease	Status	Date of last occurrence/notes
Foot-and-mouth disease	Free	1872
Vesicular stomatitis	Free	Never occurred
Swine vesicular disease	Free	Never occurred
Rinderpest	Free	1923
Peste des petits ruminants	Free	Never occurred
Contagious bovine pleuropneumonia	Free	1967; Australia declared freedom in 1973
Lumpy skin disease	Free	Never occurred
Rift Valley fever	Free	Never occurred
Bluetongue	Viruses present	Restricted to specific areas (northern part of the country); sentinel program
Sheep pox and goat pox	Free	Never occurred
African horse sickness	Free	Never occurred
African swine fever	Free	Never occurred
Classical swine fever	Free	1962
Highly pathogenic avian influenza	Free	1997
Newcastle disease	Viruses present	Sporadic outbreaks occur; last reported 2002

Comments on selected Office International des Epizooties (OIE) List A diseases

Bluetongue

Bluetongue viruses capable of causing disease are only found in parts of the far north of the Northern Territory and Western Australia. Relatively nonpathogenic strains (types 1 and 21) are found on the east coast in Queensland and northern New South Wales. There is little overlap

¹ <http://www.aahc.com.au/status/ahsquarterly/index.htm>

² <http://www.aahc.com.au/status/ahiareport/index.htm>

³ http://www.oie.int/eng/info/en_infoan.htm

⁴ The OIE agreed that, from 1 January 2005, Lists A and B will be combined into a single list of notifiable terrestrial animal diseases, together with amended reporting obligations.

between the distribution of vectors of bluetongue virus and major sheep populations, because the climate conditions that favour sheep production are not conducive to the vectors.

Transmission of bluetongue viruses was observed in the endemic areas of far northern Australia and along coastal Queensland. There was evidence of continuing activity in the focus of bluetongue transmission in the Pilbara region of north-western Western Australia, with some transmission to the north. There was also further southwards spread in the Northern Territory and adjacent regions in far central western Queensland. In the Northern Territory, types 1 and 21 were the only serotypes identified. There was no evidence of movement of more pathogenic viruses out of the far northern ‘high risk’ zone and no evidence of the incursion of any new virus serotypes into Australia. There was no evidence of bluetongue viruses near any of the major sheep populations. In New South Wales, the Hunter region remains free of bluetongue infection. Nationally, the areas free of bluetongue virus are slightly smaller this year, returning to limits observed in past years. However, all regions in southern Australia and most pastoral regions in eastern Australia remain free.

Newcastle Disease

Australia experienced sporadic outbreaks of Newcastle disease (ND) from 1998 to 2002. These were caused by viruses that have mutated to virulence from endemic avirulent strains. As well as destruction of infected poultry flocks, response measures have included ND vaccination, enhanced surveillance and improved biosecurity. The poultry industry and government have implemented long-term disease control strategies to improve the management of ND in Australia.

2. Australia’s status for OIE list B diseases

Disease	Status	Date of last occurrence/notes
Multiple species diseases		
Anthrax	Present	Limited distribution
Aujeszky’s disease	Free	Never occurred
Echinococcosis/hydatidosis	Present	
Heartwater	Free	Never occurred
Leptospirosis	Present	
New World screw-worm fly (<i>Cochliomyia hominivorax</i>)	Free	Never occurred
Old World screw-worm fly (<i>Chrysomya bezziana</i>)	Free	Never occurred
Paratuberculosis	Present	National control/management programs
Q fever	Present	
Rabies	Free	1867; two human cases in 1987 and 1990 were acquired overseas
Trichinellosis	Not reported	<i>T. spiralis</i> not present; <i>T. pseudospiralis</i> present in wildlife
Cattle diseases		
Bovine anaplasmosis	Present	
Bovine babesiosis	Present	
Bovine brucellosis	Free	Australia declared freedom in 1989
Bovine cysticercosis	Present	
Bovine genital campylobacteriosis	Present	
Bovine spongiform encephalopathy	Free	Never occurred; National Transmissible Spongiform Encephalopathy Freedom Assurance Program includes surveillance
Bovine tuberculosis	Free	Australia declared freedom in 1997; because of

