



**SASKATCHEWAN SOCIETY OF
MEDICAL LABORATORY TECHNOLOGISTS**

Recognized as a Vital Link in Health Care

**TRANSPORTATION OF
DANGEROUS GOODS
BY GROUND**

Clear Language Edition
Implementing Amendment 6

2005

Notice

This material is intended for use as resource material only. It should be used in conjunction with an employer approved training program. The review of this material would not render the reader certified to transport dangerous goods.

The material contained in this document addresses the transportation of infectious substances and dry ice only. No attempt has been made to include information about any other type of dangerous good.

Disclaimer

While every effort has been made to ensure the accuracy of the information contained in this document, the author and the SSMLT shall not be liable for any damages, either by direct or consequential, resulting from the use of this material. Responsibility to comply with current Transportation of Dangerous Goods Regulations rests with the reader at all times.

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Table of Contents

Part I

Introduction	Page 4
Reference	Page 4
Abbreviations and Terms	Page 5
Responsibilities	Page 7

Part II

Training	Page 8
Training Certificate	Page 9
Classification	Page 10
List of Dangerous Goods in Schedule 1 and 3	Page 11

Part III

Packing	Page 13
1A specifications	Page 14
1B specifications	Page 14
1C specifications	Page 15
Exemptions from Regulations	Page 16
Table of “Means of Containment”	Page 17
Packing Diagram	Page 18
Marking, Labeling and Shipping	Page 19
Marking and Labeling Diagrams 1A/1B	Page 21
Exempt Human Specimens	Page 22
Shipping Documentation	Page 22
Shipping Document	Page 24
Ground Waybill	Page 25
Packaging Checklist	Page 26

Part IV

Emergency Response Assistance Plan	Page 27
ERAP Flow Chart	Page 28
Immediate Response	Page 29
30-Day Followup Report	Page 29
Infectious Substance Clean Up	Page 30
Bibliography	Page 31
Acknowledgements	Page 31
Appendix 3 Category A & B Assignment	Page 32
Frequently Asked Questions	Page 48

PART I

INTRODUCTION

This document will provide general information about the Transportation of Dangerous Goods Act and Regulations and give details on classifying, packaging, labeling and documentation of shipments of infectious substances, specimens believed not to contain infectious substances and dry ice. This document does not provide information about other dangerous goods.

REFERENCE

The Federal Government of Canada passed the Transportation of Dangerous Goods Act on July 17, 1980 and a revised Act was passed in 1992. The Transportation of Dangerous Goods Regulations were enacted on July 1, 1985 to allow for greater public safety. The Regulations (TDGR) is a corresponding document that translates the Act into its operative form by describing the various safety requirements relative to handling, offering for transport and the transportation of dangerous goods. These Acts and Regulations were introduced to promote public safety when transported by road, rail, sea or air. In case of an accidental release, the documentation, safety marks and labels provide the necessary information for emergency personnel to identify those dangerous goods and to clean up the spill in the safest manner possible. The Clear Language Edition of the TDG Regulation revisions came into effective on August 15, 2002. This document has been updated to include editions according to Amendment 6.

ABBREVIATIONS AND TERMS

The following abbreviations may be used in this training manual:

TDGR	Transportation of Dangerous Goods Act and Regulations Clear Language Edition
ICAO	International Civil Aviation Organization
CANUTEC	Canadian Transport Emergency Center of the Department of Transport
CGSB	Canadian General Standards Board
IATA	International Air Transport Association

The following terms will be used in this training manual:

Accidental Release	Means, in relation to dangerous goods, an unplanned or accidental discharge, emission, explosion, outgassing or other escape of dangerous goods, or any component or compound evolving from dangerous goods.
Biological Product	Means a product that is derived from living organisms and that is used to prevent, treat or diagnose disease in human beings or animals or for development, experiment or investigation purposes and include finished or unfinished products, live vaccines or attenuated live vaccines.
Biomedical Waste	Waste, human or animal, that is generated by health care facilities, medical research establishments, medical teaching establishments, and clinical laboratories or facilities involved in the production or testing of vaccines.
Carrier	Means a person who, whether or not for hire or reward, has possession of dangerous goods while they are in transport.
Category A	Means an infectious substance which is transported in a form that, when it is released outside of its means of containment and there is physical contact with humans or animals, it is capable of causing permanent disability or life-threatening or fatal disease to humans or animals.
Category B	Means an infectious substance that does not meet the criteria for inclusion in Category A.

Classification	Means for dangerous goods, the shipping name, the primary class, the compatibility group, the subsidiary class, the UN number, and the infectious substance category.
Consignee (Receiver)	Person or organization entitled to take delivery of a consignment.
Consignor (Shipper)	Means a person in Canada who is named in a shipping document as the consignor; imports or who will import dangerous goods into Canada; or has possession of dangerous goods immediately before they are in transport.
Culture	Means a process by which pathogens in a specimen are intentionally propagated. This definition does not include specimens taken from a human or animal patient and that are intended to be processed in a laboratory.
Dangerous Goods	Means a product, substance or organism included by its nature or by the regulations in any of the classes listed in the schedule to the Act. (Schedule 1 of the TDG Clear Language Edition)
Director General	The Director General of the Transport of Dangerous Goods Directorate, Department of Transport.
Emergency Response Assistance Plan	Means a plan that outlines what is to be done if there is an accident involving certain dangerous goods. The plan must be registered with TDG Transport Canada. For Class 6.2, ERAP # ERP2-0746 is only needed when shipping Category A (*). Health Canada ERAP phone number: 1-800- 545-7661.
Handling	Means loading, unloading, packing, or unpacking dangerous goods in a means of containment for the purpose of, in the course of or following transportation and includes storing them in the course of transportation.
Imminent Accidental Release	Means that there has been an incident and there is damage to the means of containment, which, if not corrected, could result in an accidental release of any quantity of Class 6.2 Dangerous Goods in transport that could cause danger to public safety.
Infectious Substance	Means a substance known or reasonably believed to contain viable micro-organisms that are known or reasonably believed to cause disease in humans or animals and that are listed in Appendix 3 to Part 2, Classification, or that exhibit characteristics similar to a substance listed in Appendix 3.
Means of Containment	Means a container or packaging or any part of a means of transport that is or maybe used to contain goods. The means of containment must be designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release of dangerous goods that could endanger the public. According to standard CAN/CGSB-43.125-99

Reason to Believe	The term “reason to believe” means that sufficient belief exists that the diagnostic specimens, for example, contain infectious substances of Category A or B.
Statistical Inference	The assumption that in a given number of samples or specimens a certain percentage will test positive for an infectious substance. This is not considered a “reason to believe” for the purpose of TDG regulations.

RESPONSIBILITIES

Employers: are responsible for training and certifying employees to transport dangerous goods. They are also responsible for developing procedures that ensure compliance with the regulations in their particular workplace. An employer must not direct or allow an employee to handle or offer for transport dangerous goods, unless the employee has been adequately trained and holds a training certificate or performs those activities in the presence or under the direct supervision of a person, who is adequately trained and holds a training certificate. Employers must provide the Emergency Response Assistance Plan reference number (ERAP # ERP2-0746) and phone number (1-800-545-7661), if a dangerous occurrence takes place involving a Category A infectious substances during handling and transportation.

Consignors (shippers): must be trained and certified to handle or offer for transport dangerous goods. Consignors are responsible for:

- i) Identifies: makes a decision as to whether or not the article or substances being shipped are identified as dangerous goods (i.e. determines if a specimen or culture is a dangerous good or believed not contain an infectious substance).
- ii) Classifies: determines the class of the dangerous good (infectious substance Class 6.2), and Category. *“In the case of infectious substances this activity is normally done by, a doctor, scientist, veterinarian, epidemiologist, genetic engineer, microbiologist, pathologist, nurse, coroner or laboratory technologist or technician.”*
- ii) Means of containment: selects Type 1A or Type 1B packaging and ensures that it is in compliance with CAN/CGSB-43.125-99.
- iv) Marks: ensures all appropriate labels are on the package, such as addresses of the consignor and the consignee, as well as the proper shipping names.
- v) Labels: ensures all appropriate labels are on the package, such as Class 6.2 infectious substances or Category B marks.
- vi) Documents: ensures all proper documentation accompanies the package. The consignor must receive permission, in writing from CANUTEC, to use their 24-hour number when technical information about the dangerous good in transit is needed. The ERAP phone number must be provided when transporting Class 6.2 Category A (*). A copy of the shipping document must be able to be produced, for two years after the date the shipping document was prepared.

The Consignor’s responsibility is complete when the package arrives intact at its final destination and the consignee accepts it.

Carrier: must be trained and certified to handle and transport dangerous goods. They must ensure that the TDG shipping document is complete and that all information, including safety marks agrees with the consignment. They must also replace any safety labels that become damaged during transport. A copy of the shipping document must be within reach of the driver at all times. If a package is being transferred from one driver to the next, a copy of the document must also be transferred along with the package. Delivers the package and document to the consignee. Must report any dangerous occurrence, lost or stolen packages to the local police, CANUTEC and /or ERAP. The drivers must retain a copy of the shipping document for 2 years.

Consignee (Receiver): must be trained and certified to handle dangerous goods. They must ensure that the TDG shipping document is complete and that all information, including safety marks agrees with the consignment. They must inspect the package for leakage or damage. Must report any dangerous occurrence, lost or stolen packages to the local police, CANUTEC and /or ERAP. The consignee must be informed that a Class 6.2 Category A Dangerous Good is being shipped, prior to transport. They must also retain their copy of the shipping document for 2 years.

PART II

TRAINING

A person, who handles, offers for transport or transports dangerous goods must be trained and certified. They need to be adequately trained or work under the direct supervision of a person who is adequately trained and holds a training certificate. Direct supervision may mean within audible and visual distance. After the date of issuance, training certificates are valid for 36 months for road transport and 24 months for air transport. An employer must keep a record or copy of the certificate from the date of issuance until two years after expiry.

The training must be directly related to the person's duties. If the employee only handles or offers for transport Class 6.2 or Class 9, then adequate training would consist of these areas.

Training Requirements:

A person is adequately trained when they have a sound knowledge of:

- a) classification criteria
- b) shipping names
- c) the use of the schedules 1, 2, and 3
- d) shipping documentation
- e) dangerous goods safety marks
- f) means of containment, and certification marks
- g) emergency response assistance plan requirements
- h) accidental release report requirements
- i) the proper use of any equipment used to handle or transport dangerous goods
- j) the safe handling and transportation practices
- k) the reasonable emergency measures a person must take to reduce or eliminate any danger to the public

A person is considered trained when his employer is satisfied that adequate training has been received and issues him a training certificate. The training certificate must include:

- a) the name and address of the place of business of the employer.
- b) the employees name and signature
- c) the training requirements must be listed.
- d) the date the training certificate expires, preceded by the words "Expires on".
- e) The signature of the employer acknowledging the individual's competency in the training requirements of Class 6.2 Transportation of Dangerous Goods.

A person must produce their certificate to an inspector immediately upon request.

