



CIVIL AVIATION PUBLICATION

CAP 02

DANGEROUS GOODS

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CAP 02

DANGEROUS GOODS

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1. GENERAL

1.1 Intent

This Civil Aviation Publication (CAP) provides information and CAA policy regarding the transport of Dangerous Goods by air and includes applicable requirements, policy and additional guidance material to assist operators, shippers, freight forwarders and ground handling agents in the safe carriage of dangerous goods.

1.2 References

This CAP should be read in conjunction with the following documents used as reference material.

- (a) ANTR Part VII, including definitions;
- (b) ICAO Doc. 9284-AN/905 Technical Instructions for the Safe Transport of Dangerous Goods by Air;
- (c) IATA Dangerous Goods Regulations

1.3 Applicability

The requirements presented in this publication must be applicable to all operations of civil aircraft with the exception of any dedicated aircraft operation involving the spraying or dropping of articles/substances involved in agricultural, horticultural, forestry, pollution or disaster control.

The ANTRs do not apply to dangerous goods of a type specified in the Technical Instructions or IATA Regulations which are:

- (a) articles and equipment required to be carried on an aircraft for the purpose of the good order of the flight in accordance with normal practice whether or not such articles and equipment are required to be carried or intended to be used on that particular flight;
- (b) solely intended for the use of passengers or crew members or for sale to the passengers or crew members of the aircraft during the flight in question;
- (c) to provide veterinary aid or a humane killer for an animal during flight; and
- (d) to provide medical aid to a person or persons during flight.

Where articles and substances intended as replacements for those described in (a) and (b) above or which have been removed for replacement are carried on an aircraft, they must be transported in accordance with the provisions of this procedure except as permitted in the Technical Instructions.

The goods specified in sub-paragraphs (c) and (d) above must only be carried if;

- (a) they are or may be required for use during the flight;



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- (b) they are or may be required for use during a subsequent flight by the same aircraft and it will not be practicable to load the goods on the aircraft in the intervening period before the commencement of that subsequent flight; and
- (c) they were used or might have been required for use during a previous flight by the same aircraft and it has not been practicable to unload them from the aircraft since that flight.

1.4 Carriage of Dangerous Goods Approval

The transport of dangerous goods by air may only be conducted by approved operators as established in ANTR Part VII using the detailed specifications and procedures provided in the ICAO Technical Instructions.

A Bahraini operator is authorised by the issuance of the AOC and the Carriage of Dangerous Goods will be stated on the Operations Specifications.

Foreign operators, which are authorised by the State of Registry/Operator for the Carriage of Dangerous Goods, may be approved upon application to the Air Transport Directorate to operate over, into and out of Bahrain. Refer to Bahrain AIP for details.

Freight Forwarders and Handling Agents which are involved in the Carriage of Dangerous Goods, are approved by the Air Transport Directorate after audit and recommendation by the Aircraft Permits and Licensing Section.

Note: Carriage of explosives, weapons, forbidden goods, radioactive materials require additional authorisation.

1.5 Dangerous Goods Technical Instructions

All operators, shippers and agents must ensure compliance with the detailed provisions contained in Technical Instructions for the Safe Transport of Dangerous Goods by Air.

Note: Whilst the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air is referred to throughout this publication, the current copy of the IATA Dangerous Goods Regulations may also be utilised.

2. FORBIDDEN TRANSPORT OF DANGEROUS GOODS

2.1 Requirement

Article 14 of the Bahrain Civil Aviation Law and ANTR Part VII expressly forbids the transport or overflight of the following items by aircraft except with prior permission from Civil Aviation Affairs and in accordance with the conditions mentioned in this permission:

- (a) articles and substances that are identified in the Technical Instructions as being forbidden for transport in normal circumstances; such as
 - (1) Weapons and munitions.



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- (2) Poisonous Gases.
 - (3) Germs.
 - (4) Explosives, unless required on board the aircraft for its operation, or for signalling.
 - (5) Radioactive materials, radioisotopes and similar substances;
 - (6) Any other prohibited item as determined by the competent authorities.
- (b) infected live animals

2.2 Exemptions

Application for permission to transport the above items must be submitted, in writing, to the Chief Aviation Permits and Licensing Section.

An aircraft operating to/from Bahrain or overflying Bahrain Flight Information Region (FIR) may not carry, or have loaded therein, or suspended there under, dangerous goods which, in accordance with the Technical Instructions or IATA Regulations, are forbidden for transport by air, without the written exemption issued by Civil Aviation Affairs (CAA) in accordance with requirements specified in the Technical Instructions or IATA Regulations. A copy of any written Exemption granted by CAA must accompany the relevant consignment.

Note: Refer to Appendix 4 for application for exemption.

2.3 Dangerous goods forbidden for transport by air under any circumstances

Articles and substances that are specifically identified by name or by generic description in the Technical Instructions as being forbidden for transport by air under any circumstances cannot be carried on any aircraft within the Bahrain FIR.

3. SHIPPERS

3.1 Shipper Responsibilities

The shipper, and the shipper alone, is responsible for properly preparing a shipment of dangerous goods for transport by air as he/she is the only person having direct knowledge of what is being shipped. All other parties subsequently involved in the shipment are reliant on information provided by the shipper. Where the shipper does not have staff trained in accordance with the Technical Instructions or IATA Regulations, the freight forwarder may act on the shipper's behalf to provide such technical support/advice as may be required in order to correctly and safely prepare the shipment.

Shippers of dangerous goods must process such goods for transport by air utilising the services of only those freight forwarder agencies that have been inspected and certified by CAA as being competent to perform such operations.