		the nature of the disease, sporadic residual cases are reported
Dermatophilosis	Present	
Enzootic bovine leukosis	Present	Voluntary accreditation and testing programs in place; very low prevalence
Haemorrhagic septicaemia	Free	Never occurred; strains of <i>Pasteurella multocida</i> present, but not the 6b or 6e strains that cause haemorrhagic septicaemia
Infectious bovine rhinotracheitis/infectious pustular vulvovaginitis	Present	
Malignant catarrhal fever	Present	
Theileriosis	Free	Nonpathogenic <i>T. buffeli</i> only; <i>T. parva</i> and <i>T. annulata</i> not present
Trichomonosis	Present	
Trypanosomosis (tsetse-borne)	Free	Never occurred
Sheep and goat diseases		
Caprine and ovine brucellosis (excluding <i>Brucella ovis</i>)	Free	Never occurred
Caprine arthritis/encephalitis	Present	
Contagious agalactia	Not reported	<i>Mycoplasma agalactiae</i> has been isolated, but Australian strains do not produce agalactia in sheep
Contagious caprine pleuropneumonia	Free	Never occurred
Enzootic abortion of ewes (ovine chlamydiosis)	Not reported	Never occurred
Maedi-visna	Free	Never occurred
Nairobi sheep disease	Free	Never occurred
Ovine epididymitis (<i>Brucella ovis</i>)	Present	Voluntary accreditation schemes in all states
Ovine pulmonary adenomatosis	Free	Never occurred
Salmonellosis (<i>Salmonella abortusovis</i>)	Free	Never occurred; <i>S. abortusovis</i> was isolated in 1994 from two children, but surveillance has shown no evidence of infection in sheep
Scrapie	Free	1952. Covered by transmissible spongiform encephalopathy surveillance program
Equine diseases		
Contagious equine metritis	Free	1980
Dourine	Free	Never occurred
Epizootic lymphangitis	Free	Never occurred
Equine encephalomyelitis (Eastern and Western)	Free	Never occurred
Equine infectious anaemia	Serological evidence	
Equine influenza	Free	Never occurred
Equine piroplasmosis	Free	Last reported in 1976
Equine rhinopneumonitis	Present	
Equine viral arteritis	Serological evidence	
Glanders	Free	1891
Horse mange	Free	Never occurred
Horse pox	Free	Never occurred
Japanese encephalitis	Serological evidence	In far northern Australia only; a sentinel program to monitor activity is in place in Torres Strait

Surra (<i>Trypanosoma evansi</i>)	Free	Never occurred
Venezuelan equine encephalomyelitis	Free	Never occurred
Swine diseases		
Atrophic rhinitis of swine	Present	
Enterovirus encephalomyelitis	Free	Never occurred
Porcine brucellosis	Serological evidence	Occurs in feral pigs in northern Australia
Porcine cysticercosis	Free	Never occurred
Porcine reproductive and respiratory syndrome	Free	Never occurred
Transmissible gastroenteritis	Free	Never occurred
Avian diseases		
Avian chlamydiosis	Present	
Avian infectious bronchitis	Present	
Avian infectious laryngotracheitis	Present	
Avian mycoplasmosis (<i>M. gallisepticum</i>)	Present	
Avian tuberculosis	Present	
Duck virus enteritis	Free	Never occurred
Duck virus hepatitis	Free	Never occurred
Fowl cholera	Present	
Fowl pox	Present	
Fowl typhoid	Free	Last reported in 1952
Infectious bursal disease (Gumboro disease)	Present	Infectious bursal disease occurs in a mild form; Gumboro disease does not occur
Marek's disease	Present	
Pullorum disease	Present	
Lagomorph diseases		
Myxomatosis	Present	
Rabbit haemorrhagic disease	Present	Used as a biological control agent for wild rabbits
Tularaemia	Free	Never occurred
Bee diseases		
Acariosis of bees	Free	Never occurred
American foulbrood	Present	
European foulbrood	Present	
Nosemosis of bees	Present	
Varroosis	Not reported	<i>Varroa jacobsoni</i> last reported in 1997 in the Torres Strait; does not occur on mainland Australia
Other List B diseases		
Leishmaniosis	Atypical organism found	A new <i>Leishmania</i> species has been isolated from skin lesions in a group of captive red kangaroos. Mild lesions developed when the animals were moved away from their natural habitat to a hot, humid climate. Human health authorities have been notified but no human cases have been detected. Investigations are continuing.