TRAINING CERTIFICATE EXAMPLE

CERTIFICATE OF TRAINING TRANSPORTATION OF DANGEROUS GOODS	
_____ Name of Employer	_____ Employer's Business Address
_____ Name of Employee	_____ City, Province, Postal Code
This certifies that the employee named above has completed the training described on the reverse, in accordance with the requirements of the Transportation of Dangerous Goods Act and Regulations.	
Certificate Expires on: _____	Employer's Signature: _____ Employee's Signature _____

TRAINED IN THE HANDLING / OFFERING FOR TRANSPORT / TRANSPORTING: (Choose as appropriate)
<input type="checkbox"/> Classification <input type="checkbox"/> Shipping Names <input type="checkbox"/> The use of Schedules 1, 2, & 3 <input type="checkbox"/> Documentation <input type="checkbox"/> Dangerous Goods Safety Marks <input type="checkbox"/> Means of Containment <input type="checkbox"/> Emergency Response Assistance Plans <input type="checkbox"/> Accidental Release and Imminent Accidental Release Report Requirements <input type="checkbox"/> Safe Handling and Transportation Practices, and the Characteristics of the Dangerous Goods <input type="checkbox"/> The Proper Use of Equipment Used to Handle or Transport the Dangerous Goods. <input type="checkbox"/> Emergency Measures to Take to reduce or Eliminate Danger to the Public <input type="checkbox"/> Air Transportation of Dangerous Goods (ICAO TI) <input type="checkbox"/> Marine transportation of Dangerous Goods (IMDG)

CLASSIFICATION

There are nine classes of Dangerous Goods. The numbers do not signify the degree of hazard. Some classes are further divided into divisions. Classes and Divisions are stated as follows:

CLASS	DIVISIONS	DESCRIPTION	EXAMPLES
Class 1 EXPLOSIVES	1.1	Mass explosion hazard	TNT
	1.2	Projection hazard, but not a mass explosion hazard	Hand grenade
	1.3	Fire hazard along with a minor blast hazard and/or a minor projection hazard, but does not have a mass explosion hazard	Smokeless powder, serial flares
	1.4	A minor explosion hazard-explosion effects are localized to immediate surroundings	Fireworks
	1.5	Very insensitive substances with a mass explosion hazard	Blasting agents
	1.6	An extremely insensitive substance with no mass explosion hazard	
Class 2 GASES	2.1	A flammable gas which is easily ignited and burns	Propane
	2.2	A non-flammable, non-poisonous, non-corrosive gas	Nitrogen, refrigerated liquid, anhydrous ammonia
	2.3	A corrosive or toxic gas harmful to living beings	Ammonia solution >50%
Class 3 FLAMMABLE LIQUIDS	No divisions	Have a flash point ≤ 60.5	Gasoline Heating oil
Class 4 FLAMMABLE SOLIDS; SUBSTRANCES LIABLE TOSPONTANEOUS COMBUSTION; SUBSTRANCES THAT ON CONTACT WITH WATER EMIT FLAMABLE GASES	4.1	A flammable solid under normal conditions of transport, liable to cause a fire through friction; solid desensitized explosives	Molten sulphur, safety matches
	4.2	Substances liable to spontaneous combustion which consists of pyrophoric substances that ignite within 5 minutes of coming into contact with air; self heating substances that when in large amounts, spontaneously ignite on contact with air after long period of time	Activated charcoal
	4.3	Water-reactive substances	Calcium carbide
Class 5 OXIDIZERS; ORGANIC PEROXIDES	5.1	Substances that yield oxygen that contributes to the combustion of other material	Ammonium nitrate
	5.2	An organic peroxide, a strong oxidizing agent which releases oxygen very readily and may be liable to explosive decomposition, burn rapidly, sensitive to impact or friction, react dangerously with other substances, causes damage to eyes	Benzoyl peroxide
Class 6 POISONOUS; INFECTIOUS SUBSTRANCES	6.1	A poisonous substance	Strychnine
	6.2	An infectious substance	Bacteria; viruses
Class 7 RADIOACTIVE MATERIAL	No divisions	A radioactive material	Uranium
Class 8 CORROSIVE SUBSTANCE	No divisions	A corrosive material, either acid or alkaline	Sulphuric acid
Class 9 MISC. DANGEROUS GOODS	No divisions	A miscellaneous substance or product presenting dangers sufficient to warrant regulation in transport but which cannot be ascribed to any other class	Dry Ice, asbestos
		An environmentally hazardous substance that cannot be ascribed to any other class	DDT
		A dangerous specified waste	Acid sludge

Shipping Names

The proper shipping name must be used on all shipping documents and packaging. The United Nations Committee of Experts on the Transportation of Dangerous Goods has assigned all dangerous goods a number to aid in identification. UN must always precede the number given by the United Nations. The UN numbers are always used in conjunction with shipping names. The UN numbers and shipping names for infectious substances and dry ice are stated as follows:

UN2814	INFECTIOUS SUBSTANCE, AFFECTING HUMANS Category A infectious substances and all cultures ¹
UN3373	BIOLOGICAL SUBSTANCE, CATEGORY B Category B infectious substances
UN1845	DRY ICE (CARBON DIOXIDE)(SOLID)

Category A & B

The 13th Edition of the UN Recommendations classifies all infectious substances into two categories: Category A and Category B. These categories replace the four risk groups historically used to classify infectious substances for transport.

Infectious substances included in Category A are those that pose a high risk in transport. These substances are transported in a form capable of causing permanent disability or life-threatening or fatal disease to humans or animals when exposure to them occurs.

Infectious substances included in Category B are those that pose a low risk in transport. These are all infectious substances not meeting the criteria for inclusion in Category A.

Packing Groups

Once the shipper has identified the dangerous good by Class, shipping name, technical name, and category, they now must, where relevant, assign each item of dangerous goods to one of the three packing groups within the assigned class or division. Dangerous Goods are assigned to relevant packing groups according to the degree of hazard they present. Degree of hazard refers to how long after exposure “visible death of skin” occurs.

Infectious substances have not been put into packing groups, instead they have been placed into Categories.

Packing Group I	- great danger (0 – 3 Minutes)
Packing Group II	- medium danger (3 – 60 Minutes)
Packing Group III	- minor danger (1 – 4 Hours)

LIST OF DANGEROUS GOODS IN SCHEDULE 1 and 3

The consignor is responsible for identifying and classifying dangerous goods and must be familiar with Schedule 1 and 3. Schedule 1 is a list of dangerous goods by their UN numbers, and is in numerical order. Schedule 3 is the same list, but the shipping names are listed in alphabetical order. The schedule will give you all the information you will need to fill out documents and the quantity allowed in your shipment.

The Schedule is divided into 10 columns.

Column 1	UN Number: Column 1 gives the UN numbers for the shipping names of dangerous goods.
Column 2	Shipping name and Description: Each shipping name is written in upper case letters and any descriptive text is written in lower case letters.
Column 3	Class: This column gives the primary class for dangerous goods.
Column 4	Category/Packing Group: This column lists the Packing Group/Category for dangerous goods.
Column 5	Special Provisions: Special provisions that apply to the dangerous goods are shown in Schedule 2 and listed below.
Column 6	Limited Quantity Index: This column gives the quantity of dangerous good at or below which the dangerous goods may be handled, offered for transport or transported as a limited quantity. ('0' demonstrates – any amount of infectious substances must be declared) (5kg – dry ice)
Column 7	ERAP Index: Any quantity of Category A infectious substances requires an emergency response assistance plan. Dry ice does not require an ERAP.
Column 8	Passenger Carrying Ship Index: This column gives the quantity limits for a consignment of dangerous goods above which the consignment must not be transported on board a passenger carrying ship.
Column 9	Passenger Carrying Road Vehicle Index: This column indicates the amount per consignment that may be shipped by passenger vehicle. (0.05 litres or 50mls – infectious substances) (200kg – dry ice)
Column 10	Marine Pollutant: this column indicates the Dangerous goods that are marine pollutants.

Col. I	Col. II	Col. III	Col. IV	Col. V	Col. VI	Col. VII	Col. VIII	Col. IX	Col. X
UN Number	Shipping Name and Description	Class	Category/ Packing Group	Special Provisions	Explosive Limit and Limited Quantity Index	ERAP Index	Passenger Carrying Ship Index	Passenger Carrying Road or Rail Index	Marine pollutant
UN2814	INFECTIOUS SUBSTANCE, AFFECTING HUMANS	6.2	Category A infectious substances and all cultures	84	0	See Special Provision 84	0.05 L	0.05 L	
UN2900	INFECTIOUS SUBSTANCE, AFFECTING ANIMALS only	6.2	Category A infectious substances and all cultures	84	0	See Special Provision 84	0.05 L	0.05 L	
UN3373	BIOLOGICAL SUBSTANCE, CATEGORY B	6.2	Category B infectious substances		0		4 L	4 L	
UN1845	CARBON DIOXIDE, SOLID; or DRY ICE	9	III	18 **	5			200 kg	

The Special Provisions are extracted from Amendment 6 Schedule 2 in TDGR Clear Language Edition.

Special Provisions for Dry Ice

- 18.** These regulations do not apply to UN1845, CARBON DIOXIDE, SOLID, or DRY ICE that is transported by a road vehicle and that is used as a refrigerant in a small means of containment if:
- (a) the consignor includes, on a waybill document that accompanies the small means of containment, the words “**Dry ice as refrigerant**”; and
 - (b) the small means of containment in which the dry ice is used as a refrigerant is designed and constructed to permit the release of carbon dioxide to prevent the build-up of pressure that could rupture the small means of containment.

Special Provision for Infectious Substance

- 84.** The following infectious substances require an Emergency Response Assistance Plan:
- (a) Crimean-Congo Hemorrhagic fever virus;
 - (b) Ebola virus;
 - (c) cultures of Foot and mouth virus;
 - (d) Guanarito virus;
 - (e) Hendra virus;
 - (f) Junin virus;
 - (g) Kyasanur Forest disease virus;
 - (h) Lassa virus;
 - (i) Machupo virus;
 - (j) Marburg virus;
 - (k) Nipah virus;
 - (l) Omsk hemorrhagic fever virus;
 - (m) Sabia virus; and
 - (n) Variola virus.

PART III

PACKING

General Requirements for all packaging refer to standard CAN/CGSB-43.125

Shippers of biological products and diagnostic specimens, where a relatively low probability exists that infectious substances are present, must ensure that their shipments will arrive at their destination in good condition and will present no hazard to humans or animals during transport.

Three types of packaging are described below. The packaging type necessary will depend on whether the shipment is a culture, specimen or waste product. Whether the specimen(s) contains an infectious organism and if so, what category the organism falls into and mode of transportation.

1A PACKAGING (PACKING INSTRUCTION 602)

1A packaging required for infectious substances included in Category A:

- a) watertight primary container (vacutainer tube). If screw caps are used, these must be secured by positive means, e.g. tape, paraffin sealing tape or manufactured locking closure.
- b) watertight secondary container (sealed biohazard bag)
- c) enough absorbent material to absorb the entire content of the primary container. If multiple primary receptacles are placed in a single secondary container, the primaries will be individually wrapped or separated to prevent contact between the receptacles.
- d) an itemized list of contents, enclosed between the secondary packaging and the outer packaging.
- e) rigid outer packaging of adequate strength for its capacity, mass and intended use of which the smallest external dimension is 100mm.) Combination package must not contain more than 50 ml/50g of infectious substances.

Special Provision A140

For the purposes of documentation, the proper shipping name must be supplemented with the technical name. Technical names need not be shown on the package. When the infectious substances to be transported are unknown but suspected of meeting the criteria for inclusion in Category A and assignment to UN2814 or UN2900, the words “(Suspected Category A Infectious Substances)” must be shown in parentheses following the proper shipping name on the itemized list of contents inside the outer packaging and on the Shipper’s Declaration for Dangerous Goods, but not on the outer packaging. (specific for IATA air regulations)

Inner packaging containing infectious substances must not be consolidated with inner packaging containing unrelated types of goods. When substances consigned are shipped frozen with Carbon dioxide, solid (dry ice), interior support must be provided to secure the secondary packaging in the original position after the ice has dissipated.

Before a package can be said to meet the requirements of 1A packaging, it must undergo a series of tests. A Package Design Report must be filed and Transport Canada must issue a “Certificate of Registration”. The outer surface of the package that meets the requirements is marked with the United Nations packaging symbol, code design, ‘CLASS 6.2’, manufactured year last 2 digits, state authorization ‘CAN’, manufacturers symbol and the Transport Canada Registration Number. 1A packaging must be purchased from a vendor who has already gone through the steps of having their packages tested and certified.

1B PACKAGING (TC-125-1B OR PACKING INSTRUCTION 650)

1B packaging required for infectious substances included in Category B:

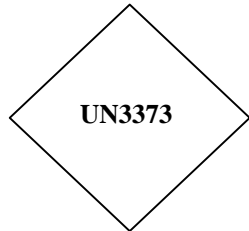
- a) watertight primary container must not contain more than 1L
- b) watertight secondary container
- c) enough absorbent material to absorb the entire content of the primary container. If multiple primary receptacles are placed in a single secondary container, the primaries will be individually wrapped or separated to prevent contact between them
- d) the primary receptacle or secondary packaging must be capable of withstanding an internal pressure of 95kPa in the range of -40°C to +55°C.
- e) an itemized list of contents, enclosed between the secondary packaging and the outer packaging.