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Before consigning any package of dangerous goods for carriage by air, the shipper and freight forwarder must ensure that:

- (a) the goods are correctly identified and classified. When in doubt as to the correct identification of the goods in question, the shipper should refer to the manufacturer to obtain the necessary information – or – should seek the services of a reputable chemical laboratory for substance analysis. The latter also applies as/when a leak or spill occurs in the aircraft cargo hold, on the apron, or elsewhere on the aerodrome, of a substance of unknown and questionable composition;
- (b) the goods are not of a category whose carriage by air is prohibited by relevant provisions of the Technical Instructions or IATA Regulations;
- (c) the goods are packed, marked and labelled in accordance with the Technical Instructions or IATA Regulations and also that the packaging used is in compliance with specifications as stipulated in those documents;
- (d) the Special Provisions and the State and Operator variations applied to articles and substances as contained in the List of Dangerous Goods are appropriately administered;
- (e) the package is in fit condition for carriage by air;
- (f) the Dangerous Goods Transport Document has been completed and the declaration has been signed by the true shipper of the goods.

4. FREIGHT FORWARDERS

4.1 Application

The requirements for the issue of a certificate are as follows:

- (a) An application to be submitted for DG certification on CAA Form ALD/LIC/F001 enclosing copies of current training certificates of at least two staff members and a cheque of payment for the annual fee;
- (b) Absence of any previous offence, which led to the revocation of a certificate.
- (c) At least two staff members must possess a current DG training certificate (ab-initio or biennial refresher) issued by a CAA approved DG training facility.
- (d) Clearance of any discrepancies noted in a CAA inspection of the agency.
- (e) Payment by cheque of annual fee;
- (f) Unless already procured, the agency must obtain;
 - (1) ANTR Part VII (Refer to www.caa.gov.bh)



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- (2) ICAO Technical Instructions for the Transport of Dangerous Goods by Air (current edition); or
- (3) IATA DG Regulations (current edition).

4.2 Approval of Freight Forwarders

In the case of Freight Forwarders, and on completion of an inspection by an Aeronautical Licensing Directorate (ALD) Inspector, the successful application is awarded a CAA Licence for Exercising Air Cargo Activities from the Air Transport Directorate. The Licence Number shown on this Certificate must be quoted in the “Additional Handling Information” box of the Airway bill accompanying the consignment.

Such agencies will prominently display the CAA Agency Licence Number. The DG training of a minimum of two freight forwarding agency staff members must be current. Acceptance and processing of dangerous goods by a non-certified freight forwarder (either directly or by temporary assignment to an alternative freight forwarder) would be considered a violation of the Bahrain Civil Aviation Law (Article 121, Para 2) and could subject the violator to applicable penalties.

4.3 Responsibilities of Freight Forwarders

Before consigning any package of dangerous goods for carriage by air, the freight forwarder must ensure that;

- (a) the goods are correctly identified and classified.
- (b) the goods are not of a category whose carriage by air is prohibited by relevant provisions of the Technical Instructions or IATA Regulations;
- (c) the goods are packed, marked and labelled in accordance with the Technical Instructions or IATA Regulations and that the packaging used is in compliance with those specifications;
- (d) the Special Provisions and the State and Operator variations applied to articles and substances as contained in the List of Dangerous Goods are appropriately administered;
- (e) the package is in fit condition for carriage by air.

5. OPERATORS

5.1 Approval of Operators

An Operator intending to transport dangerous goods by air must first obtain necessary approvals from the concerned authorities. The general approval for an operator to carry Dangerous Goods by Air is granted to an Operator under the provisions contained in



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ANTR Part VII and AOC and accompanying Operations Specifications after the operator has met all operational, documental and training requirements.

5.2 Responsibilities of Operators

The operator must ensure that all relevant documents accompanying the dangerous goods are correctly completed and certified.

The operator must ensure that the package, overpack or freight containers containing dangerous goods, is inspected in accordance with the acceptance procedures in the Technical Instructions. Operators are to ensure that an acceptance checklist is available and complied with.

The operator is responsible for the removal of any contamination in the aircraft and the repair of any damage to the aircraft.

The operator has incorporated the following in its Operations Manual:

- (a) such information as will enable the flight crew to carry out its responsibilities with regard to the transport of dangerous goods;
- (b) instructions as to the action to be taken to notify emergency personnel responding in the event of emergencies arising involving dangerous goods.

6. GROUND HANDLING AGENCIES

6.1 Application

The requirements for the issue of a certificate are as follows:

- (a) An application to be submitted to the CAA for DG certification on CAA Form ALD/LIC/F001 enclosing copies of current training certificates of at least two staff members and a cheque of payment for the annual fee;
- (b) Absence of any previous offence, which led to the revocation of a certificate.
- (c) At least two staff members must possess a current DG training certificate (ab initio or biennial refresher) issued by a CAA approved DG training facility.
- (d) Clearance of any discrepancies noted in a CAA inspection of the agency.
- (e) Payment by cheque of annual fee;
- (f) Unless already procured, the agency must obtain;
 - (1) ANTR Part VII (Refer to www.caa.gov.bh)
 - (2) ICAO Technical Instructions for the Transport of Dangerous Goods by Air (current edition); or



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- (3) IATA DG Regulations (current edition).

6.2 Approval of Ground Handling Agencies

In the case of Ground Handling Agents, on completion of inspection by an ALD Inspector, the successful application is awarded a CAA Licence for Exercising Air Cargo Activities by the Air Transport Directorate.

The Licence Number shown on this Certificate must be quoted in the “Additional Handling Information” box of the Airway bill accompanying the dangerous goods consignment.