Comments on selected Office International des Epizooties (OIE) List B diseases

Bovine Tuberculosis

Australia declared freedom from bovine tuberculosis in December 1997, but due to the nature of the disease occasional cases may still be reported. Subsequently, the Tuberculosis Freedom Assurance Program (TFAP) was instituted. TFAP is designed to detect any resurgence of TB in Australia and to quickly eradicate any detected cases. TFAP's main role is to maintain Australia's 'free area' status by conducting active abattoir surveillance through the National Granuloma Submission Program (NGSP), and by effectively eradicating any detected residual cases of TB in the Australian cattle population.

In 2004, 4865 granulomas were submitted for testing and 50,000 field tests were conducted. No cases of TB were detected.

Anthrax

Anthrax is a notifiable animal disease subject to compulsory government controls including quarantine, disposal of carcasses, and vaccination. It is present in well-defined areas in the northern and northeastern districts of Victoria and central New South Wales. In these areas, anthrax has a low prevalence, and occurs only sporadically. Occasional outbreaks have occurred in other States. South Australia last recorded an outbreak in 1914, and Tasmania in 1933; these States are now considered anthrax free. Anthrax was diagnosed in Queensland in 1993 and 2002, and in Western Australia in 1994. The disease has never been reported in the Northern Territory. During 2004, there were 13 reported incidents of anthrax in New South Wales and 3 in Victoria.

3. Comments on Other Diseases

Nil

[Form B(i)]

Plant Diseases 2004

There was one exotic plant disease identified. Citrus Canker (*Xanthomonas axonopodis* pv *citri*) was detected in the Emerald area of Queensland in June 2004 and is currently under a national response program. This program includes national surveillance, interstate quarantine actions and tree destruction in the affected area. The pathway of entry for this exotic disease has not been confirmed, but it may have been introduced through the illegal entry of infected germplasm.

4. CONFIDENCE BUILDING MEASURE “C”

Policy on Publication of Results

The policy of the Defence Science and Technology Organisation is to publish results of a general scientific value in the open literature in scientific journals. Information that is more specialised and relevant particularly to defence is published in laboratory reports, which are unclassified and available to the public, unless they contain information that might prejudice the security of Australia or information that is commercial-in-confidence. It is envisaged that all results of the biological research will be either unclassified or “commercial-in-confidence”.

The Defence Health Service Branch (DHSB) encourages the publication of scientific reviews of the literature in the biological defence area. Over the past 12 months, several articles have been published or accepted for publishing in the Australian and international scientific literature. These include:

Alderton, M.A. & Gauci, P.J. (2004). Methods for the production of antibodies against potential biological warfare agents. DSTO TR-1619, DSTO Platform Sciences Laboratory.

Shahin, S. & Proll, D.F (2004). Adhesion and invasion of human lung epithelial cells by *Burkholderia pseudomallei*. DSTO TR - 1584, DSTO Platform Sciences Laboratory.

McAllister, J. & Proll, D.F. (2004). Comparison of intramuscular versus intradermal delivery of DNA vaccines. DSTO TN - 0567, DSTO Platform Sciences Laboratory.

Proll, D.F. & Gauci, P. (2004). Production of gene expression cassettes for the rapid production of DNA vaccines. DSTO TR - 1597, DSTO Platform Sciences Laboratory.

5. CONFIDENCE BUILDING MEASURE "D"

Promotion of Professional Contacts

Australia welcomes *bona fide* professional contact with other researchers in matters directly related to the Convention. Contact should be made with the facility described in Form A, part 2 (iii).

Active Promotion of Contacts

1. International forums of exchange in which Australia participated in 2004

- a. The Technical Cooperation Program (TTCP) CBD Group, Technical Panel 4 - Medical countermeasures against biological agents.
- b. DSTL Chemical and Biological Sciences, Porton, UK.
- c. January 2004
- d. United States
- e. TTCP Biological Defence programs, collaborative research, advances in biotechnology
- f. Membership of TTCP CBD Group
- g. Dr Peter Gray, Platforms Sciences Laboratory, PO Box 4331, Melbourne 3001, Australia. Phone (03) 9626 8482, Fax (03) 9626 8410.

