

Advisory Circular AC92-4

Dangerous Goods Manuals

Revision 0 XX XXXX 2022

General

Civil Aviation Authority advisory circulars (ACs) contain information about standards, practices, and procedures that the Director has found to be an **acceptable means of compliance** with the associated rule.

Consideration will be given to other methods of compliance that may be presented to the Director. When new standards, practices, or procedures are found to be acceptable they will be added to the appropriate AC.

Purpose

This AC describes an acceptable means of compliance with the dangerous goods (DG) manual requirements prescribed under Civil Aviation Rules (CAR), Part 92 *Carriage of Dangerous Goods*, particularly for smaller operators and private pilots.

Related Rules

This AC relates specifically to CAR Part 92. In addition, it also relates to CAR Part 133 *Helicopter External Load Operations*.

Cancellation notice

This is the first revision of AC 92-4.

Version history

AC Revision No. Effective Date		Summary of Changes		
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1. Introduction

Certificated operators must have an exposition that outlines their organisation's procedures and practices to ensure compliance with the relevant rule parts¹. This exposition needs to cover methods of compliance with Part 92, which for the most part requires compliance with the *ICAO Technical Instructions for the Carriage of Dangerous Goods by Air* (ICAO TIS).

A non-certificated operator, or a private pilot carrying Dangerous Goods (DG), should consider the benefits of having written guidelines or Standard Operating Procedures (SOPs) that explain in simple terms the processes for carrying DG by air, that is, a 'DG manual'. The term 'DG manual' is used throughout this section to refer to the exposition section, separate manual, or SOPs relating to DG.

A DG manual is an operator's guide on how they are going to apply Part 92 and the ICAO TIs. It is not simply a repeat of the rule itself: it needs to explain in simple terms how each person carries out their DG duties, including if applicable packing, shipping, accepting and handling DG. The DG manual also needs to be relevant to the processes and procedures of the operator and its employees, so not a generic 'off-the-shelf' version. Operators need to review it on an annual basis to ensure alignment with the ICAO TIs and relevance to the operator's DG carriage requirements.

This AC provides guidance on what CAA expects in a DG manual, though not everything will be applicable to all cases. Operators can leave out aspects that are not applicable to their operation. Conversely, there may be other aspects that need to be explained depending on the nature of the operation.

Appendices A and B contain two examples of manuals designed as templates that operators may wish to refer to when creating or amending their DG manual: one for an operator who carries DG as cargo, and one for an operator who does not carry DG as cargo. These examples do not include any specific helicopter provisions that are explained in AC 92-2, so if a helicopter operator wants to use these provisions, they must be explained in the relevant section of the operator's DG manual.

While the ICAO TIs are the primary reference document, it is acknowledged that many operators prefer to use the International Air Transport Association Dangerous Goods Regulations (IATA DGR). It is acceptable to use the IATA DGR as the prime reference for carriage of DG by air, and application of the IATA DGR does ensure that compliance with the ICAO TIs is achieved. In some cases, the IATA DGR is more restrictive that the ICAO TIs.

Despite what type of DG manual operators choose, it is important to bear in mind that some items of DG are forbidden for transport by air. Nothing in this AC is intended to allow these items to be carried.