6.3 Responsibilities of Ground Handling Agencies

The Ground Handling Agency acting on behalf of the operator of an aircraft must ensure that dangerous goods to be transported by air are;

- (a) received from CAA certified freight forwarders and that the accompanying Airway bill contains the statement “CAA Certified Dangerous Goods Agency Licence No: _____” in the Handling Information Box;
- (b) identified, packaged, marked, labelled and documented in accordance with an appropriate acceptance checklist which must be completed in duplicate;
- (c) not leaking or damaged so that the contents may escape or become damaged:
 - (1) before accepting the package; and
 - (2) before loading or causing the package to be loaded on board the aircraft or before suspending or causing the package to be suspended beneath the aircraft, as the case may be; and
 - (3) after unloading by inspecting for signs of damage or contamination on any part of the aircraft, or any sling or other apparatus which has been used to suspend goods beneath the aircraft, in which;
 - (i) a unit load device containing dangerous goods was stowed; or
 - (ii) any damaged or leaking package of dangerous goods was loaded.
- (d) unloaded, or cause to be unloaded, any package or dangerous goods which appears to be leaking or damaged on or beneath an aircraft and must ensure that other cargo or baggage loaded on or suspended beneath that aircraft is in a fit state for carriage by air and has not been contaminated.

Ground Handling Agencies are to ensure that acceptance checklist is available and complied with.



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7. PACKING REQUIREMENTS

Dangerous goods must be packed in accordance with the provisions of ANTR Part VII and as provided for in the Technical Instructions. In particular; packaging used for the transport of dangerous goods by air must;

- (a) be of good quality and construction and securely closed so as to prevent leakage which might be caused in normal conditions of transport, by changes in temperature, humidity or pressure, or by vibration.
- (b) be suitable for the contents. Packaging in direct contact with dangerous goods must be resistant to any chemical or other action of such goods.
- (c) meet the material and construction specifications in the Technical Instructions.
- (d) be tested in accordance with the provisions of the Technical Instructions.
- (e) must be capable of withstanding, without leaking, the pressure stated in the Technical Instructions whenever retention of a liquid is a basic function.

Inner packaging must be so packed, secured or cushioned as to prevent their breakage or leakage and to control their movement within the outer packaging(s) during normal conditions of air transport. Cushioning and absorbent materials must not react dangerously with the contents of the packaging.

No packaging must be re-used until it has been inspected and found free from corrosion or other damage. Where a packaging is re-used, all necessary measures must be taken to prevent contamination of subsequent contents.

If, because of the nature of their former contents, un-cleaned empty packaging may present a hazard, they must be tightly closed and treated according to the hazard they constitute.

No harmful quantity of a dangerous substance must adhere to the outside of packages.

8. LABELLING AND MARKING REQUIREMENTS

8.1 Labels

Unless otherwise provided for in the Technical Instructions, each package of dangerous goods must be labelled with the appropriate labels and in accordance with the provisions set forth in those Instructions. (Refer to Appendix 5 for examples)

8.2 Markings

Unless otherwise provided for in the Technical Instructions, each package of dangerous goods must be marked with the proper shipping name of its contents and, when assigned, the UN number and such other markings as may be specified in those Instructions.



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Unless otherwise provided for in the Technical Instructions, each packaging manufactured to a specification contained in those Instructions must be so marked in accordance with the appropriate provisions of those Instructions and no packaging must be marked with a packaging specification marking unless it meets the appropriate packaging specification contained in those Instructions.

8.3 Languages to be used for markings

The English language must be used for the markings related to dangerous goods.

9. LOADING AND STOWAGE

9.1 General

Both the Operator and/or their Ground Handling Agency have a dual responsibility for the correct and safe loading and stowage.

9.2 Inspection for Damage or Leakage

A unit load device must not be loaded aboard an aircraft unless the device has been inspected and found free from any evidence of leakage from, or damage to, any dangerous goods contained therein. Leaking or damaged packages, overpacks or freight containers must not be loaded on an aircraft.

Where any package or dangerous goods loaded on an aircraft appears to be damaged or leaking, the operator or the ground handling agency acting on behalf of an operator must remove such package from the aircraft, or arrange for its removal by an appropriate authority or organisation, and thereafter must ensure that the remainder of the consignment is in a proper condition for transport by air and that no other package has been contaminated.

9.3 Radioactive Materials

Packages and overpacks containing dangerous goods and freight containers containing radioactive materials must be loaded and stowed on aircraft in accordance with the provisions of ICAO Technical Instructions (Doc 9284).

Packages and overpacks containing dangerous goods and freight containers containing radioactive materials must be inspected for evidence of leakage or damage before loading on an aircraft or into a unit load device.

Packages or overpacks containing dangerous goods and freight containers containing radioactive materials must be inspected for signs of damage or leakage upon unloading from the aircraft or unit load device. If evidence of damage or leakage is found, the area where the dangerous goods or unit load device were stowed on the aircraft must be inspected for damage or contamination. An aircraft which has been contaminated by radioactive materials must immediately be taken out of service and not returned to service until the radiation level at any accessible surface and the non-fixed contamination are not more than the values specified in the Technical Instructions.



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9.4 Separation and Segregation

Packages containing dangerous goods which might react dangerously one with another must not be stowed on an aircraft next to each other or in a position that would allow interaction between them in the event of leakage.

Packages and infectious substances must be stowed on an aircraft in accordance with the provisions of the Technical Instructions.

Packages of radioactive materials must be stowed on an aircraft so that they are separated from persons, live animals and undeveloped film, in accordance with the provisions in the Technical Instructions.