- a. The Technical Cooperation Program (TTCP) CBD Group, Technical Panel 9 - Hazard Assessment.
- b. Defence Research Establishment, Suffield.
- c. February 2004
- d. Canada
- e. TTCP Biological Defence programs, collaborative research, advances in biotechnology
- f. Membership of TTCP CBD Group
- g. Dr Ralph Gailis, Platforms Sciences Laboratory, PO Box 4331, Melbourne 3001, Australia. Phone (03) 9626 8455, Fax (03) 9626 8410.

- a. The Technical Cooperation Program (TTCP) CBD Group, Technical Panel 10 - Detection of Biological Agents.
- b. Defence Research Establishment, Suffield.
- c. November 2004
- d. Canada
- e. TTCP Biological Defence programs, collaborative research, advances in biotechnology
- f. Membership of TTCP CBD Group
- g. Dr Ralph Leslie, Platforms Sciences Laboratory, PO Box 4331, Melbourne 3001, Australia. Phone (03) 9626 8478, Fax (03) 9626 8410.

- a. The Technical Cooperation Program (TTCP) CBD Group, Technical Panel 11 – Integrated NBC Protective Clothing
- b. Platforms Sciences Laboratory, Melbourne.
- c. November 2004
- d. Australia
- e. TTCP programs, collaborative agreements, advances in personnel protective ensembles

- f. Membership of TTCP CBD Group
- g. Mr Steven Scanlan, Platforms Sciences Laboratory, PO Box 4331, Melbourne 3001, Australia. Phone (03) 9626 8473, Fax (03) 9626 8410

2. Planned international forums of exchange

- a. The Technical Cooperation Program (TTCP) CBD Group, Technical Panel 11 – Integrated NBC Protective Clothing
- b. DSTL, Porton Down, UK.
- c. October 2005
- d. Australia
- e. TTCP programs, collaborative agreements, advances in personnel protective ensembles
- f. Membership of TTCP CBD Group
- g. Mr Steven Scanlan, Platform Sciences Laboratory, PO Box 4331, Melbourne 3001, Australia. Phone (03) 9626 8473, Fax (03) 9626 8410

- a. The Technical Cooperation Program (TTCP) CBD Group, Technical Panel 4 - Medical countermeasures against biological agents.
- b. DTRA, Washington DC, US.
- c. November 2005
- d. United States
- e. TTCP Biological Defence programs, collaborative research, advances in biotechnology
- f. Membership of TTCP CBD Group
- g. Dr Peter Gray, Platform Sciences Laboratory, PO Box 4331, Melbourne 3001, Australia. Phone (03) 9626 8482, Fax (03) 9626 8410.

- a. The Technical Cooperation Program (TTCP) CBD Group, Technical Panel 10 - Detection of Biological Agents.
- b. Defence Research Establishment, Suffield.
- c. November 2005
- d. Canada
- e. TTCP Biological Defence programs, collaborative research, advances in biotechnology
- f. Membership of TTCP CBD Group
- g. Dr Ralph Leslie, Platform Sciences Laboratory, PO Box 4331, Melbourne 3001, Australia. Phone (03) 9626 8478, Fax (03) 9626 8410.

- a. The Technical Cooperation Program (TTCP) CBD Group, Technical Panel 9 - Hazard Assessment.
- b. DTRA, San Diego.
- c. February 2006
- d. Canada
- e. TTCP Biological Defence programs, collaborative research, advances in biotechnology
- f. Membership of TTCP CBD Group
- g. Dr Ralph Gailis, Platform Sciences Laboratory, PO Box 4331, Melbourne 3001, Australia. Phone (03) 9626 8455, Fax (03) 9626 8410.

6. CONFIDENCE BUILDING MEASURE "E"

Declaration of Legislation, Regulations and Other Measures

Australia has the following Australian Government legislation, regulations and other measures to declare under this confidence-building measure. Australia has taken a range of legislative and executive measures that ensure compliance with the UN Security Council Resolution 1540 (2004).

Australia is fully committed to the work of the 1540 Committee in ensuring global implementation of this resolution. As well as WMD-dedicated legislation, there is a considerable amount of health, safety and environmental legislation that control access to hazardous biological materials. The Australian Government is reviewing all WMD and hazardous materials controls, with a view to enhancing them if necessary for counter-terrorism purposes.