- f) rigid outer packaging must not contain more than 4L or 4 kg. This quantity excludes dry ice to keep specimens cold. At least one surface on the outer packaging must have a minimum dimension of 100mmx100mm.

When substances consigned are shipped frozen with Carbon dioxide, solid (dry ice), interior support must be provided to secure the secondary packaging in the original position after the ice has dissipated.

The complete package must be capable of passing the drop test, except that the height of the drop must not be less than 1.2m.

For transport the mark on a background of proper shipping name to the diamond shaped 1-(613)-996-6666.



must be displayed on the external surface of the outer packaging contrasting color and must be clearly visible and legible. The “BIOLOGICAL SUBSTANCE, CATEGORY B” must be adjacent mark. As well as the 24 hour contact telephone number / Canutec

A Shippers Declaration for Dangerous Goods is not required. The name, address and telephone number of a responsible person must be provided on the waybill or on the package. The “Nature and Quantity of Goods” box of the waybill must show the text “BIOLOGICAL SUBSTANCE, CATEGORY B” and “UN 3373”.

These specimens can be packaged in Type 1B packaging regardless of the mode of transportation as long as the means of containment is in compliance with CGSB-43.125-99. The outer containers that meet the requirements must be durably marked with “TC-125-1B” and the name and address of the manufacturer on the package. If symbols are used, the symbols must be registered with Transport Canada. The manufacturer may be the consignor. In this case, the TC-125-1B and the consignor's address would be durably marked on the outer container.

1C PACKAGING (REFER TO TABLES 2-5B CAN/CGSB-43.125)

1C packaging required for biomedical waste:

- a) a single packing that meets the requirements of one of the standards in Table 2 or 3.
- b) a combination packing, that is a securely-closed plastic bag that meets the requirements of Table 4 and is contained in a securely closed outer packaging that is rigid, leak-proof and designed for repeat use or a packaging that meets the requirements of Table 2, 3, 5a or 5b.
- c) a sharps container that meets the requirements of CSA Z316.6-95 or is rigid, leak-proof and designed for repeated use.

Type 1C is suitable for the transportation of biomedical waste in Category B. Shippers should refer to the applicable regulation(s) to ensure that Type 1C is permitted for a particular substance, transport mode or jurisdiction. Shippers should also consult the TDG Regulations for vehicle requirements that apply to the transportation of biomedical waste.

Biomedical waste that is designed non-infectious by a medical professional is not subject to the requirements of this standard. Biomedical waste that is decontaminated having been treated using a process that is deemed acceptable by a medical professional is not subject to the requirements of this standard.

Requisitions

Whenever laboratory specimens are transported, the accompanying requisitions should be put into a plastic bag and stored between the secondary and outer container during shipment. This is to prevent contamination and possible loss of information due to breakage or leakage of primary receptacles.

EXEMPTIONS FROM REGULATIONS:

1) Substances Believed Not to Contain Infectious Substances

The means of containment must be marked with the words “**Exempt Human Specimen**” that is Type 1B or Type 1C or that is designed, constructed, filled, closed, secured, and maintained so that under normal conditions of transport, including handling, there will be no release of the specimen. (marking must be 6mm high in black letters on a contrasting background)

2) Biological Products Exemption

The means of containment must be marked with the words “**Biological Product**” that is Type 1B or that is designed, constructed, filled, closed, secured, and maintained so that under normal conditions of transport, including handling, there will be no release of the specimen. (marking must be 6mm high in black letters on a contrasting background)

3) Packing Class 6.2, Infectious Substances, Category B Exemption

Part 3 (Documentation), and Part 7 (Emergency Response Assistance Plan), do not apply to the handling, offering for transport or transporting on a road vehicle of infectious substances that are included in Category B if:

- (a) one external dimension of the means of containment for the substances is at least 100 mm x 100 mm;
- (b) the means of containment has displayed on the external surface:
 - (i) the Category B mark, black markings 6 mm high with a width of at least 2 mm, white background, and diamond shaped with each side 50 mm.
 - (ii) the shipping name in letters at least 6 mm high, on a contrasting background, next to the mark.
- (c) the 24-hour telephone number required is displayed next to the shipping name on the means of containment.

4) Blood for Transfusion, Tissues or Organs for Transport Exemption

These regulations do not apply to the handling, offering for transport or transporting of blood for transfusion, tissues or organs for transplant.

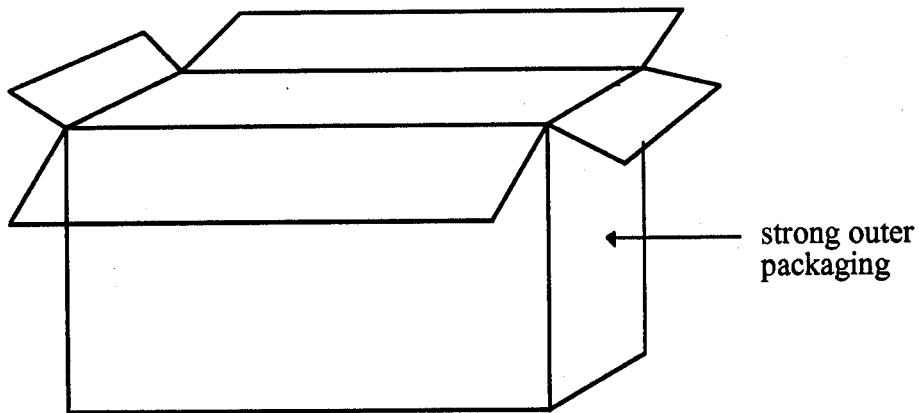
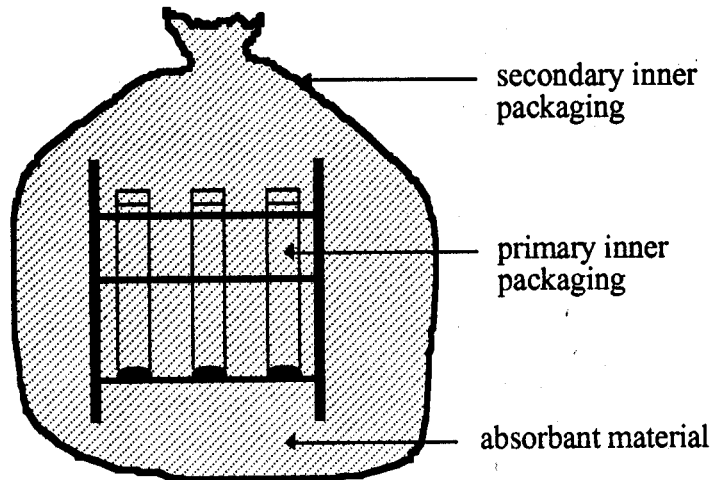
MEANS OF CONTAINMENT FOR INFECTIOUS SUBSTANCES

	Col. 2 Means of containment for cultures	Col. 3 Means of containment for diagnostic specimens or clinical specimens	Col. 4 Means of containment for infectious substances intended for disposal
Category A	1A	1B except for the following substances which must be contained in a 1A means of containment: (a) Crimean-Congo Hemorrhagic fever virus; (b) Ebola virus; (c) Flexal virus; (d) Guanarito virus; (e) Hantaan virus - Hantaviruses causing hemorrhagic fever with renal syndrome; (f) Hantaviruses causing pulmonary syndrome; (g) Hendra virus; (h) Herpes B virus (i) Junin virus; (j) Kyasanur Forest disease virus; (k) Lassa virus; (l) Machupo virus; (m) Marburg virus; (n) Monkeypox virus; (o) Nipah virus; (q) Omsk hemorrhagic fever virus; (p) Russian Spring-summer encephalitis virus (r) Sabia virus; and (s) Variola virus.	1C except for the following substances which must be contained in a 1A means of containment: (a) Crimean-Congo Hemorrhagic fever virus; (b) Ebola virus; (c) Flexal virus; (d) Guanarito virus; (e) Hantaan virus - Hantaviruses causing hemorrhagic fever with renal syndrome; (f) Hantaviruses causing pulmonary syndrome; (g) Hendra virus; (h) Herpes B virus (i) Junin virus; (j) Kyasanur Forest disease virus; (k) Lassa virus; (l) Machupo virus; (m) Marburg virus; (n) Monkeypox virus; (o) Nipah virus; (p) Omsk hemorrhagic fever virus; (q) Russian Spring-summer encephalitis virus (r) Sabia virus; and (s) Variola virus;
Category B	1B	1B	1C

A person must not handle, offer for transport or transport a Class 6.2 Infectious substance in a mean of containment, unless the means of containment is listed in the above chart. Despite what the chart states, a Type 1A means of containment may be used in all cases. The Type 1A /1B means of containment must be in compliance with CSGB-43.125.

PACKING DIAGRAM

Components of a four part packaging



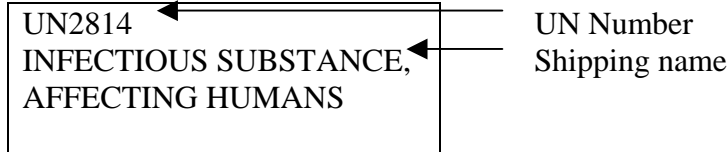
MARKING , LABELING AND SHIPPING

It is the consignors and the carriers responsibility to ensure that all required marks and labels are on the outside package.

A) Safety Marks

i) The marking and labeling of an infectious substance package are as follows:

- Shipping name (upper case)
- UN number



ii) Apply complete name and address of consignor and consignee. The consignor and consignee should have a contact person and phone number. The contact person does not have to be the shipper. It may be whom ever initiated the shipment of the package.

B) Labels

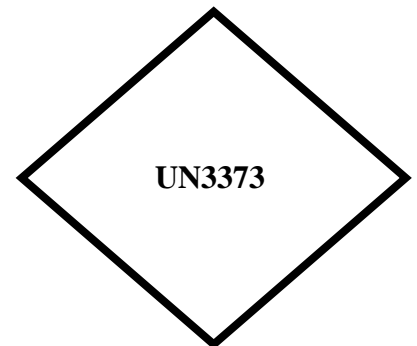
There are two types of labels when shipping most Dangerous Goods:

- Hazard labels (Class 6.2 Infectious substance Category A, Category B)
- Handling Labels (Directional arrows, Over-pack label)

The Hazard labels are diamond -shaped and set at a forty-five degree angle. Handling labels such as directional arrows are in various rectangular shapes. Whenever Hazard labels are used, the shipping name, category and the UN number must be placed adjacent to the label. When a label is required, it must be displayed on any side of the means of containment, other than the side on which it is intended to rest or be stacked during transport.

Hazard Labels

**Class 6.2 (Infectious substance)
Category A**



Category B

Handling Labels

Directional Arrows



Over-pack Label

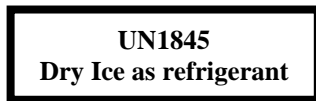


C) Shipping

1. Dry Ice (carbon dioxide, solid)

Dry Ice must be packaged using Packing instruction 904. Packing Instruction 904 says the package must be designed and constructed to permit the release of CO₂ gas. Dry ice must never be placed in an airtight container. As dry ice dissipates, it releases CO₂ gas. If the gas has no place to go, the pressure will build up and the container may explode causing serious injury to anyone in the vicinity.

According to Special Provision 18 in Schedule 1, a Dry Ice hazard label is not needed. Dry Ice must be declared on the waybill as **“Dry Ice as Refrigerant”**



Shipping name label may be placed on the outside of the box. (optional)

2. With Over-packs

Package the dangerous goods in a 1A or 1B box. These packages are manufacturer certified packages.