¹ Rule 119.81(a)(i); Rule 119.125(a)(1)(i); AC 119-1, Air Operator Certification

	Definitions
Approval	An authorisation granted by CAA to carry DG that is otherwise forbidden, where the ICAO TIs state that an approval may be granted.
Baggage	Personal property of a passenger or crew member carried on an aircraft with that person.
Cargo	Any property carried on an aircraft other than mail and baggage.
Certified Handler	A person who holds a compliance certificate as a certified handler issued under the Health and Safety at Work (Hazardous Substances) Regulations 2017
Competency- based Training	Training and assessment characterised by the defining and setting of performance standards, development of training to meet those standards, and training and assessment against those standards.
Dangerous Goods (DG)	Articles or substances which are capable of posing a hazard to health, safety, property, or the environment and which are shown in the list of DG in the ICAO TIs, or which are classified according to the ICAO TIs.
	<i>Note</i> : This definition is from the TIs and differs slightly from the definition in the Civil Aviation Act (1990).
Dangerous Goods Declaration (DGD)	The IATA Dangerous Goods Transport Document.
Exception	A provision contained within the ICAO TIs which excludes a specific item of DG from requirements normally applicable to that item.
Exemption	An authorisation, other than an approval, granted by CAA providing relief from the requirements of the ICAO TIs. ²
Handling agent	An agency which performs on behalf of an operator some or all of the operator's functions including receiving, loading, unloading, transferring, or other processing of passengers or cargo.
IATA DGR	The International Air Transport Association's Dangerous Goods Regulations.
ICAO Technical Instructions (TIs)	The International Civil Aviation Organisation's Document 9284: <i>Technical Instructions for the Safe Transport of Dangerous Goods by Air.</i> Note : For a full definition, refer to the TIs.
No-carry	IATA definition of an operator who does not carry DG as cargo (synonymous with a will-not-carry operator).
Notification to Captain (NOTOC)	The document that advises the pilot in command of DG loaded in the aircraft, including emergency response codes.
Will-carry	An operator who carries DG as cargo.
Will-not-carry	An operator who elects not to carry DG as cargo. A will-not-carry operator may still carry DG under other provisions, such as DG carried by passengers and crew.

2. Definitions and Abbreviations

 $^{^2}$ An exemption is provided for in S37 of the CA Act 1990. An exemption is also provided for in the ICAO TIs, but any request for a DG exemption will be considered as a S37 exemption.

	Abbreviations			
AC	Advisory circular			
a/c	Aircraft			
САА	Civil Aviation Authority			
CAO	Cargo Aircraft Only			
CAR	Civil Aviation Rules			
DG	Dangerous Goods			
DGD	Dangerous Goods Declaration			
DGR	Dangerous Goods Regulations			
Doc	Document			
DOC	Department of Conservation			
EQ	Excepted quantity			
ERG	Emergency response guidance			
g	Gram			
G	Gross mass			
ΙΑΤΑ	International Airline Transport Association			
IAW	In accordance with			
ICAO	International Civil Aviation Organisation			
kg	Kilogram			
L	Litre			
Max	Maximum			
mg	Milligram			
mL	Millilitre			
N/A	Not applicable			
n.o.s	Not otherwise specified			
NOTOC	Notification to Captain			
PED	Personal Electronic Device			
PI	Packing Instruction			
Pkg	Package			
PSN	Proper Shipping Name			
Qty	Quantity			
SMS	Safety Management System			
S.P.	Special Provision			
TIs	Technical Instructions			
UN	United Nations			
v	Volt			
Wh	Watt-hour			

3. Policy Statement and Introduction to the DG manual

Operators tend to fall into one of two categories: those that 'will-not-carry' DG and those that 'will-carry' DG.

- **'Will-not-carry' DG operators.** These operators do not carry DG as cargo but may carry DG under the other provisions of Part 92 and the ICAO TIs.
- **'Will-carry' DG operators.** These operators do carry DG as cargo, as well as carrying DG under the other provisions of the Part 92 and the ICAO TIs.

The policy statement is an explanation of the operator's intention with regards to the carriage of DG, including whether they are a 'will-carry' or 'will-not-carry' operator. It needs to state:

- a) If a '**will-carry'** operator, which of these apply:
 - i. Carry DG under rule 92.11.
 - ii. Carry DG under the provisions for passengers and crew.
 - iii. Carry DG under helicopter specific provisions.
 - iv. Carry DG as underslung loads.
 - v. Carry DG shipped as cargo.
 - vi. Carry DG under other exceptions in the ICAO TIs such as DG carried for medical or veterinary use in flight.
- b) If a 'will-not-carry' operator, which of these apply:
 - i. Carry DG under rule 92.11.
 - ii. Carry DG under the provisions for passengers and crew.
 - iii. Carry DG as underslung loads.
 - iv. Carry DG under other exceptions in the ICAO TIs such as DG carried for medical or veterinary use in flight.
- c) If packing DG either for company material or on behalf of a client is undertaken.
- d) If shipping DG either for company material or on behalf of a client is undertaken.

The policy section should include a reference to the primary reference material used by the organisation, either the ICAO TIs or IATA DGR³, and any other relevant documentation, such as the ICAO Emergency Response Guidance. It should also include the general carriage requirements of rule 92.7, and the prohibition of carrying forbidden DG IAW rule 92.9.

³ Note that it is not necessary to hold both documents.