Chemical Weapons (Prohibition) Act 1994 and Chemical Weapons (Prohibition) Regulations

The Act, administered by the Australian Safeguards and Non-Proliferation Office within the Department of Foreign Affairs and Trade, gives effect to Australia's obligations to the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction. The Act controls certain chemicals which may be used as weapons, including the natural toxins ricin and saxitoxin. The Act's general purpose criterion also applies to the hostile use of any chemical, including other toxins.

The Act extends to the acts of Australian citizens outside Australia. Contravention of the Act is an indictable offence.

Crimes (Biological Weapons) Act 1976

The Act, which is administered by the Attorney-General, makes it unlawful for Australians to develop, produce, stockpile or otherwise acquire or retain microbial or other biological agents or toxins whatever their origin or method of production, of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes; or weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict.

The Act extends to the acts of Australian citizens outside Australia. Contravention of the Act is an indictable offence.

Crimes (Biological Weapons) Regulations 1980

The Regulations specify the way in which substances acquired under the Act should be stored, disposed of and analysed.

Customs Act 1901 and Customs (Prohibited Exports) Regulations

Under the Customs (Prohibited Export) Regulations the Minister for Defence controls, through a system of export licenses, the export of defence and related goods from Australia. These Regulations were amended in December 1996 to bring all export licensing requirements for defence and related goods under a single regulation - Regulation 13E. No substantial change was made to the regulations relating to the export licensing requirement for biological agents, toxins or equipment which could be used to assist a biological weapons program.

The Regulations require exporters to obtain a licence before proceeding to export certain listed items. These goods are listed in the "Defence and Strategic Goods List". Part 1 of this list includes biological agents designed or adapted to produce casualties in human beings; equipment designed or adapted for disseminating biological agents; goods designed or adapted for the detection, identification or defence against biological agents; and goods including software designed or adapted for the purposes of producing any of the previous items. Part 3 of the list includes human pathogens and toxins, animal pathogens, plant pathogens and equipment capable of being used to develop biological weapons.

Quarantine Act 1908 and Regulations

The Quarantine Act 1908 is designed to prevent the introduction of serious pests and diseases affecting humans, plants and animals into Australia. Accordingly, in conjunction with the Biological Control Act (see below), it controls the import into Australia of all biological material and may prohibit the import in some circumstances.

The Quarantine Act 1908 is administered by the Australian Quarantine and Inspection Service (AQIS) within the framework of the Federal Government's quarantine policy. All biological agents require prior permission to import. Under the provisions of Section 13 of the Quarantine Act 1908, goods of biological origin, including human pathogenic micro-organisms and toxins, may only be imported into Australia if approval has been given by a Director of Quarantine. In giving approval, the Director may require that the importer adhere to certain conditions or requirements, including, but not limited to, the storage, transportation, distribution and disposal of the goods, the use to which the goods may be put, and the personnel authorised to handle or use the goods.

Import conditions vary depending on the nature of the organisms, and on the risks involved. High risk organisms such as serious pathogens of humans, animals and plants which might be considered as potential biological weapons would only be permitted under the most stringent, high security conditions. Very few such imports are approved, and generally those would be for diagnostic research in preparation for emergency responses to specific serious exotic disease incursions.

Penalties for the importation of controlled goods without a permit, and for breaches of permit requirements, are severe and may include a fine, imprisonment or both.

Biological Control Act 1984 and Regulations

This Act is administered jointly by the Bureau of Rural Sciences and the Agriculture Industry Division of the Department of Agriculture, Fisheries and Forestry within the framework of the Federal Government's quarantine policy. It provides powers additional to those of the Quarantine Act in order to regulate the release of biological agents for the control of pests, diseases and weeds. It primarily covers issues of compensation for the release of a biological control agent.

Gene Technology Act 2000 and Regulations

The object of the Act is to protect the health and safety of people and the environment from risks posed by, or as a result of, gene technology by identifying those risks and managing them by regulating certain dealings with genetically modified organisms (GMOs). Dealings include manufacturing, importing or conducting experiments with GMOs and require authorisation under legislation. In addition, there are legislative provisions for accreditation of organisations, certification of facilities and extensive monitoring and enforcement powers.

Therapeutic Goods Act 1989 and Regulations

The Therapeutic Goods Administration of the Australian Government Department of Health and Ageing regulates therapeutic goods for human use under this Act. The Act covers the import and export of therapeutic goods and would include pathogenic micro-organisms where these are included in vaccines for human use.