9.5 Securing of Dangerous Goods Cargo Loads

When dangerous goods are loaded in an aircraft, the operator, or the ground handling agency acting on behalf of an operator, must protect the dangerous goods from being damaged, and must secure such goods in the aircraft in such a manner that will prevent any movement in flight which would change the orientation of the packages. For packages containing radioactive materials, the securing must be adequate to ensure that the separation requirements are met at all times.

9.6 Loading on Cargo Aircraft

Except as otherwise provided in the Technical Instructions, packages of dangerous goods bearing the “Cargo aircraft only” label must be loaded in such a manner that a crew member or other authorised person can see, handle and, where size and weight permit, separate such packages from other cargo.

10. SPECIFIC REQUIREMENTS

10.1 Carriage of Dangerous Goods: Overflying Bahrain FIR

Operators proposing to carry dangerous goods and applying for permission to overfly the Bahrain Flight Information Region (FIR), must ensure that all dangerous goods have been packed, marked, labelled and handled in accordance with ICAO Annex 18 – Safe Transport of Dangerous Goods by Air, and the requirements of ICAO Technical Instructions Doc. 9284-AN/905, and must make an undertaking to CAA to this effect.

This undertaking must be made at the time of providing notification of overflight/applying for the required permission. (Aeronautical Information Publication Bahrain FIR GEN 1.4, Paragraph 1.3.2 refers).

10.2 Transportation of Arms, Ammunition and all Classes of Explosives

- (a) The transportation of arms, ammunition and all classes of explosives from/to/through Bahrain requires prior permission to be obtained from the Ministry of the Interior (MOI) and Civil Aviation Affairs (CAA) of the Kingdom of Bahrain.



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- (b) Under exceptional circumstances, requests for carriage of the above types of dangerous goods may be considered for approval by CAA when:
- (1) the Ministry of Interior has no Public Security objections; and
 - (2) the goods are transported in accordance with ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284-AN/905).
- (c) Permission for transportation of Arms, Ammunition and all Classes of Explosives can be obtained by following the steps described below:

TRANSPORTATION OF ARMS, AMMUNITION AND ALL CLASSES OF EXPLOSIVES		
	TO/FROM BAHRAIN	TRANSIT/TRANSHIPMENT AT BAHRAIN INTERNATIONAL AIRPORT
Application Form	ALD/LIC/F002A	ALD/LIC/F002B
Applicant to complete in BLOCK PRINT	Items I to IV on the form	Items I to IV on the form
Forward/fax the completed form at least seven days prior to the proposed date of transportation	The Ministry of Interior Public Security Headquarters Tel: +973 17 272 111 Fax: +973 17 270 463	Directorate of Public Security Airport Division Bahrain International Airport Tel:+973 17 321 604/ 17 321 605 Fax:+973 17 332 718
The MOI will indicate their 'no objection' at Item V of the application form and forward/fax it back to the Operator.		
On receipt of the MOI's "no objection" the Operator must forward/fax the application to CAA for their approval at least three working days prior to the proposed date of transportation (see 7.1.15).		
The CAA will notify the Operator of its approval by fax, and will also notify the Airport Director, Air Traffic Control, Airport Police, Customs, and Bahrain Airport Services – Cargo Section of the movement of dangerous goods.		

In the case of explosives, the operator is required to ensure that arrangements are made with the consignee to collect the shipment **IMMEDIATELY** on arrival at Bahrain International Airport.

10.3 Transportation of Radioactive Material through Bahrain International Airport

The transportation of radioactive material by air from/to/through Bahrain requires prior permission to be obtained from the Bahrain CAA. Under exceptional circumstances, requests for carriage of the above types of dangerous goods may be considered for



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approval by CAA when the goods are transported in accordance with ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air.

Permission for transportation of radioactive material by air from/to/through Bahrain can be obtained by following the steps described below:

- (a) Application must be made on Form ALD/LIC/F034, 'Transportation of Radioactive Material by Air From/To/Through Bahrain International Airport'. Application forms can be obtained by writing to the CAA or from www.caa.gov.bh.
- (b) The completed application form should be forwarded by fax to Bahrain CAA for approval at least three (3) days prior to the proposed date of shipment.
- (c) The CAA will notify the Operator, by fax, of its decision.

The operator of an aircraft must not permit it to fly for the purpose of carrying passengers or cargo if he knows or suspects that radioactive materials have leaked or otherwise contaminated any part of the aircraft or any sling or other apparatus attached to the aircraft.

However this is not applicable if the radiation level resulting from the fixed contamination on any accessible surface and the non-fixed contamination are not more than the relevant values specified in the Technical Instructions or IATA Regulations.

An aircraft which has been contaminated by radioactive materials must immediately be taken out of service and not returned to service until the radiation level at any accessible surface and the non-fixed contamination are not more than the values specified in the Technical Instructions.

Hazardous contamination found on aircraft as a result of leakage or damage from dangerous goods must be removed immediately.

10.4 Changes in Flight Arrangements

Should there be any changes in flight arrangements subsequent to above approvals being obtained, the Operator is required to complete a fresh application form with the new flight details and fax it, along with a copy of the previously approved application form to Civil Aviation Affairs for approval.

In such instances, a further 'no objection' from the MOI is not required except for applications for transportation of Arms, Ammunition and Explosives.

10.5 Changes to Consignment

If any changes are made to the contents of a consignment, e.g. a change in items, quantity, weight per package, etc., for which MOI 'no objection' and CAA approval have previously been given, the approval will no longer be valid for that consignment, and a fresh application will need to be submitted.