4. Specific rule requirements

The following sections outline the expectations CAA has for the evidence a DG manual will include to show the operation meets specific rule requirements.

Rule 92.11 Exceptions. A description of how the operator will apply the requirements of rule 92.11 for:

- a) DG carried by police IAW their duties;
- b) Class 1 DG carried under the approval and supervision of a certified handler⁴;
- c) DG carried for the recreational use of a passenger.

This section should include the safety and emergency procedures established for each of the above, and a list of the specific DG items that may be carried.

Rule 92.13 Carriage by a passenger or crew member. Details of the DG that may be carried by a passenger or crew member, the allowable quantities, whether the DG may be carried as carry-on, checked baggage, or on one's person, and the procedures for informing passengers and crew of those requirements. These requirements can be a direct repeat of the information or tables contained in the ICAO TIs or IATA DGR, or may be an abbreviated version of those tables, listing only the applicable items.

The requirements of the ICAO TIs for documentation, marking, labelling, and packing do not apply to goods carried under this provision, except for reporting requirements for DG incidents which are still applicable. A clear distinction must be made between DG carried under 92.13, and DG carried under 92.11(c): if DG is carried under 92.11(c) then the full provisions of that rule must be applied.

Rule 92.17 Custody of DG and Rule 92.181 Custody by Operator. A description of how DG will be secured in the event of an incident or accident and who is responsible for this.

Rule 92.51 Packaging requirements and Rule 92.55 Packing requirements. An operator will not normally be involved in the packing of DG, however if they:

- pack company DG material or
- intend to provide a DG packing service, then

details of the appropriate packaging procedures and materials are required.

Rule 92.57 Marking requirements and Rule 92.59 Labelling requirements. Details of how the marking and labelling requirements will be applied.

Rule 92.103 Offer of DG. If the operator is going to act on behalf of a client for the offering of DG for transport by air, include a description of the process and responsibilities of the employee

⁴ Reference in this section to a Certified Handler has the same meaning and intent as the Approved Handler referred to in Part 92. Introduction of the Health and Safety at Work (Hazardous Substances) Regulations 2017 replaced the term approved with certified.

undertaking that duty including the required documentation. It would be appropriate to include a table or flowchart to show the required process.

Rule 92.105 Dangerous goods transport document. A description of the dangerous goods transport document(s) that will be accepted or used by the operator, with sample(s) attached.

Rule 92.153 Acceptance of dangerous goods and Rule 92.155 Acceptance check. Details of the process for accepting and inspecting DG, including a sample of the acceptance checklist. This may be the IATA Dangerous Goods Acceptance Checklist, or a company version.

Rule 92.157 Aircraft loading restrictions. Details of the loading of DG in different types of aircraft including the carriage of DG in the passenger cabin, cargo compartments, or cargo pods as applicable. This section must include restrictions on the types of DG that may be carried in a passenger cabin, or, if using the specific helicopter provisions contained in *AC 92-2, Carriage of dangerous goods*, what safety and emergency procedures are applicable to that operation. If applicable, provide the maximum allowable transport indices for radioactive materials and the maximum amount of dry ice permitted in each cargo hold.

Rule 92.159 Incompatible dangerous goods and Rule 92.161 Separation, segregation, and security. An explanation of the requirements for the separation, stowing, and securing of DG, and how this will be achieved. It would be appropriate to include a copy of the segregation table from the ICAO TIs or IATA DGR, or a similar guide to segregation.

Rule 92.163 Loading inspection; Rule 92.165 Unloading inspection; Rule 92.167 Removal of damage or leakage; Rule 92.169 Infectious substances; Rule 92.171 Radioactive material. A description of the inspections required, what should be looked for, and what actions will be taken if a damaged or leaking item of DG is discovered.

Rule 92.173 Information to pilot-in-command. Operators should provide information to the pilot-in-command (PIC) for the carriage of DG, including emergency procedures, and include their plan for how that information will be conveyed to the PIC, including a sample of the appropriate form or example of the electronic notification. The information provided to the pilot must include the drill code(s) from the *ICAO Doc 9481 Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods*. Because of this, including the aircraft emergency response drills table from this document is recommended.

Rule 92.175 Information to employees. A description of how DG information will be conveyed to employees, including actions to the taken in the event of emergencies.