- If you have a multiple of these 1A/1B boxes that need to be shipped to the same address, place the 1A and 1B packages into a larger box. This is now called an over-pack. The maximum quantity of dangerous goods allowed in each 1A package is 50 mls. Only one 1A package is allowed in the Overpack.
- If the dangerous good is being shipped on dry ice, place 1A and/or 1B packages into an ice-box (Styrofoam box) and place the dry ice around the 1A and/or 1B packages. This is also an Over-pack. Again, due to the maximum quantity allowed in a package that contains dangerous goods, only one 1A or 1B package is allowed in the Overpack.

All marks and labels that are on the 1A/1B package must be on the Over-pack:

- Addresses – consignor and consignee
- Class 6.2 hazard label
- proper shipping name, UN number label (placed adjacent to hazard label)
- directional arrows (optional)

In addition to the above marks and labels:

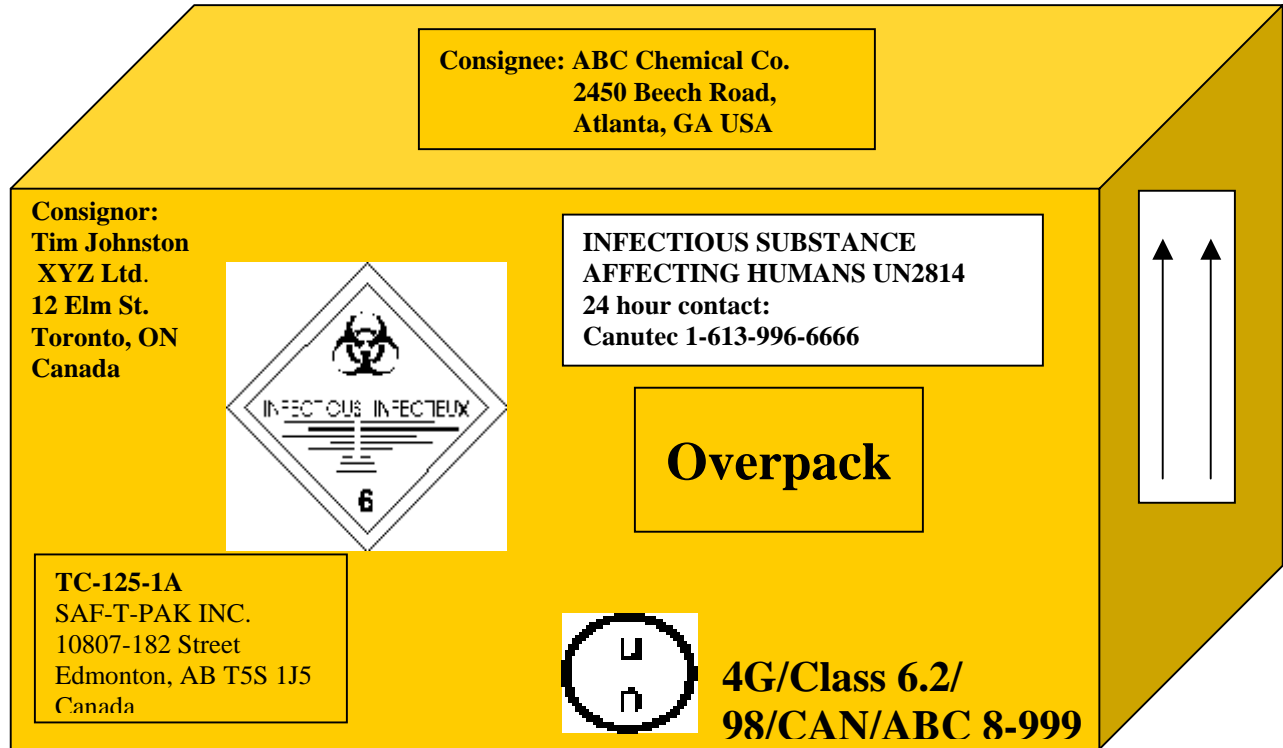
- proper shipping name label for Dry Ice if it is being used. (optional)

A label which states **“Overpack”** must be on the over-pack. This tells the carrier that the inner package is a certified box that meets 1A or TC-125-1B specifications.

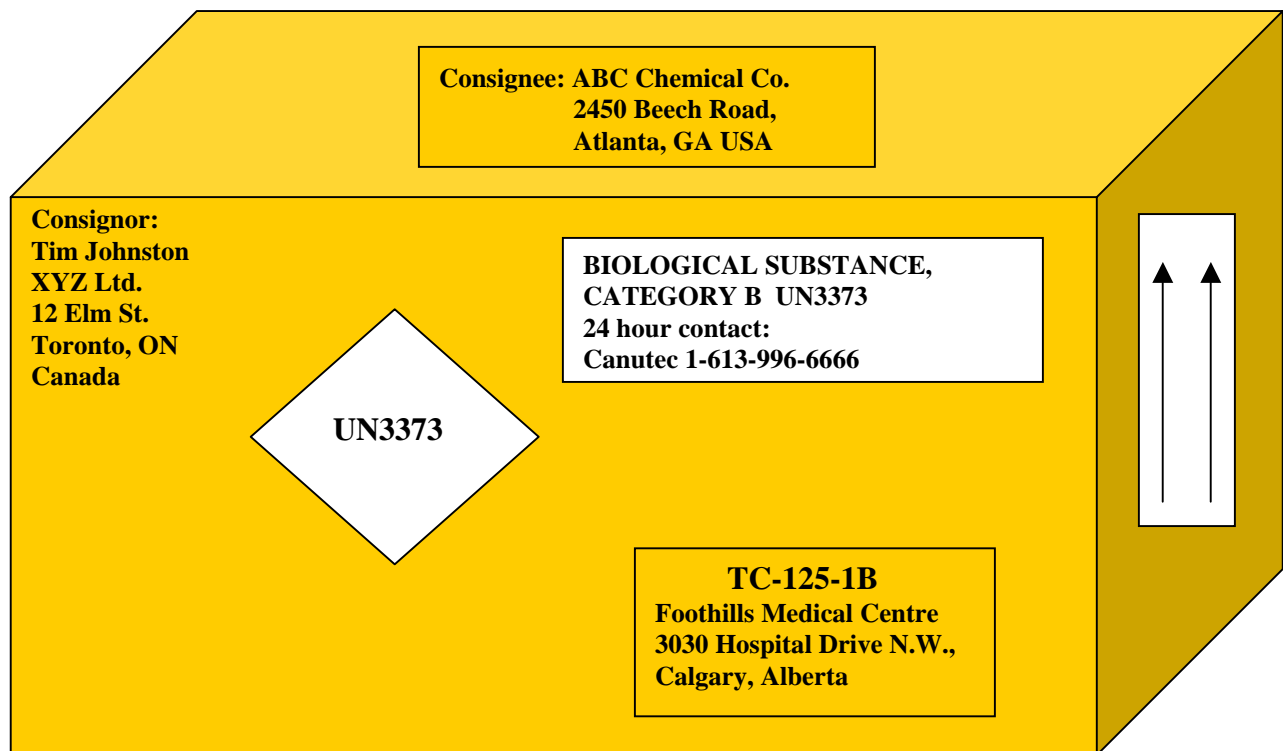
NOTE: According to the TDG ACT, you cannot put a misleading safety mark on a package.

The person who unloads, unpacks, cleans, or purges the package, must cover or remove the dangerous goods safety marks when there is no longer a danger present in the means of containment.

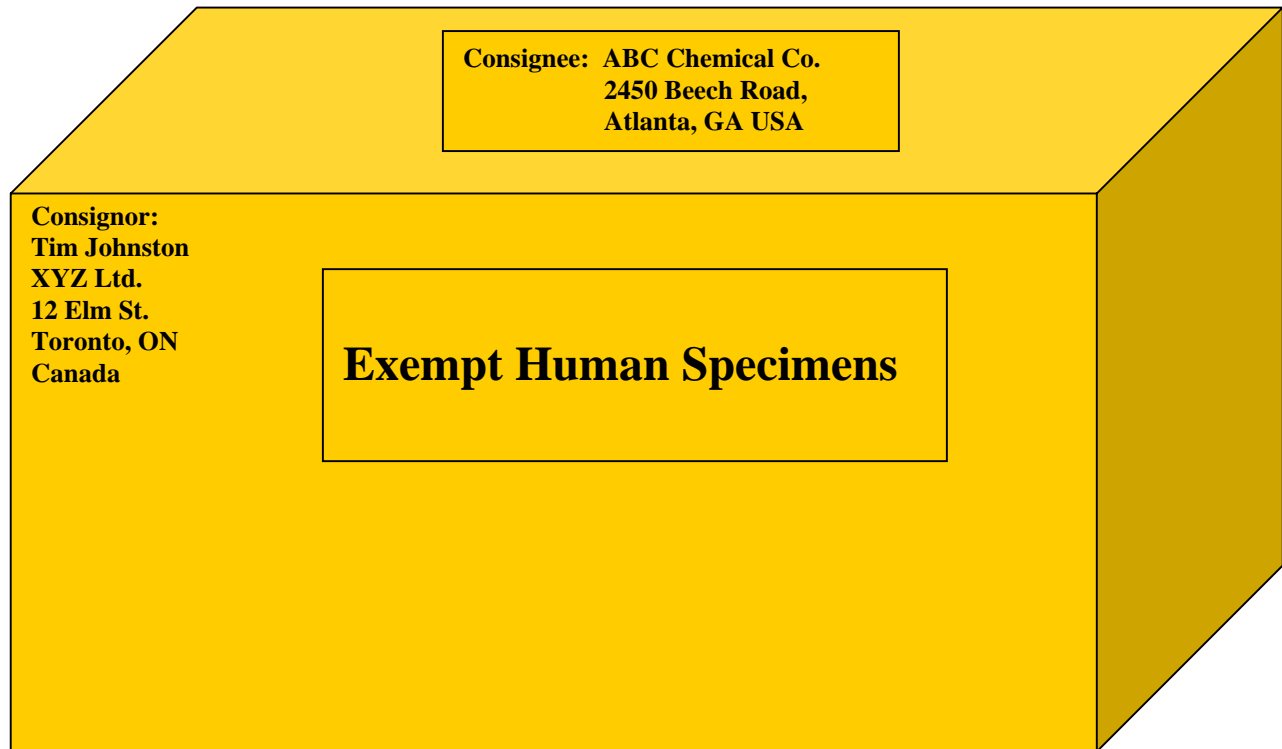
TYPE 1A PACKAGE MARKINGS



TYPE 1B PACKAGE MARKINGS



EXEMPT HUMAN SPECIMENS



SHIPPING DOCUMENTATION

A Shipping Document and Shipper's Declaration of Dangerous Goods are documents, which must be prepared by the consignor when offering Category A dangerous goods for transport. Category B, biological products or substances believed not to contain infectious substances and Dry Ice, do not require a shipping document.

Shipping Document - is used for ground transportation and may be prepared electronically. The information on a shipping document must be easy to identify, legible, in indelible print and in English or French. The ground document may be in black and white. This shipping document must be filled out in triplicate. One for the consignor's record, one for the carrier and one for the consignee. Shipping documents for ground may be photocopied. When multiple carriers are involved in transporting the consignment, more copies may be needed.

Shipper's Declaration for Dangerous Goods - is a prescribed document and must be used for consignments by air. The air document must have red thatched borders and cannot be photocopied. Additional information may be required according to IATA.

Both documents are legal documents and must be kept for 2 years after the date the shipping document was prepared.