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10.6 Addresses and Contact Details

- (a) **Ministry of Interior** (*for applications for Transportation of Arms, Ammunition and Explosives*)

- (i) **Transport To/From Bahrain** (ii) **Transit/Transshipment at Bahrain**

The Ministry of Interior
Public Security Headquarters
P.O. Box 13
Bahrain

Tel: +973 17 272 111
Fax: +973 17 270 463
Telex: 9572 BN

Directorate of Public Security
Airport Division
Bahrain International Airport
Bahrain

Tel: +973 17 321 604 or 17 321 605
Fax: +973 17 332 718

- (b) **Civil Aviation Affairs**

Chief Aviation Permits and Licensing
Aeronautical Licensing Directorate
Civil Aviation Affairs
P.O. Box 586
Bahrain

Tel: +973 17 329 117
Fax: +973 17 321 061
Telex: 9186 AIRCIV BN

11. DANGEROUS GOODS TRANSPORT DOCUMENT

An aircraft must not carry dangerous goods unless the shipper of the goods has furnished the operator of the aircraft, with a Dangerous Goods Transport Document bearing the Shipper's Declaration except that such document must not be required in respect of those categories of dangerous goods specified in the Technical Instructions or IATA Regulations as being goods for which such document is not required.

The Dangerous Goods Transport Document must be completed and signed only by the actual shipper of the goods and it must;

- (a) describe the dangerous goods in accordance with, and contain such information as is required by, the provisions of the Technical Instructions or IATA Regulations; and
- (b) contain a declaration stating that the dangerous goods are:
- (1) fully and accurately described by their proper shipping name;
 - (2) correctly classified, packaged, marked and labelled; and



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- (3) in all respects in proper condition for carriage by air according to applicable international and national governmental regulations.

Note: The Dangerous Goods Transport Document must be completed and the declaration signed by the true shipper of the goods.

The Dangerous Goods Transport Document must be completed and signed in duplicate by the shipper (the second copy may be a carbon copy). One copy of the document will be attached to the Airway bill and the second copy (or carbon copy) must be retained on file by the operator or the ground handling service acting on his behalf for a minimum of three months, together with any other document in respect of dangerous goods furnished him in accordance with the ANTRs (as a minimum; the acceptance checklist and a copy of the written information [NOTOC] provided to the pilot-in-command and which has been receipt-acknowledged with his signature).

12. PROVISION OF INFORMATION

12.1 Provision of Information to Pilot in Command

The operator of an aircraft in which dangerous goods are to be carried must provide the pilot-in-command as early as practicable before departure of the aircraft with written information as specified in the Technical Instructions.

12.2 Information and Instructions to Flight Crew Members

The operator must provide such information in the Operations Manual as will enable the flight crew to carry out its responsibilities with regard to the transport of dangerous goods and must provide instructions as to the action to be taken in the event of emergencies arising involving dangerous goods.

12.3 Information to Other Persons

Operators, shippers, freight forwarders and ground handling agencies involved in the transport of dangerous goods by air must provide such information to their personnel as will enable them to carry out their responsibilities and must provide instructions as to the action to be taken in the event of emergencies arising involving dangerous goods.

12.4 Information from Pilot-In-Command to Aerodrome Authorities

If an in-flight emergency occurs, the pilot-in-command must, as soon as the situation permits, inform the appropriate air traffic services unit, for the information of aerodrome authorities, of any dangerous goods on board the aircraft, as provided for in the Technical Instructions.

12.5 Information in the Event of an Aircraft Accident or Incident

In the event of an aircraft accident or a serious incident where dangerous goods carried as cargo may be involved, the operator of the aircraft carrying dangerous goods as cargo must provide information, without delay, to emergency services responding to the



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accident or serious incident about the dangerous goods on board, as shown on the written information to the pilot-in-command. As soon as possible, the operator must also provide this information to the appropriate authorities of the State of the Operator and the State in which the accident or serious incident occurred.

In the event of an aircraft incident, the operator of an aircraft carrying dangerous goods as cargo must, if requested to do so, provide information without delay to emergency services responding to the incident and to the appropriate authority of the State in which the incident occurred, about the dangerous goods on board, as shown on the written information to the pilot-in-command.

A Bahraini operator must also notify the Civil Aviation Affairs. (See also Section 14. below)

13. TRAINING

The shipper of dangerous goods by air or the freight forwarder acting on his behalf, the aircraft operator and ground handling service acting on his behalf, agencies engaged in the security screening of passengers and their baggage and cargo, must inform any of their respective employees whose duties include a function concerned with the carriage of passengers or cargo by air, of the provisions of the Technical Instructions or IATA Regulations.

For this purpose, they must establish and undertake training programmes as required and outlined in Part 1, Chapter 4 of the Technical Instructions or Section 1.5 of the IATA Regulations as pertain to various categories of personnel. Dangerous Goods training programmes conducted in or outside Bahrain for Operator's personnel and the instructors conducting such programmes may be subject to examination and approval by the Authority. The current records/certificates of staff/employees for whom training is required must be maintained on file and be readily available for inspection as/when required by a CAA Inspector.

An operator must establish and maintain staff training programmes, as required by ANTR-OPS 1 Subpart R, or ANTR-OPS 3 Subpart R, as applicable.

14. DANGEROUS GOODS OCCURRENCES

14.1 Immediate Action

When a package containing Dangerous Goods is suspected to be damaged, leaking or emitting dangerous fumes, the following action must be taken immediately:

- (a) Call the Airport Fire Services and report the incident.
- (b) Ensure the area is sealed off and that all persons are kept clear.
- (c) Scrutinise cargo documents to identify hazards to assist fire services.

Note: Refer to Appendix 1



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14.2 Reporting

For Bahraini operators or for all operators if Bahrain is the State in which the incident occurred;

Complete CAA Form ALD/LIC/F020 with whatever information is available and forward it *as soon as possible* to:

Chief Aviation Permits and Licensing
Civil Aviation Affairs
P. O. Box: 586
Kingdom of Bahrain

Tel.: (973) 17 329117
Fax.: (973) 17 321061

Note: Do not withhold the form for full information to become available.