Rule 92.177 Information in cargo acceptance areas and. Details of signs or other methods of conveying DG information in cargo acceptance areas.

Rule 92.179 Information to passengers. A description of how DG information is conveyed to passengers, including locations of notices and as part of the booking or ticketing process.

5. Other requirements

Training. Details of the training that will be conducted for all personnel involved in the handling and carriage of DG, including the level of training required for different personnel, the training provider(s), the frequency of training, and training records. Competency standards for training and assessment may be described here, or in a company training manual. It is recommended that *AC92-1, Dangerous goods training*, is consulted.

Notification and reporting. A description of the required DG incident and accident notifications and reports, who is responsible for these, and what format the reports will be.

Excepted DG. A description of what DG may be carried under the exceptions that are contained in the ICAO TIs, and any special procedures that apply to these exceptions. Examples of these include:

- d) DG carried for medical use in flight.
- e) DG carried for veterinary use in flight.
- f) DG carried to provide aid in connection with search and rescue operations during flight.

Appendix A: DG Manual Sample for a 'will-carry' operator (not using specific helicopter provisions).

Part 1: Policy and general requirements

1. Policy and Authorisation

ABC Aviation carries Dangerous Goods (DG) as part of its everyday activities. The company has elected to be a 'will-carry' operator, with the policies and procedures in place, and staff trained, to carry DG as cargo when required. DG may be carried in ABC Aviation aircraft under the following provisions:

- a. DG carried under the exceptions of Rule 92.11:
 - i. DG carried by police in the performance of their duties
 - ii. Class 1 explosives carried under the supervision of a certified handler, and/or
 - iii. DG carried for the recreational use of a passenger.
- b. DG carried by passengers and crew.
- c. DG shipped, accepted, and carried as cargo.
- d. DG carried under the exceptions contained in the ICAO TIs, including:
 - i. DG carried to provide medical aid to a passenger in flight;
 - ii. DG carried to preserve tissues or organs intended for use in transplantation;
 - iii. DG carried to provide, during flight, veterinary aid or as a humane killer for an animal.

Each of these is explained in the following paragraphs and if any staff members have any concerns regarding the carriage of DG or are unsure of the correct procedures, they are to raise these concerns with the CEO prior to accepting, handling, or otherwise dealing with the DG.

EITHER

The primary reference for carriage of DG by air is the *ICAO Doc 9284 Technical Instructions for the Safe Transport of Dangerous Goods by Air* (ICAO TIs). ABC Aviation holds the latest revision in the office, so all staff can refer to it when required. ABC Aviation also holds copies of the International Air Transport Association's *Dangerous Goods Regulations* (IATA DGR) (latest edition), and these may be used alongside or in preference to the ICAO TIs. Use of the IATA DGR will satisfy the requirement to comply with the ICAO TIs. Information in this DG manual has been extracted from both documents.

OR

ABC Aviation acknowledges that the primary reference for carrying dangerous goods is *ICAO Doc 9284 Technical Instructions for the Safe Transport of Dangerous Goods by Air* (ICAO TIs). ABC Aviation subscribes to the International Air Transport Association's *Dangerous Goods Regulations* (IATA DGR) (latest edition) and complies with the requirements contained within that document. Compliance with the IATA DGRs will ensure that the requirements of the ICAO TIs are also met⁵.

2. General carriage requirements

DG must be classified, documented, certificated, described, packaged, marked, labelled, and be in a suitable condition for shipment IAW the requirements of the ICAO TIs. DG may only be carried in an aircraft if it is accepted, handled, and carried IAW with the ICAO TIs or under the exceptions in

Rule 92.7

⁵ These paragraphs are only an example of a statement, which operators can adjust to fit their circumstances. As per the advice in Section 3, it is not necessary to hold copies of both documents.

Part 92, as detailed in this DG manual. For reference a summary of the DG Classes and Divisions is at Table A1.

3. Forbidden dangerous goods, approvals, and exemptions. *Rule 92.9*

DG must not be carried if it is forbidden for carriage by air under the ICAO TIs. Some articles are forbidden for carriage under any circumstances.

However, other articles that are identified as being forbidden in columns 9 and 10, or 11 and 12, of the DG List in the ICAO TIs (including that article or substance described as not otherwise specified), may be approved for carriage by the Director of CAA (the Director). If a client presents DG for carriage that has been approved by the Director, they are required to present a copy of the approval document, along with copy of the DG transport document, and the DG item or substance. In all such cases the CEO's prior authorisation is required before the goods may be carried in an ABC aircraft, and any conditions or limitations contained in the approval must be followed.