Prior to initial supply for human use products must be entered in the Australian Register of Therapeutic Goods. Vaccines are registrable products and undergo evaluation by the Therapeutic Goods Administration prior to entry in the Register.

Weapons of Mass Destruction (Prevention of Proliferation) Act 1995 and Regulations

The Act is administered by the Department of Defence and complements the existing barriers contained in the Customs Act 1901 and the Customs (Prohibited Exports) Regulations. It prohibits the supply or export of goods, not otherwise controlled by the Customs Act 1901, or the provision of services, in circumstances where the goods or services may be used to assist in the development, production, acquisition or stockpiling of WMD, including biological weapons or their delivery systems. The prohibitions under the legislation apply where the person involved knows or suspects the connection with a biological weapons program.

The Act applies extraterritorially as well as within Australia, covering the activities of Australian citizens or residents, as well as bodies incorporated in Australia. It provides a mechanism for exporters to obtain written guidance from the Government on the risk of a particular planned transaction contributing to a biological weapons program.

Guidelines to prevent the inadvertent supply of biological weapons-applicable plant, equipment, source cultures and expertise.

The Guidelines are a non-statutory, non-proliferation measure, developed by the Department of Foreign Affairs and Trade, to raise the awareness of industry and researchers about the risk of inadvertent involvement in the biological weapons programs of other countries. The Guidelines have been circulated to biological industry, universities, relevant professional associations and government agencies.

Declaration of Legislation, Regulations and other Measures

Relating to	Legislation	Regulations	Other Measures	Amended Since Last Year
(a) Article 1	Yes	Yes	No	No
(b) Exports of micro-organisms* and toxins	Yes	Yes	Yes	No
(c) Imports of micro-organisms* and toxins	Yes	Yes	No	No

*Micro-organisms pathogenic to man, animals and plants in accordance with the Convention.

7. CONFIDENCE BUILDING MEASURE "F"

Declaration of Past Activities in Offensive and/or Defensive Biological Research and Development Programs

1. Date of Entry into force of the Convention for Australia
5 October 1977
2. Past offensive biological R & D program
No
3. Past defensive biological R & D Program
No, but see the explanatory statement attached.

Attachment to Form F

EXPLANATORY STATEMENT RESEARCH AND DEVELOPMENT PROGRAMS RELATED TO BIOLOGICAL WARFARE AND DEFENCE IN AUSTRALIA SINCE 1 JANUARY 1946

Between 1946 and 1994, Australia had no R&D program specifically aimed at defence against biological and toxin weapons. However, some methods for protection against chemical warfare agents could also be used to protect against biological agents. As Australia has had a longstanding R&D program to develop protection against chemical agents, it had, though only incidentally, also been involved in the development of means capable of offering some protection from biological weapons.

The Position at the end of World War II

During World War II, Australia acquired a protective capability against chemical and biological warfare (CBW), which included the equipping of military units with protective clothing, respirators, detection apparatus and decontamination equipment. This capability was associated with the threat of chemical warfare, as almost all of the major combatants possessed chemical weapons.

Australia had no biological weapons and knew little about them. While a need for some defence against them was generally perceived, no major specific steps were taken to achieve this. The tendency was to regard chemical and biological weapons as a single category of threat, with biological weapons treated as the lesser element.

The Situation from 1945 to the 1970s

In the late 1940s and 1950s Defence committees assessed the need for defence against biological agents. The view adopted was that if a biological threat arose, Defence authorities would co-opt staff from public health facilities who were trained in microbiology and biological sciences.

In this Australia received limited information on biological defence from the United States of America, the United Kingdom and Canada through the Technical Cooperation Program (TTCP).

Under TTCP, there is provision for collaborative research on biological defence, but Australia never participated in that research.

During the 1960s and 1970s some research was conducted in an Australian Defence laboratory on toxins and venoms from Australian animals and plants. The research had no biological warfare focus, and was undertaken solely for the purpose of developing expertise in toxicology. The results of the research were published in scientific journals, contributing to the open scientific literature.