Ground Shipping Document (Section 3.5 of Part 3 TDGR)

Information Required:

1	Date	the date the shipping document was prepared or given to a carrier
2	Shipping number	this is for tracking purposes. Any numbering system will do, but it MUST be on the shipping document.
3	Consignor	consignor's name, address, and phone number
4	Consignee	consignee's name, address, and phone number NOTE: When shipping Category A and Category B, the document must have a contact person identified for both the consignee and consignor.
5	UN number	Infectious Substance is UN2814
6	Proper Shipping Name	INFECTIOUS SUBSTANCE, AFFECTING HUMANS is the shipping name Dry Ice - when Dry Ice is used along with the infectious substance, the ground document must state " Dry Ice as Refrigerant ".
7	Class/Division	Infectious Substances is Class 6.2
8	Category/ Packing Group	Category A or B must be documented, based on severity of disease, route of infection, virulence, infectivity. The packing group for a substance may be preceded by 'PG'
9	Mass or Volume	total mass or volume of package(i.e. 50 mL or 50 g) 'OVERPACK used' must be inserted after all relevant entries relating to the packages within each overpack.
10	Packing Instruction	number of packing instruction
11	Number of Packages	number of packages being sent with the same document
12	Contact Canutec	in the event of an accidental release, the person in possession of Class 6.2 Infectious Substances, must make an immediate report to CANUTEC (613) 996-6666.
13	24-hour contact number	this number must be a contact from whom technical information can be obtained about the dangerous goods in transport, without breaking the telephone connection. It must be a number that can be reached 24 hours each day. You may use CANUTEC's number after you have contacted them and received written permission. This can be done at no cost to the consignor.
14	Additional Handling Information	Emergency Response Assistance Plan – issued by Transport Canada. When shipping Category A (*) infectious substances, the ERAP reference number, # ERP2-0746 and phone number 1-800-545-7661, must be provided on the documentation.

GROUND SHIPPING DOCUMENT						
DATE: _____ 1 _____			SHIPPING NO. _____ 2 _____			
FROM: _____ CONSIGNOR _____ 3			TO: _____ CONSIGNEE _____ 4			
Contact person: Phone number:			Contact person: Phone number:			
UN or ID No.	PROPER SHIPPING NAME	CLASS Division	CATEGORY/ PACKING GROUP	MASS OR VOLUME	PACKING INST.	# of PKGS
5 UN2814	6 INFECTIOUS SUBSTANCES AFFECTING HUMANS Specimen Culture <input type="checkbox"/> <input type="checkbox"/>	7 6.2	8 Category A	9 _____ mls	10 602	11 1
UN1845	<input type="checkbox"/> DRY ICE as refrigerant Non-regulated	9	III	20 kg Overpack used	904	

This is to certify that the above named articles are properly classified, described, packaged, marked, labeled and are in proper condition for transportation according to the *Transportation of Dangerous Goods Regulations*.

IF PACKAGE IS DAMAGED, IMMEDIATELY TELEPHONE CANUTEC
(613) 996-6666 12

24 HOUR CONTACT NUMBER:
CANUTEC (613) 996-6666 13

ERAP #ERP2-0746 phone # 1-800-545-7661 14

Received in apparent good order: _____	(Consignee's Signature)
Received in apparent good order: _____	(Carrier's Signature)

GROUND WAYBILL

All waybills must have handling information. The description for an infectious substance being shipped by ground is “**Dangerous Goods as per attached Shipping Document**”. If Dry Ice is used along with the infectious substance, the ground document must state “**Dry Ice as Refrigerant**”, so it does not have to be declared on the ground waybill.

When Dry Ice is shipped with diagnostic specimens, it is not required to fill out a shipping document. Dry Ice is a non-regulated product, when used as a refrigerant in a small means of containment. In this case, the ground waybill must state “**Dry Ice as Refrigerant**”, when shipped with diagnostic specimens.

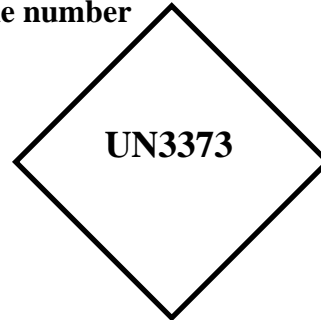
In summary, when shipping dangerous goods by ground the following steps must be taken:

- Identify the dangerous goods in the Dangerous Goods List (Schedule 1)
- Classify the product according to Category.
- Choose the appropriate packing instruction for the item being shipped.
- Obtain packing material, which meet the requirements of the packing instruction.
- Follow the general packing requirements.
- Mark and label the package.
- Complete the “Shipping Document” for Dangerous Goods in triplicate.
- Complete the ground waybill.

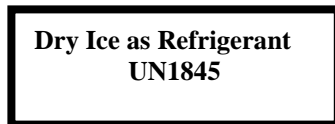
Package your shipments as though you would be sitting beside them from origin to destination.

PACKAGING CHECKLIST FOR CATEGORY A AND CATEGORY B

- Consignor's complete address
- Consignee's complete address
- Hazard labels - with proper shipping name label adjacent to hazard label
 - 24 hour contact telephone number



- Proper Shipping name label for Dry Ice



(optional)

- Directional arrows

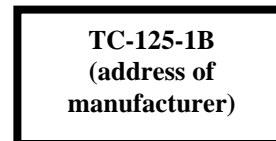


(optional)

- Certification Mark



4G/Class 6.2/
98/CAN/ABC 8-999



- Over-pack label if over-pack is being used



- Documentation

- No Documentation

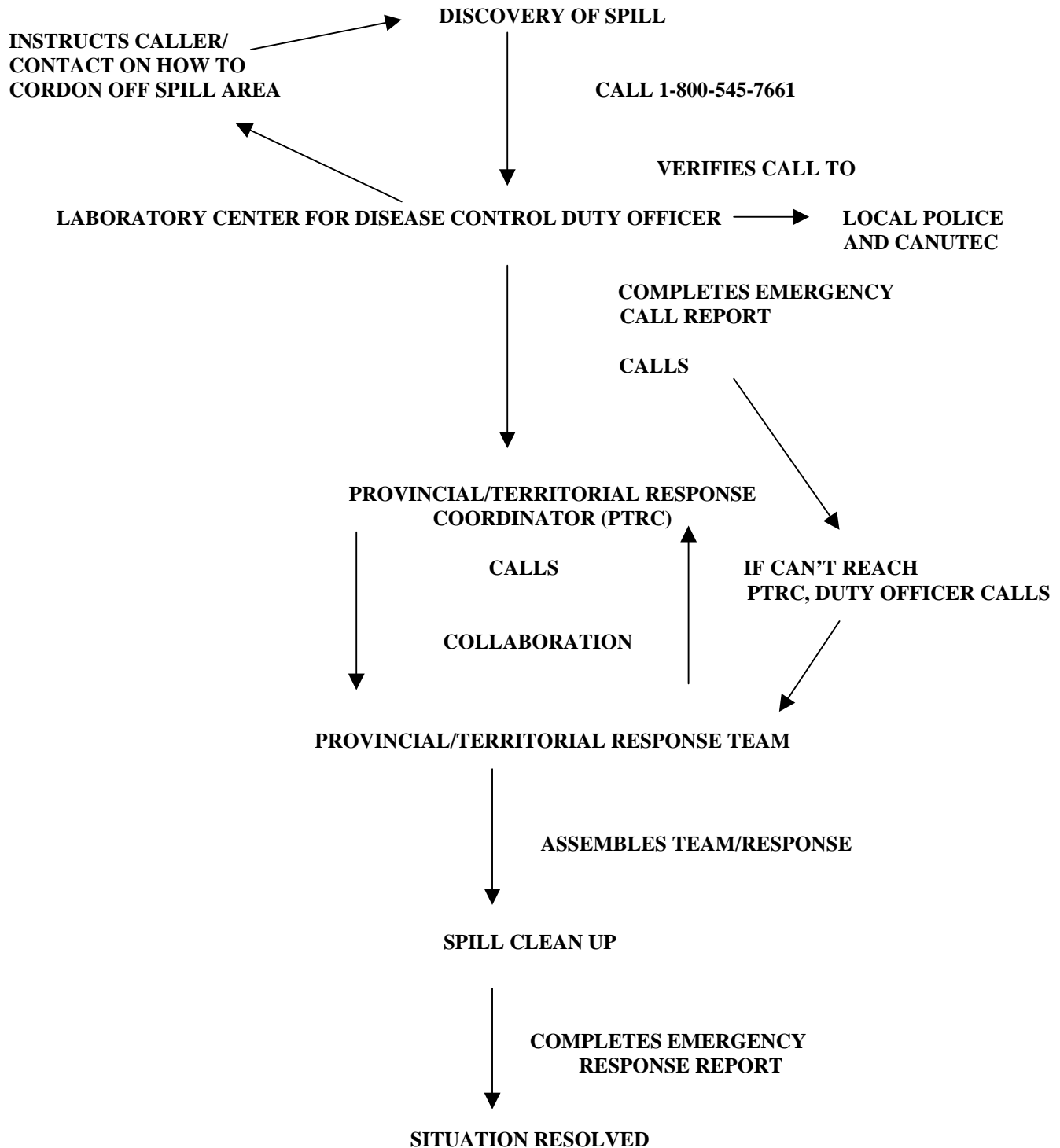
PART IV

EMERGENCY RESPONSE ASSISTANCE PLAN (ERAP) REQUIREMENTS:

An Emergency Response Assistance Plan is required for any amount of Dangerous Goods classified as, Class 6.2 Category A infectious substances with an asterisk '*' against them in column 3 of the Category A assignment list, when transported in Canada. The consignee must be contacted and informed of the consignment's contents and expected arrival details.

The ERAP is a plan that outlines what is to be done if there is an accident involving a dangerous good. Health Canada issues a reference number once the ERAP is approved. This reference number for Class 6.2 Category A (*) infectious substances is #ERAP2-0746 and must be on the shipping document. In the event of an accidental release, spill, leak or imminent emission of Class 6.2 Category A (*) infectious substances from a means of containment, the person who has possession of the dangerous goods, must report the discovery to Health Canada Duty Officer at ERAP 1-800-545-7661, then the response plan # ERP2-0746 will be implemented. There is a provincially trained ERAP team in place to respond to spills and they will be notified by Health Canada's Duty Officer.

ERAP FLOW CHART OF EVENTS



IMMEDIATE RESPONSE

In the event of an accidental or imminent release of any amount of dangerous goods, Class 6.2 Category A or Category B infectious substances, a person who has possession of the dangerous goods must immediately report the incident by contacting:

- (a) the appropriate provincial authority (In Saskatchewan it is the local police or 1-800-667-7525).
- (b) the person's employer.
- (c) the consignor of the dangerous goods.
- (d) for a road vehicle, the owner, lessee or charter of the road vehicle.
- (e) for Class 6.2, Infectious Substances, CANUTEC at (613) 996-6666.

The immediate report must include:

- (a) the shipping name or UN number of the dangerous good.
- (b) the quantity of the dangerous good that was originally contained in the means of containment and the amount known or suspected to have been released.
- (c) a description of the condition of the means of containment, including details as to whether the conditions of transport were normal when the means of containment failed.
- (d) the location of the accidental release.
- (e) the number of deaths and injuries resulting from the accidental release.
- (f) the number of people evacuated from the area.

30-DAY FOLLOW-UP REPORT

A follow-up report must be made by the employer of the person who had possession of the dangerous goods at the time of the accidental release. The followup report must be made in writing to the Director General within 30 days after the occurrence of the accidental release, and must include the following information:

- (a) the name and address of the business, and the name and telephone number of the person providing the information.
- (b) the date and time and location of the accidental release.
- (c) the name and address of the business of the consignor.
- (d) the classification of the dangerous good.
- (e) the estimated quantity of the dangerous goods released and the total quantity of the means of containment.
- (f) a description of the means of containment involved based on the identification markings and a description of the failure or damage to the means of containment, including how the failure or damage occurred.
- (g) the number of deaths and injuries resulting from the accidental release.
- (h) an estimate of the number of people evacuated from the area.
- (i) if an emergency response assistance plan was activated, the name of the person who responded to the emergency in accordance with the emergency response assistance plan.

INSTRUCTIONS FOR CLEAN UP OF INFECTIOUS SUBSTANCES

The following procedure is recommended for decontaminating spills of infectious substances. Preparation for the potential response should include the provision and easy accessibility of materials necessary for clean up and decontamination.

Biological spill kit contents:

- Gloves and lab coat
- Puncture resistant utility gloves
- Disinfectant – Bleach
- Squeeze bottle containing a 10% bleach solution made fresh daily
- Absorbent material – paper towels, wonder wipes
- Forceps
- Dust pan
- Garbage bucket
- Biohazardous sharps container - glassware and metal sharps
- Autoclavable waste bag – contaminated materials to be autoclaved

- a) You must wear appropriate protective clothing when approaching a spill. Wear gloves and a gown. Heavy weight, puncture resistant utility gloves such as those used for house cleaning and dish washing are recommended.