The Director may issue an exemption for the carriage of DG under specific circumstances. If a client presents such DG for carriage, a copy of the exemption document, along with the DG transport document, must be presented at the same time. In all such cases the CEO's prior authorisation is required before the DG may be carried in an ABC Aviation aircraft, and any conditions or limitations contained in the exemption must be followed.

4. Articles or substances excluded from Part 92 requirements Rule 92.1(b)(2)

Articles or substances that are required to be aboard an aircraft IAW the airworthiness or operational requirements of the CARs, or that are approved by the Director to meet special operational requirements, are not subject to the requirements of Part 92. However, articles and substances intended as replacements for such items must be shipped and carried as DG. Examples of such articles are:

- a. Dry cell batteries;
- b. Fire extinguishers;
- c. First-aid kits;
- d. Insecticides;
- e. Portable oxygen supplies; and/ or
- f. Catering or cabin service supplies.

This provision <u>does not</u> allow for the carriage of aviation fuel in jerry cans or drums. Such carriage is to be done IAW the procedures below for carriage of DG as cargo.

Part 2: Part 92.11 Exceptions

5. Carriage of DG by Police.

A member of the police may carry DG in the course of that person's duties without complying with Part 92. It is expected that this provision will only be used if an urgent or emergency situation exists, or during a pre-planned police tactical operation. If ABC Aviation carries police using this provision of the rules, the following conditions will be met:

- a. The police must be on duty and carrying the DG IAW those duties; and
- b. The aircraft must be used only for police purposes: no non-police passengers may be carried.

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Rule 92.11(a)

Rule 92.11(b)

In addition, before the flight:

- c. The police are to fill in form xxx listing all the DG that they are carrying;
- d. The pilot is to sight the DG and confirm that it is in a suitable condition for carriage, ensuring that:
 - i. All DG, in particular ammunition and explosive devices, are securely packed and carried in such a manner that it/ they cannot become free or loose in the aircraft;
 - ii. Explosive articles, incendiary devices, pepper-sprays, and other items that have initiation devices or fuses have safety devices fitted and be carried in such a manner that they are unable to be activated without deliberate intent.

A list of probable DG items that police may carry is listed at Annex A⁶. ABC Aviation has conducted a risk assessment based on the items in that list: the risk assessment can be located in the Hazard and Risk Register.

6. Carriage of Class 1 DG.

The provision for carriage of class 1 DG without complying with Part 92 exists for use during avalanche control duties. ABC Aviation does not conduct such flights, and any carriage of class 1 explosives will be conducted under Part 92 and the ICAO TIs.

7. Carriage of DG by passengers for their recreational use. Rule 92.11(c)

Part 92.11(c) allows DG to be carried by passengers for their recreational use, without complying with Part 92 and the ICAO TIs. Flights using this provision must be VFR only, and only passengers associated with the DG may be carried. (It is not acceptable to mix different groups such as a scenic flight passenger and a party of hunters.) DG that can be accepted by ABC Aviation for carriage under this provision is listed at Appendix A - Annex B. When this provision is utilised, the following procedures are to be applied:

- a. The pilot is to brief the passengers on what constitutes DG and require that all DG be separated from other bags or backpacks, and presented for inspection;
- b. Each item of DG is to be identified and listed on form xxx;
- c. The DG must be inspected to ensure it is in proper condition for carriage, in particular:
 - i. All items and all packaging are free from damage;
 - ii. There is no leakage of fluids, gas, or other material;
 - iii. There are no signs of corrosion on cylinders or metal containers;
 - iv. All gas bottles, diving tanks, or cylinders are checked for testing date;
 - v. All plastic jerry cans or bottles are in new or near-new condition; and
 - vi. All containers are suitable for their contents.
- d. All DG must be secure in its packaging and unable to become loose in flight;
- e. DG may be packed together in suitable containers, but DG that is required to be segregated must be packed into its own container;
- f. DG must be loaded into the aircraft so that it is secure and will not be affected by manoeuvres or turbulence, and containers that require to be upright must be loaded with the correct orientation.