The Situation from 1970 to 1994

During this period the policy was to maintain a watching brief on developments in biological warfare defence research so that a competency could be maintained to advise on policy and to give direction to training for the Australian Defence Force. This competency was derived from open literature and from Australia's partners under The Technical Cooperation Program (TTCP). No research on defence against toxins (or other biological warfare agents) was undertaken during this period.

Australia did, however, maintain an R&D program into chemical defence and the protective aspects of this program and some incidental common utility in biological defence.

1994 – Present

In 1994, it was recognised that Australia's knowledge of toxins as warfare agents needed to be strengthened if appropriate advice on defensive measures was to be given to the Australian Defence Force and in support of the country's arms control objectives. Consequently, the Government gave approval to commence a modest program of research into defence against toxins as warfare agents.

It was also recognised that the Government needed advice on defence against biological weapons if it was to pursue its aims of strengthening the Biological Weapons Convention. Consequently, the policy of maintaining only a watching brief on BW defence research was modified to allow research in BW defence that did not involve pathogenic reproducing organisms. Such activities as epidemiological studies, computer simulations and studies of the detection of toxins could then be undertaken.

In 1998, government approval was given for DSTO to undertake biological defence work with reproducing organisms up to Risk Group 3, with interdepartmental oversight of all such activities. This research allows Australia to play a larger part in those TTCP Panels that deal with BW defence research and obtain access to more information held by our cooperative partners. Australia still maintains its active program into researching protective aspects of defence against chemical agents and has expanded the scope to include utility defence against biological weapons (eg incorporation of antibacterials in carbon adsorbants).

A statement on Australia's Defence policy appeared in *Australia's National Security: A Defence Update 2003*. The necessity of BW defence research is contained in the statement:

“In the worst case we need to be ready to respond to a WMD attack on Australian soil or against Australian interests. The domestic layer of defence is a shared responsibility between the States and the Commonwealth and includes police, customs and other agencies, but the ADF has particular knowledge and skills to contribute. The Incident Response Regiment has an important role in

supplementing State and Territory capabilities to respond to a nuclear, chemical, biological or radiological incident.”

8. CONFIDENCE BUILDING MEASURE “G”

Declaration of Vaccine Production Facilities

CSL is the only manufacturer licensed by the Australian Government pursuant to the Therapeutic Goods Act 1989 to produce vaccines for the protection of humans included on the Australian Register of Therapeutic Goods (ARTG). The licence requires the manufacturer to comply with principles of Good Manufacturing Practice.

Declaration of Vaccine Production Facilities

1. Name of facility

CSL Limited

2. Location (mailing address)

45 Poplar Road, Parkville, Victoria, 3052, Australia.

3. General description of the types of diseases covered

Vaccine products must be entered in the Australian Register of Therapeutic Goods prior to supply of the products for human use. Registered products manufactured by CSL Limited are:

Diphtheria vaccine
Diphtheria & tetanus vaccine
Influenza vaccine
Plague vaccine
Q fever vaccine
Tetanus toxoid vaccine
Triple antigen (diphtheria, tetanus, pertussis)
Cholera Vaccine
Typhoid Vaccine
*Malarial Vaccine

*** CSL manufactures the Malarial Vaccine for another sponsor, for export to Papua New Guinea only.**

Note that Section 3, General Description of the Types of Diseases Covered, CSL Limited **sponsor** the following vaccines according to the Australian Register of Therapeutic Goods (ARTG):

Cholera Vaccine
Diphtheria and Tetanus Vaccine
Diphtheria Vaccine
Influenza Vaccine
Meningococcal Vaccine

Tetanus Toxoid Vaccine
Triple Antigen (diphtheria, tetanus, pertussis)
Typhoid Vaccine

Q Fever Vaccine
Plague Vaccine
Yellow Fever Vaccine
Japanese Encephalitis Vaccine
Rabies Vaccine

There are some other manufacturers in Australia with GMP licences to produce biological goods – this category includes, but is not limited to, vaccines. These facilities are listed in the TGA document located at: <http://www.health.gov.au/tga/docs/pdf/licmanuf.pdf> “*Australian Manufacturers Licensed to Manufacture Therapeutic Goods*” and are categorised as manufacturers of “*Plasma and other biological products of human or animal origin Supply Units.*” None of these manufacturers are listed on the ARTG as sponsors of vaccines (i.e. responsible for the commercial supply). CSL may use one or more of such GMP-licensed manufacturers to supply components of its vaccines.