If the spill contains broken glass or other objects, these should be removed with forceps. Rigid sheets of cardboard used as a ‘pusher’ and ‘receiver’ may also be used to handle such objects and discarded into an appropriate biohazard container.

- b). Absorb the spill – since most disinfectants are less active, or even ineffective, in the presence of high concentrations of protein as are found in blood and serum, the bulk of the spilled liquid should be absorbed prior to disinfecting.

Spilled material should be absorbed with disposable absorbent material. (e.g. paper towels) After absorption of the liquid, all contaminated materials should be discarded in the biohazard waste container.

- c). Disinfect spill site using a 10% bleach solution - Cover the spill area with paper towel to avoid splashing. Gently pour disinfectant onto the paper towels, working in a circular motion from the outside to the center. Wait 30minutes.
- d). Dispose of the paper towels into an autoclave bag. Absorb any remaining disinfectant solution.
- e). Rinse spill site with water to remove any noxious chemicals or odours. The spill site should be dried to prevent slipping.
- f). Place all disposable materials, used to decontaminate the spill, into a biohazard container. The infectious waste should be decontaminated by autoclave or local provision of disposal of biomedical waste material. Any reusable materials should be decontaminated prior to storage.

BIBLIOGRAPHY

1. TRANSPORT DANGEROUS GOODS- REGULATION (Clear Language Edition)
2. Amendment 6 Draft 2 April 26, 2005 Regulations amending the Transportation of Dangerous Goods Regulations www.tc.gc.ca/tdg
3. IATA Manual, INTERNATIONAL AIR TRANSPORT ASSOCIATION, 43rd edition, 2005
4. A Guide for Shipping Diagnostic Specimen and Infectious Substances, Saf-T-Pak Inc., Edmonton, AB, 2002
5. Packaging of Infectious Substances, Diagnostic Specimens, Biological Products and Biomedical Waste for Transport, CAN/CGSB-43.125, National Standard of Canada, Government of Canada
6. Transport Canada, Surface Transport of Dangerous Goods, Infectious Substances
7. SSMLT Training Document, 2003
8. Regional Health Authority #6 TDG Training Document

ACKNOWLEDGEMENTS

1. PHH ENVIROMENTAL, Randy Scott
2. Personal communications with Garneau Stephane, David Lamarche, Ray Desjardin, Maurice Gaudet, David Greyeyes, and Eugene Delonge TDGR Inspectors, Transport Canada, July 2005
3. Personal Communication With Dave Cook, Regulatory Affairs Specialist At Saf-T-Pak, Edmonton, Ab, 2002
4. SAHO – Martine Legare, CRSP, Safety Consultant, Workplace Health, Safety and Education Services

Thank you to the members of the SSMLT that developed this TDG Training document.

Della Minielly
Sarina Clarke
Carol Jorgenson
Virginia Marsh

Appendix 3 to Part 2, Classification, of the Regulations

APPENDIX 3 GUIDE TO CATEGORY A AND CATEGORY B ASSIGNMENT

1. If the symbol "@" appears beside an infectious substance listed in one of the following categories, that infectious substance affects animals only. The UN number and shipping name are UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS.
2. If there is no symbol "@", the infectious substance affects humans or animals. The UN Number and shipping name are UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS.

The item column gives sequential item numbers for the entries in this Appendix. Beside the item number is the corresponding item number, in parentheses, in the French-language appendix.

The lists in this appendix are not exhaustive or complete and are provided for guidance to those who must classify infectious substances. If there is any doubt as to whether or not a substance is infectious or as to the category in which it must be assigned, assistance may be obtained from the Director, Office of Laboratory Security, Public Health Agency of Canada, or from the Director, Biohazard Containment and Safety, Canadian Food Inspection Agency.

As a reminder, the substances with an asterisk "" against them in column 3 of the Category A list require an Emergency Response Assistance Plan (see special provision 84).*

UN2814 Category A- Virus and Bacteria Virus

Item	Column 1 Family	Column 2 Genus	Column 3 Species
1(1)	Arenaviridae	Arenavirus	(a) Flexal virus (b) Guanarito virus* (c) Junin virus* (d) Lassa virus* (e) Machupo virus* (f) Sabia virus*
2(2)	Bunyaviridae	(1) Hantavirus	(a) Hantaviruses causing hemorrhagic fever with renal syndrome (b) Hantaviruses causing pulmonary syndrome
		(2) Nairovirus	Crimean-Congo hemorrhagic fever virus*
		(3) Phlebovirus	Rift Valley Fever virus
3(3)	Coronaviridae	Coronavirus	Human Coronavirus - SARS, Severe Acute Respiratory Syndrome
4(4)	Filoviridae	Filovirus	(a) Ebola virus* (b) Marburg virus*

Item	Column 1 Family	Column 2 Genus	Column 3 Species
5(5)	Flaviviridae	Flavivirus	(a) Dengue virus (b) Japanese encephalitis virus (c) Kyasanur Forest virus* (d) Omsk hemorrhagic fever virus* (e) Russian spring-summer encephalitis virus* (f) Tick-borne encephalitis virus (g) West Nile fever virus (h) Yellow fever virus (wild type)
6(6)	Hepadnaviridae	Orthohepadnavirus	Hepatitis B virus
7(7)	Herpesviridae (Alphaherpesvirinae)	Simplexvirus	Herpes B virus: (a) Herpesvirus simiae (b) Monkey B virus*
8(8)	Orthomyxoviridae	Influenzavirus A, B and C	Highly pathogenic avian influenza virus
9(9)	Paramyxoviridae	Morbillivirus	(a) Hendra virus* (b) Nipah virus* (Hendra-like virus)
10(10)	Picornaviridae	Enterovirus	Polioviruses
11(11)	Poxviridae	Orthopoxvirus	(a) Monkeypox virus (b) Variola* (smallpox virus)
12(12)	Retroviridae	Lentivirus	Human Immunodeficiency virus
13(13)	Rhabdoviridae	Lyssavirus	Rabies virus
14(14)	Togaviridae	Alphavirus	(a) Eastern equine encephalitis virus (b) Venezuelan equine encephalitis virus

Bacteria

Item	Column 1 Family	Column 2 Genus	Column 3 Species
1(1)		Bacillus	anthracis
2(2)		Brucella	(a) abortus (b) melitensis (c) suis
3(3)		Burkholderia	(a) mallei (formally: <i>pseudomonas mallei</i>) (Glanders) (d) pseudomallei (formally: <i>pseudomonas pseudomallei</i>)
4(4)		Chlamydia	psittaci (avian strains)
5(5)		Clostridium	botulinum
6(6)		Cocidioides	immitis
7(7)		Coxiella	burnetti
8(8)		Escherichia	coli enterotoxigenic - ETEC
9(9)		Francisella	tularensis
10(10)		Mycobacterium	tuberculosis
11(12)		Rickettsia	(a) prowazekii (b) rickettsi

Item	Column 1 Family	Column 2 Genus	Column 3 Species
12(12)		Shigella	dysenteriae (Type 1)
13(13)		Yersinia	pestis

UN2900, Category A- Virus and Bacteria

Virus

Item	Column 1 Family	Column 2 Genus	Column 3 Species
1(1)	Flaviviridae	Pestivirus	Hog Cholera virus (Classical Swine Fever)
2(2)	Paramyxoviridae	Morbillivirus	(a) Peste des petits ruminants virus (b) Rinderpest virus
3(3)	Paramyxoviridae (subfamily Paramyxovirinae)	Rubulavirus	Avian paramyxovirus Type 1 Velogenic Newcastle virus
4(4)	Picornaviridae	(1) Aphthovirus	Foot and mouth disease virus*
		(2) Enterovirus	Swine vesicular disease virus
5(5)	Poxviridae	Capripoxvirus	(a) Goat pox virus (b) Lumpy skin disease virus (c) Sheep pox virus
6(6)	Rhabdoviridae	Vesiculovirus	Vesicular stomatitis virus
7(7)	Unclassified	Unclassified	African Swine fever virus

Bacteria

Item	Column 1 Family	Column 2 Genus	Column 3 Species
1(1)		Mycoplasma	mycoides

UN3373, Category B - Virus, Bacteria and Fungi

Virus

Item	Column 1 Family	Column 2 Genus	Column 3 Species
191)	Adenoviridae	(1) Aviadenovirus	Animal, all isolates@
		(2) Mastadenovirus	(a) Animal, all isolates@ (b) Adenovirus (human, all types)
2(2)	Arenaviridae	Arenavirus	(a) Lymphocytic choriomeningitis virus (b) Mopeia virus (c) Tacaribe viruses (d) Whitewater Arroyo virus
3(3)	Arteviridae	Arterivirus	(a) Equine arteritis virus@ (b) Porcine reproductive/ Respiratory syndrome virus@ (c) Simian hemorrhagic fever virus
4(4)	Astroviridae	Astrovirus	All serotypes
5(5)	Birnaviridae	Birnavirus	(a) Infectious bursal disease virus@ (b) Infectious pancreatic necrosis virus@
6(6)	Bornaviridae	Bornavirus	Borna disease virus (CNS-encephalo-myelitis)

Item	Column 1 Family	Column 2 Genus	Column 3 Species
7(7)	Bunyaviridae	(1) Bunyavirus	(a) Aino virus@ (b) Akabane virus@ (c) Bunyamwera virus (d) California encephalitis virus (e) Jamestown Canyon virus (f) La Crosse virus (g) Lumbo virus (h) Oropouche virus (i) Snowshoe hare virus (j) Tahyna virus
		(2) Hantavirus	(a) Hantaviruses not causing pulmonary syndrome (b) Hantaviruses not causing hemorrhagic fever with renal syndrome
		(3) Nairovirus	(a) Hazara virus (b) Nairobi sheep disease virus@
		(4) Phlebovirus	(a) All species except Rift Valley fever virus (b) Toscana virus
8(8)	Caliciviridae	Calicivirus	(a) European brown hare virus@ (b) Feline calicivirus@ (c) Hepatitis E virus (d) Norwalk virus (e) Rabbit hemorrhagic disease virus@ (f) San Miguel sea lion virus@ (g) Vesicular exanthema of swine virus
9(9)	Circoviridae	Circovirus	(a) Avian circovirus@ (b) Porcine circovirus@
10(10)	Coronaviridae	(1) Coronavirus	(a) Avian infectious bronchitis virus (b) Bovine coronavirus, all strains (c) Canine, Rat and Rabbit coronavirus (d) Feline enteric coronavirus@ (e) Feline infectious peritonitis virus (f) Hemagglutinating encephalo-myelitis virus of swine (g) Human coronavirus, all strains excluding SARS (h) Mouse hepatitis virus (i) Porcine epidemic diarrhea virus@ (j) Porcine respiratory coronavirus@ (k) Transmissible gastroenteritis virus of swine (l) Turkeys enteritis coronavirus@
		(2) Torovirus	(a) Berne virus@ (b) Breda virus@
11(11)	Flaviviridae	(1) Flavivirus	(a) Kunjin virus (b) Louping ill virus (c) Murray Valley encephalitis virus (Australia encephalitis)