Part 3: Exceptions from the ICAO Technical Instructions

8. Carriage of DG for medical use in flight

Rule 92.1(b)

The carriage of DG for medical use in flight and to preserve tissues or organs intended for use during in transplantation is allowed under the exception of Part 92.1(b) and the ICAO TIs Part One. DG that can be accepted by ABC Aviation for carriage under this provision is listed at Annex C. When this provision is utilised, the following procedures are to be applied:

- a. The pilot is to brief the medical personnel and/or passengers on what constitutes DG and require that all DG be identified and if necessary, inspected by the pilot;
- b. Each item of DG is to be identified and listed on form xxx;
- c. The DG must be inspected to ensure that is in the proper condition for carriage, in particular:
 - i. All items and all packaging are free from damage;
 - ii. There is no leakage of fluids, gas, or other material;
 - iii. There are no signs of corrosion on cylinders or metal containers;
 - iv. All gas bottles or cylinders have been checked for testing date, and that they have been manufactured specifically for that particular gas;
 - v. All plastic jerry cans or bottles are in new or near-new condition;
 - vi. All containers are suitable for their contents;
 - vii. All equipment containing lithium batteries meets the conditions specified in the ICAO TIs, and all spare batteries must be individually protected to prevent short-circuits.
- d. All DG is secure in its packaging and cannot become loose in flight;
- e. DG may be packed together in suitable containers, but DG that needs to be segregated must be packed into its own container;
- f. DG must be stowed so that it is secure and will not be affected by manoeuvres or during take-off and landing, and at any other time when deemed necessary by the pilot;
- g. Containers that need to be upright must be loaded with the correct orientation. (This includes any equipment containing wet cell batteries);
- h. The drugs and medicines and other medical matter must be under the control of trained personnel during the time when they are in use.

These DG articles and substances may also be carried on a flight made by the same aircraft to collect a patient, or after that patient has been delivered, when it is impracticable to load or unload the goods at the time of the flight on which the patient is carried.

Part 4: Carriage of DG by passengers and crew

9. Carriage of DG by passengers and crew

Rule 92.13

DG may be carried by passengers and crew on the conditions that the goods are:

- a. Carried in carry-on baggage, checked baggage, or on the person;
- b. Permitted in the table attached at Annex D (Copy of IATA DGR Section 2.3 Table 2.3.A); and
- c. For personal use only.

The requirements of the ICAO TIs for documentation, marking, labelling, and packing do not apply to goods carried under this provision, except for the reporting requirements for DG incidents which are still applicable.

Part 5: Carriage of DG as cargo

10. Offer of goods.

Rules 92.15, 92.101, 92.103, 92.105

When any items are presented for carriage in ABC Aviation aircraft that are not postal articles, checked baggage, or carry-on baggage, the person presenting the items must sign a document which accurately describes the items or states that the items are not DG. Staff need to bear in mind that persons presenting items may not know what constitutes DG and be vigilant in monitoring for hidden DG (either deliberately or inadvertently), or mis-declared DG. The document to use for this is ABC form xxx.

When DG is presented for carriage in ABC Aviation aircraft, the person offering the DG (a DG shipper) is required to have complied with Part 92 subpart C which includes the requirements to ensure that:

- a. The DG is not forbidden under the ICAO TIs;
- b. The DG is certified as required under Part 92;
- c. The DG is packaged, packed, marked, and labelled as detailed in Part 92;
- d. The DG is accompanied by a dangerous goods transport document (if required by the TIs); and
- e. They have otherwise complied with the ICAO TIs.

The DG transport document that ABC Aviation accepts is the IATA Dangerous Goods Declaration (DGD) which must be presented accurately and fully completed and signed and dated by the DG shipper. The DGD includes the declaration required by rule 92.105(2).

It is common practice for clients to present DG for carriage by air without understanding the requirements for offering DG, nor the ability to engage the services of a qualified DG shipper (due to the remote nature of ABC Aviation's operations). In this case, suitably trained, qualified, and competent staff may complete the requirements for the offer of DG on behalf of the client. The process that ABC will apply in these circumstances is described in Annex E.