15. DANGEROUS GOODS SECURITY PROVISIONS

Each operator or agent, seeking CAA approval must establish dangerous goods security measures, applicable to shippers, operators, consignors and other individuals engaged in the transport of dangerous goods that may endanger persons or property. These measures should be commensurate with security provisions specified in relevant ICAO Annexes, the Technical Instructions and the ANTRs.

16. COMPLIANCE

16.1 Inspection System

As part of its ongoing surveillance of operators/cargo handling agents, the CAA will conduct inspections of Bahraini and foreign operators, shippers, freight forwarders and Ground Handling Agencies to ensure compliance with Dangerous Goods Regulations.

The surveillance and inspection may include inspection of documents, cargo and operators' practices as well as a method for investigation of alleged violations.

16.2 Powers of Inspector

An authorised person, such as a CAA Inspector, may examine, take samples of, and seize any goods, which he/she has reasonable grounds to suspect may be dangerous goods in respect of which regulations have not been complied with.

An authorised person may open, or require to be opened, any baggage or package, which he/she has reasonable grounds to suspect, may contain dangerous goods in respect of which regulations have not been complied with.



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Any sample taken or goods seized by an authorised person may be retained or detained for so long as the Authority considers necessary in all the circumstances and disposed of in such manner as the Authority considers appropriate.

16.3 Penalty Provisions

Non-compliance with the provisions of the ANTRs may result in penalties as specified in the Bahrain Civil Aviation Law Article 121, Paragraph (2); i.e. either a fine not exceeding three thousand Dinars (BD 3000), or a term of imprisonment not exceeding three months, or both penalties concurrently.



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APPENDIX 1

DANGEROUS GOODS OCCURRENCE REPORT

DANGEROUS GOODS ACCIDENT/INCIDENT REPORTING FORM

See the Notes on the reverse of this form. Those boxes where the heading is in italics need only be completed if applicable.

Operator:		<i>Flight no. and flight date:</i>	
Date of Occurrence:		<i>Airports of departure & destination:</i>	
<i>Aircraft type:</i>		<i>Aircraft registration:</i>	
Location of occurrence:		Origin of the goods:	
Description of the occurrence, including details of injury, damage, etc. (if necessary, continue on the reverse of this form)			
Proper UN Shipping Name <i>(including the technical name):</i>			
UN/ID known):	no. (when known):	Class/division (when known):	<i>Subsidiary risk(s):</i>
<i>Type of Packaging:</i>		<i>Packaging specification marking:</i>	<i>No. of packages and quantity:</i>
<i>Reference no. of Air Waybill:</i>			
<i>Reference no. of courier pouch, baggage tag or passenger ticket:</i>			
Name, address and contact numbers of shipper, passenger etc			
Other relevant Information (including suspected cause, any action taken)			
Name and title of person making report:		Signature	
Address		Date:	
Reporters Reference			



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Description of the occurrence (continuation):

NOTES

1. Any type of dangerous goods occurrence must be reported, irrespective of whether the dangerous goods are contained in cargo, mail or baggage.
2. A dangerous goods accident is an occurrence associated with and related to the transport of dangerous goods which results in fatal or serious injury to a person or major property damage. For this purpose serious injury is an injury which is sustained by a person in an accident and which:
 - (a) requires hospitalisation for more than 48 hours, commencing from the date the injury was received;
 - (b) results in a fracture of any bones (except simple fractures of fingers, toes or nose);
 - (c) involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage;
 - (d) involves injury to any internal organ;
 - (e) involves second or third degree burns, or any burns affecting more than 5% of the body surface; or
 - (f) involves verified exposure to infectious substances or injurious radiation.

A dangerous goods accident may also be an aircraft accident; in which case the normal procedure for reporting of air accidents must be followed.

3. A dangerous goods incident is an occurrence, other than a dangerous goods accident, associated with and related to the transport of dangerous goods, not necessarily occurring on board an aircraft, which results in injury to a person, property damage, fire, breakage, spillage, leakage of fluid or radiation or other evidence that the integrity seriously jeopardises the aircraft or its occupants is also deemed to constitute a dangerous goods incident.
4. This form should also be used to report any occasion when undeclared or misdeclared dangerous goods are discovered in cargo or when baggage contains dangerous goods which passengers are not permitted to take on aircraft.
5. An initial report must be despatched within 72 hours of the occurrence, unless exceptional circumstances prevent this. The initial report may be made by any means but a written report must be sent as soon as possible, even if all the information is not available.
6. Completed reports must be sent to the Head of Aviation Safety Section, Civil Aviation Affairs, P.O. Box 586, Bahrain, Tel: +973 329 117 / Fax: +973 321 061.
7. Copies of all relevant documents and any photographs should be attached to this report.
8. Providing it is safe to do so, all dangerous goods, packaging, documents etc. relating to the occurrence must be retained until after the initial report has been sent to the Aviation Safety Section and they have indicated whether or not these should continue to be retained.