Item	Column 1 Family	Column 2 Genus	Column 3 Species
			(d) Powassan virus (e) Rocio virus (f) St. Louis encephalitis virus (g) Turkey meningoencephalitis virus@ (h) Wesselsbron virus (i) Yellow fever virus (vaccine strain 17D)
		(2) Hepacivirus	Hepatitis C virus
		(3) Pestivirus	(a) Bovine viral diarrhea virus@ (b) Border disease virus@
12(12)	Hepadnaviridae	(1) Delta virus	Hepatitis D (Delta) virus
		(2) Avihepadna-virus	Duck hepatitis B virus
		(3) Orthohepadna-virus	(a) Ground squirrel hepatitis B virus (b) Woodchuck hepatitis virus@
13(13)	Herpesviridae (Alphaherpesvirinae)	(1) Simplexvirus	(a) Human herpes virus 1 (b) Human herpes virus 2 (c) Mammillitis virus (bovine herpes-virus 2)
		(2) Varicellovirus	(a) All isolates, excluding pseudorabies virus (b) Bovine infectious rhinotracheitis (herpesvirus 1) (c) Equine abortion virus (equine herpesvirus 1)@ (d) Equine coital exanthema virus (equine herpesvirus 3)@ (e) Equine rhinopneumonitis (equine herpesvirus 4)@ (f) Feline rhinotracheitis (feline herpesvirus 1)@ (g) Human herpes virus 3 (Varicella-zoster virus) (h) Pseudorabies virus (suis herpes virus 1)
		(3) Unclassified	(a) Canine herpesvirus 1 @ (b) Caprine herpesvirus 1 @ (c) Cervid herpesvirus 1 and 2@
14(14)	Herpesviridae (Betaherpesvirinae)	(1) Cytomegalovirus	(a) Human cytomegalovirus (CMV) (b) Porcine cytomegalovirus (suid herpesvirus 2)@
		(2) Muromegalovirus	Caviid herpesvirus (guinea-pig cytomegalovirus)
		(3) Roseolovirus	Equine cytomegalovirus (equine herpesvirus2)@
15(15)	Herpesviridae (Gammaherpesvirinae)	(1) Lymphocryptovirus	(a) Epstein-Barr-like virus (EBV) (Monkey virus) (b) Epstein-Barrvirus (EBV) (Human herpes-virus 4) (c) Human B lymphotropic virus
		(2) Rhadinovirus	(a) Herpesvirus ateles (b) Herpesvirus saimiri (c) Malignant catarrhal fever virus (Alcelaphine herpesvirus)@
16(16)	Orthomyxoviridae	Influenzavirus A, B and C	Influenza A, B, C and all isolates except influenza A - avian H5 and H7
17(17)	Paramyxoviridae	Pneumovirus	Turkey rhinotracheitis virus@
18(18)	Paramyxoviridae (subfamily)	(1) Morbillivirus	(a) Canine distemper virus@ (b) Measles virus

Item	Column 1 Family	Column 2 Genus	Column 3 Species
	Paramyxovirinae)		(c) Phocine distemper virus@
		(2) Paramyxovirus	Parainfluenza types 1-4
		(3) Respirivirus	(a) Bovine Parainfluenza virus Type 3@ (b) Sendai virus (mouse para-influenza virus@
		(4) Rubulavirus	(a) Avian paramyxovirus Types 2-9@ (b) Mumps virus
19(19)	Paramyxoviridae (subfamily Pneumovirinae)	Pneumovirus	(a) Bovine respiratory syncytial virus@ (b) Human respiratory syncytial virus (c) Pneumonia virus of mice@
20(20)	Parvoviridae	Parvovirus	All isolates@
21(21)	Picornaviridae	(1) Cardiovirus	(a) All isolates (human) (b) Swine encephalomyocarditis virus@ (d) Theiler's murine poliovirus
		(2) Enterovirus	(a) All isolates@, excluding Swine vesicular disease virus (b) Coxsackieviruses
		(3) Hepatovirus	All isolates (including Hepatitis A, human enterovirus type 72)
		(4) Rhinovirus	(a) All isolates (human) (b) Bovine rhinovirus Types 1-3@ (c) Equine rhinovirus@ (d) Feline Rhinovirus@ (e) Rhinovirus
22(22)	Poxviridae	(1) Avipoxvirus	(a) All isolates (human) (b) All isolates@ (animal)
		(2) Leporipoxvirus	(a) Rabbit (Shope) fibroma virus (b) Squirrel fibroma virus
		(3) Orthopoxvirus	(a) All isolates@, excluding Monkeypox and Variola (smallpox) virus (b) Buffalo pox (c) Cowpox virus (d) Rabbit pox (e) Skunkpox (f) Vaccinia
		(4) Parapoxvirus	(a) All isolates@, excluding Sealpox virus (b) Bovine papular stomatitis virus (c) Orf virus (d) Pseudocowpox virus (paravaccinia) (e) Sealpox virus
		(5) Suipoxvirus	Swinepox
		(6) Yatapoxvirus	Tanapoxvirus
23(23)	Reoviridae	(1) Coltivirus	Coltivirus
		(2) Orbivirus	(a) All isolates (b) Epizootic hemorrhagic disease virus@

Item	Column 1 Family	Column 2 Genus	Column 3 Species
			(c) Equine encephalosis virus@ (d) Ibaraki virus@ (e) Palyam virus@
		(3) Orthoreovirus	(a) Animal, all isolates@ (b) Types 1, 2 and 3
		(4) Reovirus, types 1 and 2	Animal, all isolates@
		(5) Rotavirus	(a) Animal, all isolates@ (b) Rotavirus
24(24)	Retroviridae	(1) Betaretrovirus	Mason-pfizer monkey virus
		(2) Gammaretrovirus	(a) Animal, all isolates@ (b) Avian reticuloendotheliosis virus
		(3) Deltaretrovirus	Human T-cell lymphotropic viruses (HTLV)
25(25)	Retroviridae (subfamily Spumavirinae)	Spumavirus	All isolates
		Deltaretrovirus	Bovine leukemia virus
26(26)	Rhabdoviridae	(1) Lyssavirus	(a) Rabies virus-Fixed virus (b) Australian bat lyssavirus (c) Duvenhage virus (d) European bat lyssavirus 1 (e) European bat lyssavirus 2 (f) Lagos bat virus (g) Mokola virus
		(2) Vesiculovirus	(a) Alagoas virus (b) Chandipura virus (c) Cocal virus (d) Isfahan virus (e) Pyri virus (f) Vesicular stomatitis virus - Indiana lab strain
27(27)	Togaviridae	(1) Alphavirus	(a) Bebaru virus (b) Chikungunya virus (c) Everglades virus (d) Getah virus (e) Highlands J virus (f) Mayaro virus (g) Mucambo virus (h) Ndumu virus (i) O'Nyong-Nyong virus (j) Ross River virus (k) Semliki forest virus (l) Sindbis (m) Tonate virus (n) Western equine encephalitis virus strain TC-83
		(2) Arterivirus	Equine arteritis virus
		(3) Pestivirus	Bovine disease virus

Item	Column 1 Family	Column 2 Genus	Column 3 Species
		(4) Rubivirus	Rubella virus
28(28)	Transmissible Spongiform Encephalopathies		(a) Bovine spongiform encephalophy (b) Chronic wasting disease of captive mule deer/elk@ (c) Creutzfeldt-Jacob disease (d) Gertsman-Straussier-Scheinker (e) Kuru (f) Scrapie@ (g) Transmissible mink encephalo-pathy@
29(29)	Unclassified	Unclassified	Swine hepatitis E virus@

Bacteria

Item	Column 1 Genus	Column 2 Species
1(1)	Acholeplasma	oculi@
2(2)	Acinetobacter	(a) baumannii (b) calcoaceticus (c) Iwoffii (d) spp
3(3)	Actinobacillus	(a) actinomycetemcomitans (b) capsulatus@ (c) equuli@ (d) lignieresii@ (e) pleuropneumoniae@ (f) seminis@ (g) spp (h) suis@ (i) ureae@
4(4)	Actinomadura	(a) madurae (b) pelletieri
5(5)	Actinomyces	(a) bovis@ (b) gerencseriae (c) hordeovulneris@ (d) israelii (e) naeslundii (f) pyogenes (g) spp (h) suis@ (i) viscosus@
6(6)	Aeromonas	(a) hydrophila (b) punctata (c) spp
7(7)	Afipia	spp
8(8)	Agrobacterium	radiobacter
9(9)	Alcaligenes	spp

Item	Column 1 Genus	Column 2 Species
10(10)	Amycolata	autotrophica
11(11)	Anaplasma	(a) caudatum@ (b) centrale@ (c) marginale@ (d) ovis@
12(12)	Arcanobacterium	(a) haemolyticum (b) pyogenes
13(13)	Arcobacter	(a) butzeri (b) cryoaerophilus (c) spp
14(14)	Arizona	spp
15(15)	Bacillus	cereus
16(16)	Bacteroides	(a) fragilis (b) heparinolyticus (c) levii@ (d) salivosus@ (e) spp
17(17)	Bartonella	(a) bacilliformis (b) elizabethae (c) henselae (d) quintana (e) spp
18(18)	Bordetella	(a) avium@ (b) bronchiseptica (c) parapertussis (d) pertussis (e) spp
19(19)	Borrelia	(a) burgdorferi (b) duttonii (c) recurrentis (d) spp (e) vincenti
20(20)	Brachyspira	(a) hyodysenteriae (b) innocens
21(21)	Brucella	(a) canis (b) ovis (c) spp excluding abortus, melitensis and suis
22(22)	Burkholderia	(a) cepacia genomovars I (b) cepacia genomovars III (c) gladioli (d) multivorans (e) spp excluding mallei and pseudomallei (f) stabilis (g) vietnamensis
23(23)	Campylobacter	(a) coli

Item	Column 1 Genus	Column 2 Species
		(b) fetus, subspecies fetus (intestinalis) (c) fetus, subspecies venerealis (d) hyointestinalis (e) jejuni (f) lari (g) mucosalis@ (h) spp (i) sputorum
24(24)	Capnocytophaga	spp
25(25)	Cardiobacterium	hominis
26(26)	Chlamydia	(a) pneumoniae (b) psittaci (non-avian strains) (c) trachomatis
27(27)	Chryseobacterium	meningosepticum
28(28)	Citrobacter	(a) diversus (b) freundii (c) spp
29(29)	Clostridium	(a) chauvoei (b) colinum@ (c) difficile (d) haemolyticum@ (e) histolyticum (f) novyi (g) perfringens (h) septicum (i) sordellii (j) spiriforme@ (k) spp excluding botulinum (l) tetani (m) villosum@
30(30)	Corynebacterium	(a) amycolatum (b) cystitidis@ (c) diphtheriae (d) jeikeium (e) kutscheri@ (f) minutissimum (g) pilosum@ (h) pseudotuberculosis (i) renale (j) spp (k) ulcerans
31(31)	Dietzia	maris
32(32)	Dermabacter	hominis
33(33)	Dermatophilus	congolensis
34(34)	Dichelobacter	nodosus

Item	Column 1 Genus	Column 2 Species
35(35)	Edwardsiella	tarda
36(36)	Eikenella	corrodens
37(37)	Enterobacter	(a) aerogenes/cloacae (b) spp
38(38)	Enterococcus	(a) faecalis (b) faecium (c) spp
39(39)	Ehrlichia	(a) sennetsu (b) spp
40(40)	Erysipelothrix	tonsillarum
41(41)	Escherichia	(a) coli (b) coli enterohemorrhagic VTEC (EHEC) (c) coli enteroinvasive - EIEC (d) coli enteropathogenic - EPEC (e)
42(42)	Eubacterium	suis@
43(43)	Fluoribacter	bozemaniae
44(44)	Francisella	(a) novicida (b) philomiragia
45(45)	Fusobacterium	(a) necrophorum (b) spp
46(46)	Gardnerella	vaginalis
47(47)	Gordonia	spp
48(48)	Haemophilus	(a) ducreyi (b) influenzae (c) influenzaemurium@ (d) paragallinarum@ (e) parainfluenzae (f) parasuis@ (g) piscium@ (h) somnus@ (i) spp
49(49)	Helicobacter	(a) cinaedi (b) felis@ (c) fennelliae (d) mustelae@ (e) nemestrinae@ (f) pullorum (g) pylori
50(50)	Hemobartonella	felis@
51(51)	Kingella	kingae
52(52)	Klebsiella	(a) granulomatis (b) oxytoca (c) pneumoniae