11. Acceptance of DG.

Rules 92.153, 92.155, 92.163

DG that is offered to ABC Aviation for carriage by air as cargo is to be processed using the acceptance checklist at Annex F. A copy of the acceptance checklist and the DGD are to be kept for a minimum of six months. By using the checklist, the acceptance person will ensure that:

- a. Two copies of the DGD have been received, correctly completed, signed, and dated;
- b. The information in the DGD accurately reflects the DG and the packaging;
- c. The DG is marked and labelled correctly;
- d. The DG is inspected paying attention to:
 - i. Leakage;
 - ii. Damage;
 - iii. Contamination on the exterior of the package; and
 - iv. Clearly visible marks and labels.

If the DGD or the inspection indicate that the DG is not acceptable in all respects it is to be returned to the shipper, along with a copy of the acceptance checklist indicating the reason for rejection.

12. Loading, stowage, and unloading

Rules 92.161, 92.163, 92.165, 91.167

Rules 92.13, 92.157

DG must be inspected immediately prior to loading and found free from evidence of leakage or damage. It must be stowed in the aircraft in a way that ensures that:

- a. Packages of poisons and infectious substances are stowed IAW the TIs; and
- b. Radioactive materials are separated from persons, live animals, and undeveloped film IAW the TIs;
- c. The DG is protected from being damaged; and
- d. The DG is secured in a manner that will prevent any movement in flight which would change the orientation of the packages.

When unloading DG an inspection is to be conducted to check for signs of damage or leakage. If evidence of damage or leakage is found the area of the aircraft where the DG was stowed must be inspected for damage or contamination and any hazardous contamination removed.

13. Loading restrictions

DG must not be carried in the cabin of an aircraft occupied by passengers or on the flight deck, except as follows:

- a. A passenger or crew member may carry DG as carry-on or checked baggage or on their person if permitted to do so under the provisions of the preceding paragraphs, including:
 - i. Carriage of DG by police;
 - ii. Carriage of DG for the recreational use of passengers;
 - iii. Carriage of DG for medical use in flight; and
 - iv. Carriage of DG by passengers and crew.
- b. Radioactive material may be so carried if permitted to do so as an excepted package under the TIs.

ABC Aviation aircraft are not fitted with class B cargo compartments. When carrying DG as cargo, only the following DG may be carried in the cargo compartment of the passenger cabin:

- a. Class 1, Division 1.4, Compatibility Group S explosives;
- b. Class 2, Division 2.2, non-flammable, non-toxic gas;

- c. Class 3, flammable liquids, Packing Group III;
- d. Class 4, Division 4.1, flammable solids, Packing Group III;
- e. Class 5, Division 5.1, oxidising substances, Packing Group III;
- f. Class 6, Division 6.1, poisonous substances, Packing Group III;
- g. Class 7, radioactive materials loaded in compliance with the minimum separation distances;
- h. Class 8, Packing Group III substances; and/ or
- i. Class 9, miscellaneous goods.

DG packages labelled "Cargo Aircraft Only" may only be loaded on cargo aircraft.

14. Incompatible DG, separation, segregation, and security Rules 92.159, 92.161

Items of DG that might react dangerously with each other must not be stowed near to each other. Particular attention should be paid to DG that might be a source of heat (such as lithium batteries) and DG that is flammable or may emit flammable vapour. A segregation table is attached as Annex G, which details the minimum segregation requirements for different classes and divisions of DG.

In particular, the following standards are to be applied:

- a. Packages of poisons and infectious substances must be stowed IAW the instructions contained in the ICAO TIs.
- b. Radioactive materials must be separated from persons, live animals, and undeveloped film IAW the instructions contained in Section 10 of the ICAO TIs.
- c. DG must be protected from damage during the loading process.
- d. DG must be stowed to prevent any movement in flight and in particular to ensure that the orientation of packages that need to remain upright does not change.

15. Infectious substances and radioactive material contamination *Rules 92.169, 92.171*

In the event of damage to, or a leak or contamination from, a package containing an infectious substance or radioactive material the primary responsibility of all staff is the safety of passengers and crew. If necessary, the only action may be to vacate the area and seek specialist assistance. If it is considered safe to do so the following procedures apply.

Where any package containing infectious substances appears to be damaged or leaking:

- a) Avoid handling the package or, if necessary, keep handling to a minimum and use appropriate PPE.
- b) Inspect adjacent packages, baggage or other cargo, for contamination and put aside any that may be contaminated.
- c) Inform the appropriate public health or veterinary authority.
- d) Notify the consignor or the consignee.
- e) Notify any persons who could interact with contaminated material, or need to inspect the aircraft.
- f) Notify and report IAW section 19, below.