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APPENDIX 2

DANGEROUS GOODS EMERGENCY RESPONSE CHART

DANGEROUS GOODS EMERGENCY RESPONSE CHART			
(196) Issue 3, 06/00			
Hazard Class Division & Compatibility Group	Dangerous Goods Class	Hazard Description	Immediate Action Minimise Leakage and Other Cargo
1.3 C 1.3 g	Explosives (acceptable on Cargo Aircraft only)	Fire and minor blast hazard and/or minor propulsive hazard	Notify Airport Fire Services Tel: 17 32-1111 Guard against Fire
1.4 B		Fire, but no other significant hazard	
1.4 C			
1.4 D			
1.4 E 1.4 G			
1.4 S	Explosives (safety)	Small fire Hazard	
2.1	Flammable Gas	Ignites when leaking	Notify Airport Fire Services Tel: 17 32-1111
2.2	Non-flammable Gas	High pressure cylinder bursting	Evacuate goods - ventilate area Keep away minimum 25 m
2.2	Cryogenic Liquid	Sub-cooling	
2.3	Toxic Gas (acceptable in Cargo Aircraft only)	High pressure cylinder bursting and toxic inhalation	
3	Flammable Liquid	Ignites when leaking	Notify Airport Fire Services Tel: 17 32-1111 Do not use water under any circumstances
4.1	Flammable Solid	Combustible, contributes to fire	
4.2	Spontaneously Combustible	Ignites in contact with air	
4.3	Dangerous when wet	Ignites in contact with water	
5.1	Oxidiser	Ignites combustibles on contact	Notify Airport Fire Services Tel: 17 32-1111
5.2	Organic Peroxide	Reacts violently with other substances	
6.1	Toxic	Harmful if swallowed, inhaled or in contact with skin	Notify Airport Fire Services Tel: 17 32-1111 Isolate area
6.2	Infectious Substance	Causes disease in Humans and Animals	Do not touch
7 Cat I	Radioactive - White	Radiation hazard and harmful to health	Keep away minimum 25 m
7 Cat II / III	Radioactive - Yellow		
8	Corrosive	Hazardous to skin and metal	Notify Airport Fire Services Tel: 17 32-1111 Avoid contact with skin!
9	Polymeric Beads	Evolves small quantities of flammable gas	Notify Airport Fire Services Tel: 17 32-1111
	Magnetised Material	Affects navigation system	Avoid contact with skin!
	Dry Ice	Causes sub-cooling/suffocation	
	Miscellaneous Dangerous Goods	Hazards not covered by other classes	

Source: ICAO & IATA Docs.

EMERGENCY PROCEDURE

The general emergency procedures to be followed comprise the following:

- ◆ Advise immediate supervisor first.
- ◆ Avoid contact with the contents of the package.
- ◆ Isolate the package by removing other packages or property
- ◆ If contents come in contact with the body or clothes:
 - thoroughly wash off body with plenty of water;
 - remove contaminated clothes;
 - do not eat or smoke;
 - keep hands away from eyes, mouth and nose;
 - apply for medical assistance.
- ◆ Staff involved in such incidents should, if possible, stay on site until their names are noted.



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APPENDIX 3

CONTINGENCY PLANS FOR DEALING WITH DANGEROUS GOODS INCIDENTS

On site of a dangerous goods incident, there may be a need to contact some specialists. Complete the list of experts below:

Contacts	Name of Experts or Contacts personnel	Telephone numbers
Airport authority		
Air Traffic Services (ATS)		
Airport fire service		
Hospital		
Expert to dispose of the commodity		
Emergency Response teams		
Health Authority (for Division 6.1 and 6.2)		
Radioactive Material Protection (for Class 7)		
Explosives Bureau of Experts (for class 1)		
Police		
Customs Authority		
Postal Authority		
Food and drug		
Major Shippers		
Major Manufactures		



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- Dangerous goods incidents may involve cargo or passengers' baggage
- They may occur in a freight shed, a passenger terminal or on the apron
- They may also occur on an aircraft, such as when a package is damaged through misloading
- They may involve a fire, major spillage, leakage or finding undeclared dangerous goods
- The Contingency Plan need not be implemented for undeclared dangerous goods where the package is intact and there are no signs of leakage, although they still need to be identified
- If it is suspected there has been non-compliance with the Technical Instructions, the dangerous goods need to be retained for further investigation (provided it is safe to do so)
- To implement the Contingency Plan, take the following actions:

All incidents

- record brief details, including the names of all persons involved
- make an initial assessment of the potential seriousness
- if there is fire, leakage or spillage, call the airport fire service, if not already in attendance
- notify the relevant airport authority, if not already in attendance

Any incident involving a suspected infectious substance

- clear the immediate area; do not touch or move the container, bag, etc
- contact the shipper or consignee; if not contactable, contact the nearest hospital

Cargo related incidents - fire, major leakage or spillage

- clear the immediate area; do not touch or move the dangerous goods or any container; do not attempt to clean-up a spillage or leakage; avoid breathing in fumes
- call the airport fire service if not already in attendance
- look at container for details of the contents (name, UN no., etc), if this is possible without risking injury
- locate shipping documents and use to confirm or establish details; retain for further investigation
- if the airport fire service is not available or other action needed see Subsequent Actions
- ensure container and contents placed in a safe location (if this is considered safe to do so and possible) if further investigation needed; ensure full and accurate details recorded
- ensure operator notified of incident, if not already aware



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Cargo related incidents - minor leakage (eg: wetting of part of the outer packaging)

- keep persons away from immediate vicinity; avoid breathing in fumes
- consider if calling airport fire service if considered justified
- look at container for details of the contents (name, UN no., etc)
- locate shipping documents and use to confirm or establish details; retain for further investigation
- if airport fire service not called and other action needed see Subsequent Actions
- if airport fire service deal with the incident, ensure container and contents are placed in a safe location (if safe to do so and possible) if further investigation needed; ensure full and accurate details recorded
- ensure operator notified of incident, if relevant