Item	Column 1 Genus	Column 2 Species
		(d) spp
53(53)	Lactococcus	garvieae
54(54)	Lawsonia	intracellularis@
55(55)	Legionella	(a) micdadei (b) pneumophilia (c) spp
56(56)	Leptospira	(a) bratislava (b) canicola/copenhageni (c) grippotyphosa (d) hardjo (e) icterohaemorrhagiae (f) interrogans (g) pomona (h) sejroe (i) var ballum
57(57)	Listeria	(a) ivanovii@ (b) monocytogenes (c) spp
58(58)	Mannheimia	haemolytica
59(59)	Moraxella	(a) bovis@ (b) caprae (c) catarrhalis (d) lacunata (e) phenylpyruvica (f) spp
60(60)	Morganella	morganii
61(61)	Mycobacterium	(a) africanum (b) asiaticum (c) avium complex (d) avium/intracellulare (e) bovis (f) bovis (BCG) (g) chelonae (h) fortuitum (i) kansasii (j) leprae (k) malmoense (l) marinum (m) microti (n) paratuberculosis (o) scrofulaceum (p) simiae (q) szulgai (r) ulcerans (s) xenopi

Item	Column 1 Genus	Column 2 Species
62(62)	Mycoplasma	(a) caviae (b) hominis (c) pneumoniae (d) spp excluding mycoides
63(63)	Neisseria	(a) elongata (b) gonorrhoeae (c) meningitidis (d) spp
64(64)	Neorickettsia	helminthoeca@
65(65)	Nocardia	(a) asteroides (b) brasiliensis (c) caviae (d) farcinica (e) nova (f) otitidis-caviarum (g) pseudobrasiliensis (h) spp (i) transvalensis
66(66)	Ochrobactrum	spp
67(67)	Oligella	spp
68(68)	Ornithobacterium	rhinotracheale@
69(69)	Pandoraea	spp
70(70)	Pantoea	agglomerans
71(71)	Pasteurella	(a) aerogenes (b) anatipestifer@ (c) caballi@ (d) canis (e) dagmatis (f) granulomatis@ (g) haemolytica (h) multocida (serotypes B:2 and E:2) (i) multocida, (except serotypes B:2 and E:2) (j) multocida, subspecies gallicida (k) multocida, subspecies multocida (l) multocida, subspecies septica (m) pneumotropica (n) spp
72(72)	Peptostreptococcus	(a) anaerobius (b) indolicus@ (c) spp
73(73)	Plesiomonas	shigelloides
74(74)	Porphyromonas	spp
75(75)	Prevotella	(a) melaninogenica (b) spp
76(76)	Propionibacterium	propionicum

Item	Column 1 Genus	Column 2 Species
77(77)	Proteus	(a) mirabilis (b) penneri (c) spp (d) vulgaris
78(78)	Providencia	(a) alcalifaciens (b) rettgeri (c) spp
79(79)	Psychrobacter	(a) immobilis (b) phenylpyruvicus
80(80)	Pseudomonas	(a) aeruginosa (b) spp
81(81)	Ralstonia	spp
82(82)	Rhodococcus	(a) equi (b) spp
83(83)	Rickettsia	(a) akari (b) australis (c) canadensis (d) conorii (e) helvetica (f) montanensis (g) parkeri (h) rhipicephali (i) spp excluding prowazekii and rickettsi (j) tsutsugamuchi (k) typhi (mooseri)
84(84)	Rothia	(a) dentocarosia (b) mucilagenous
86(86)	Serpulina	spp
87(87)	Serratia	(a) liquefaciens (b) marcescens
88(88)	Shigella	(a) boydii (b) dysenteriae (other than Type 1) (c) flexneri (d) sonnei
85(85)	Salmonella	(a) abortus equi (b) abortus ovis (c) agona (d) anatum (e) arizonae (f) choleraesuis (g) derby (h) dublin (i) enteritidis (j) gallinarum@ (k) heidelberg

Item	Column 1 Genus	Column 2 Species
		(l) montevideo (m) newport (n) (other serovars) (o) paratyphi A, B and C (p) pullorum@ (q) spp (r) typhi (s) typhisuis@ (t) typhimurium
89(89)	Staphylococcus	(a) aureus (b) aureus (MRSA) (c) epidermidis (d) intermedius@
90(90)	Stenotrophomonas	maltophilia
91(91)	Streptobacillus	(a) moniliformis (b) spp
92(92)	Streptococcus	(a) agalactiae@ (b) bovis@ (c) dysgalactiae@ (d) equi@ (e) pneumoniae (f) pyogenes (g) spp (h) suis (i) uberis@
93(93)	Taylorella	equigenitalis@
94(94)	Treponema	(a) carateum (b) pallidum (c) pertenu (d) spp (e) vincentii
95(95)	Tsukamurella	spp
96(96)	Ureaplasma	urealyticum
97(97)	Vagococcus	salmoninarum@
98(98)	Vibrio	(a) cholerae (b) parahaemolyticus (c) spp (d) vulnificus
99(99)	Yersinia	(a) enterocolitica (b) pseudotuberculosis (c) ruckeri@

Fungi

1(1)	Aspergillus	(a) flavus (b) fumigatus
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		(c) nidulans (d) niger (e) oryzae (f) terreus
2(2)	Blastomyces	dermatitidis (formerly: <i>Ajellomyces dermatitidis</i>)
3(3)	Candida	(a) albicans (b) glabrata (c) guilliermondii (d) krusei (e) parapsilosis
4(4)	Cladophialophora	bantiana (formerly: <i>Cladosporium bantianum</i>)
5(5)	Cladosporium	carrionii
6(6)	Cryptococcus	neoformans
7(7)	Emmonsia	parva
8(8)	Epidermophyton	floccosum
9(9)	Histoplasma	(a) capsulatum (formerly: <i>Ajellomyces capsulatum</i>) (b) capsulatum var capsulatum (c) capsulatum var duboisii (d) capsulatum var farciminosum
Item	Column 1 Genus	Column 2 Species
10(10)	Loboa	loboi
11(11)	Microsporum	(a) audouinii (b) canis (c) distortum (d) equinum (e) ferrugineum (f) fulvum (g) gypseum (h) nanum (i) persicolor (j) praecox (k) vanbreuseghemii
12(12)	Paracoccidioides	brasiliensis
13(13)	Penicillium	marneffeii
14(14)	Sporothrix	(a) Schenckii var luriei (b) Schenckii var schenckii
15	Trichophyton	(a) concentricum (b) equinum/autotrophicum (c) equinum/equinum (d) gourvilii (e) megninii (f) mentagrophytes/erinacei (g) mentagrophytes/interdigitale (h) mentagrophytes/nodulare (i) mentagrophytes/ mentagrophytes (j) mentagrophytes/quinckeanum

		(k) rubrum (l) schoenleinii (m) simii (n) sudanese (o) tonsurans (p) violaceum (q) yaoundei
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FREQUENTLY ASKED QUESTIONS

Question: Who is required to comply with the TDG Regulations?

Answer: TDG Regulations are legally enforceable requirements that are established under the TDG Act, which has been passed by Parliament. The Regulations must be complied with when handling, offering for transport or transporting dangerous goods.

Question: How do the TDG Regulations relate to standardized health care Universal Precautions?

Answer: Universal Precautions are established by the health care industry to protect health care workers from being exposed to an infectious substance. The TDG Regulations establish documentation, labeling, placarding and packaging requirements for infectious substance to protect workers that handle and transport infectious substances. In some cases, the infectious substances are solely handled and transported by persons in the health care industry; however, in most cases it is a courier or other transport company that transports the infectious substance from one location to another.

Question: A doctor has obtained a blood sample from a patient that is known to have Hepatitis B. Does the blood sample have to be classified in accordance with TDG requirements and the shipping document, packaging and labeling have to specifically identify the sample as containing Hepatitis B?

Answer: Yes. The sample is known to contain an infectious substance.

Question: A doctor does not identify a sample as containing an infectious substance because the doctor does not want anyone to know that the individual from whom the sample was collected has a specific disease. The doctor justifies this action based on doctor/patient confidentiality. Is the doctor's action in compliance with the TDG Regulations and what recourse may be taken by Transport Canada if an accident occurs when the sample is in transport?

Answer: The doctor is in non-compliance with the TDG Regulations since the doctor knows and/or reasonably believes that that sample contains an infectious substance. Measures that have been put in place by the health care industry to protect doctor/patient confidentiality (i.e. anonymous sample numbers, confidentiality agreements, etc.) are not breached by the TDG Regulations since the regulations do not require the identification of the sample source, rather that the sample only contains an infectious substance.

Transport Canada may initiate an investigation into an incident. The doctor may be charged under the TDG Act if it is found that the doctor knowingly did not classify a sample that is handled, offered for transport or transported. Section 33 of the TDG Act states that :

Every person who contravenes or fails to comply with a provision of this Act is guilty of

(a) an offence punishable on summary conviction and liable to a fine not exceeding fifty thousand dollars for a first offence, and not exceeding one hundred thousand dollars for each subsequent offence; or

(b) an indictable offence and liable to imprisonment for a term not exceeding two years.

Question: A pregnant woman has provided a blood sample for routine screening for Hepatitis as a measure to establish her general health. The pregnant woman has no history of being diagnosed with Hepatitis. How should this sample be managed to ensure compliance with the TDG Regulations?

Answer: The sample is to be handled, offered for transport and transported in accordance with requirements set forth in Part 1, Section 1.42, since the sample is a diagnostic specimen and it is believed to not contain an infectious substance.

Section 1.42 states:

These Regulations do not apply to substances in cultures, diagnostic specimens or other similar substances that are reasonably believed not to contain infectious substances if the substances are contained

(a) in a Type 1B or Type 1C means of containment that is in compliance with CGSB-43.125; or

(b) in a means of containment that is designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no release of the substances.

Question: Blood collected at a blood donor clinic is being transported to an approved storage facility. Statistically, there is a potential that any one of the containers filled with blood may contain an infectious substance. Should all of the collected blood be sent as an infectious material?

Answer: No. Statistical inference should not be used when establishing requirements for compliance with the TDG Regulations. The blood is only handled, offered for transport and transported as an infectious substance if it is “reasonably believed” that it contains an infectious substance. Blood collected at donor clinic is usually assumed to be free of infectious substances until diagnostics tests prove otherwise.

Question: A blood sample was shipped from a donor clinic to a storage facility under the assumption that it does not contain an infectious substance. The sample is tested and found to contain Hepatitis “C”. The blood is to be sent to another location for disposal. What requirements are to be put in place for the handling, offer for transport and transport of the blood?

Answer: The first shipment to the storage facility may be sent as a diagnostic specimen as per Section 1.42 of the TDG Regulations.

After testing positive, the blood should now be sent as an infectious substance and all requirements of the TDG Regulations must be complied with.

Although the sample was “reasonably believed” to not contain an infectious substance, requirements of the TDG Regulations must be put in place now that analysis of the blood has identified the presence of Hepatitis “C”.

TRANSPORT OF INFECTIOUS SUBSTANCES BY ROAD, RAIL OR SHIP ON A DOMESTIC VOYAGE

1 JANUARY 2005

On 1 January 2005, the 2005/2006 edition of the ICAO Technical Instructions come into force. This edition includes the new classifying scheme for infectious substances currently in the 13th Edition of the UN Model Regulations.

The TDG Regulations have not yet been updated to include the new requirements for transporting infectious substances. However, consignors may continue to use the current requirements and exemptions in the TDG Regulations for road, rail or ship transport when there is no air transport involved, OR

use section 1.10 of Part 1 of the TDG Regulations which allows the use of the classification in the ICAO Technical Instructions.

The current TDG Regulations can be interpreted as allowing the means of containment and marking required by the ICAO Technical Instructions for Category A and Category B to be used.

Substances that healthcare professionals have no reason to suspect contain infectious substances continue to be exempt from the Regulations except for means of containment and must be contained in Type 1B or Type 1C means of containment or in a means of containment that is designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no release of the substance.

Biological products continue to be exempt from the Regulations except for means of containment and must be contained in Type 1B means of containment or in a means of containment that is designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no release of the substance.

The current TDG Regulations require the risk group to be indicated on a shipping document (see paragraph 3.5(1)(c)(vii)). This should not be a problem because risk group designations are still used in laboratories and healthcare and research facilities to determine the level of containment protection required when working with the substance.

In the Amendment 6 (3) Subparagraph 3.5(1)(c)(vii) of the Regulations is repealed.