Passenger related incidents

- keep persons away from immediate vicinity; avoid breathing in fumes
- ask passenger to identify item or potential hazard
- consider if calling airport fire service is justified
- if airport fire service is not called and other action needed see Subsequent Actions
- if airport fire service deal with the incident, ensure container and contents are placed in a safe location (if safe to do so and possible) if further investigation needed; ensure full and accurate details recorded

Subsequent Actions

- if container shows emergency actions, deal with incident according to them
- if commodity identifiable, seek expert help if there are no emergency actions or if they cannot be followed
- do not use water, cloth or paper to deal with any spillage, unless it is certain that it is safe to do so
- if commodity not immediately identifiable but container safe to handle (little evidence of leakage, no fumes), remove to well-ventilated place, use rubber gloves to protect hands and check for labels or markings on outer container; open if there are inner containers and check again for labels or markings
- orientate any leaking container so further leakage is prevented
- stop all actions immediately if fumes detected or more serious leakage found on closer inspection; call the airport fire service or other specialist assistance
- if there are fumes, they can be contained by covering spillage with plastic sheeting or plastic bags (unless emergency actions identify possible adverse reaction) but be aware this may lead to a build-up of fumes under the covering; remain at a safe distance
- a spillage can be contained by surrounding with dry sand to prevent spread (unless emergency actions identify a possible adverse reaction)



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- use dry sand to cover a spillage, unless commodity is identified as an acid
- use sodium bicarbonate to cover a spillage of acid, but be aware this may result in bubbling and evolution of carbon dioxide (but there will be no other reaction)
- seek expert help for cleaning up the scene; if help not immediately available and it is desired to remove containers, spillage, etc, assess whether or not it is safe to continue
- using rubber gloves to protect the hands, put any container in a plastic bag; avoid breathing in any fumes; tie bag tightly
- using rubber gloves and plastic based tools or rigid plastic material, pick-up contaminated sand/sodium bicarbonate and place in another plastic bag; tie bag tightly
- place all plastic bags in a further bag and tie tightly
- place the bag(s) in a secure, well ventilated location well away from any occupied area; if in the open air ensure moisture, rain, etc, cannot come into contact with the plastic bag(s)
- check the bag(s) at frequent intervals for any adverse reaction
- seek expert help to dispose of the commodity, if not being retained.



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APPENDIX 4

APPLICATION FOR EXEMPTION

(Refer to ANTR Part VII, paragraph 2.3.2)

- a) The reason why it is essential the article or substance must be carried by air:

- b) A statement why the applicant believes the proposal (including any safety control measures specified by the applicant) will achieve a level of safety equivalent to the provided by these Instructions;

- c) Proposed proper shipping name, classification and UN number with full supporting technical data:

- d) The proposed packaging;

- e) Quantity to be carried;

- f) Any special handling required and any special emergency response information

- g) Name and address of consignor and consignee:
Consignor:

Consignee:

- h) The airports of departure and destination, route and the proposed dates of transport:

In addition to the above, the CAA will require copies of the permissions/exemptions issued to the Operator for the carriage of such goods by:

- (1) State of Registry of Aircraft
- (2) State of Operator
- (3) State of Origin
- (4) Any other States being overflown while transporting dangerous goods by air.



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APPENDIX 5

ICAO DANGEROUS GOODS LABELS

ICAO Dangerous Goods Labels

PRIMARY HAZARD LABELS

Class 1

Division 1.3
Compatibility Group C

Division 1.5
Compatibility Group D

Division 1.6
Compatibility Group N

All Class 1 Explosive labels will have an appropriate Compatibility Group letter where an asterisk (*) is shown on the sample labels. Divisions 1.3, 1.5 and 1.6 are examples of completed labels in the two formats for Class 1 labels.

The Compatibility Group of an explosive determines its suitability for loading with other explosives or other classes of dangerous goods. See Table 5-1 of the Technical Instructions for further information.

Class 2

Division 2.1
Flammable gas

Class 3

Flammable liquid

Class 4

Division 4.1
Flammable solid

Division 4.2
Substance liable to spontaneous combustion

Division 4.3
Substance, which in contact with water, emits flammable gas

Class 5

Division 5.1
Oxidizing substance

Division 5.2
Organic peroxide

Class 6

Division 6.1
Toxic substance

Division 6.2
Infectious substance

Class 7

RADIOACTIVE I
CONTAINS ACTIVITY

RADIOACTIVE II
CONTAINS ACTIVITY

RADIOACTIVE III
CONTAINS ACTIVITY

Radioactive material Category I

Radioactive material Category II

Radioactive material Category III

Class 8

Corrosive

Class 9

Miscellaneous

Subsidiary Risk Labels



Dangerous goods which possess subsidiary dangerous properties must also bear Subsidiary Risk labels denoting those hazards.

Subsidiary Risk labels are the same as Primary Hazard labels but without the Class or Division number.

HANDLING LABELS

Minimum Size: 120 x 110 mm

Cargo aircraft only

Minimum Size: 110 x 90 mm

Magnetized material

Minimum Size: 74 x 105 mm

Package orientation

- Dangerous Goods are arranged into classes by type of risk involved. Class and/or Division numbers must appear in the bottom corner of the Primary Hazard labels as indicated on the samples shown.
- The numerical order of classes does not imply a relative degree of risk. Substances exist in most classes which are forbidden for transport by air or are limited to cargo aircraft only. Check Table 2-14 in ICAO's Technical Instructions for the Safe Transport of Dangerous Goods by Air for further information.
- Text indicating the nature of the risk on the lower half of any Hazard label is optional except the text shown for Class 7 and the Handling labels which is mandatory.
- Minimum size for Hazard labels is 100 x 100 mm (except Division 6.2, Infectious Substance labels - for packages too small, this size may be reduced to 50 x 50 mm).



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