If an aircraft has been contaminated by radioactive materials, the aircraft must be immediately taken out of service. It must not return into service until the radiation level at any accessible surface and the remaining contamination does not exceed the values specified in the TIs.

Part 6: Communication and notification requirements

16. Information to the pilot-in-command

For all flights carrying DG as cargo a Notification to Captain (NOTOC) must be handed to the pilot prior to flight, detailing the DG on board and the emergency response guidance. The NOTOC form is attached to the acceptance form at Annex F and is to be filled in using the information detailed on the DGD and the emergency response guidance from Annex H. A copy of the DGD is to be attached to the NOTOC, and the pilot is to ensure that these forms are carried in the cockpit in an easily accessible location.

The PIC is to be provided with emergency response information from Appendix A – Annex H that is specific to the type of DG carried.

17. Information to employees

All employees of ABC Aviation are to have read this DG manual before taking part in any actions involving DG. Employees who have a role in the handling and carriage of DG will receive DG training (detailed below) and have access to the latest version of the ICAO TIs, IATA DGR, and the ICAO Emergency Response Guidance document held in the flight office.

18. Information to the public and passengersRule 92.177, 92.179

Passengers must be informed of the type of goods that they are prohibited from carrying aboard an aircraft. This information is conveyed in the following manner:

- a. CAA DG notices being prominently displayed in the reception area and hangar;
- b. DG information being included as part of all pre-flight passenger safety briefings; and
- c. DG information being included during the booking process for all advance bookings, particularly for outdoor recreation groups, contractors, and DOC staff.

The reception area and hangar also serve as the cargo acceptance area, and the display of the CAA DG notices in those areas satisfies the requirement to display notices in cargo acceptance areas.

19. Notification, reporting, and custody requirementsRule 12.51, 12.55, 92.17, 92.181

When an incident or accident occurs that involves DG or where DG is being carried, whether or not it is apparent that the DG contributed to the incident or accident, the DG is to be deemed to be in the custody of the Director of CAA. Any staff involved in such an event are to take reasonable measures to secure the DG until it is taken into possession by CAA, or CAA advises that the DG is no longer needed.

If a DG accident or incident occurs, the notification and reporting requirements of Part 12 apply. Details of these requirements are found in the company SMS Manual. In summary:

- a. If the incident is a serious incident or is an immediate hazard to the safety of an aircraft operation, the Safety Manager is to notify CAA as soon as practicable;
- b. In the absence of the Safety Manager, any person involved in the incident should notify CAA as soon as practicable;

17

Rule 92.175

- All notification is to include the date and time of the incident, brief details, and the name and contact details of both the organisation and the person reporting the incident;
- d. A CA005 report is to be submitted to CAA within 14 days by the Safety Manager.

A DG incident is defined as an incident associated with and related to the carriage of DG by air, after acceptance by the operator, that:

- a. results in injury to a person, property damage, fire, breakage, spillage, leakage of fluid or radiation;
- b. involves, or other evidence that the integrity of the packaging has not been maintained; or
- c. involves dangerous goods incorrectly declared, packaged, labelled, marked, or documented.

20. Dangerous goods training

Rule 92.203, 92.205

DG training is required for all ABC Aviation personnel prior to any involvement in DG activities. The Training Manager is responsible for arranging initial DG training for new employees, and for DG recurrent training each two years IAW Part 92.

Competency standards for DG training and assessment are compiled by the Safety Manager and Training Manager and forwarded to DG training providers. Competency standards are defined for four basic areas as:

- a. DG awareness training: All personnel require DG awareness training as a minimum.
- b. DG shipper training: ABC Aviation staff involved in the offering of DG (on behalf of a client) require specific DG training for the offering of DG for carriage by air.
- c. DG acceptance training: Personnel involved in accepting DG for carriage by air require specific training in the DG acceptance procedure.
- d. DG carriage: Pilots and loadmasters involved in loading, carrying, and unloading DG require specific training in the carriage of DG by air.

While the competency standards are defined for the roles that personnel fulfil, they also are designed around the types of DG that ABC Aviation carry and the operating environment of the company.

Appendix A - Annex A: DG Carried by police in accordance with their duties.

Common Name	UN # Class or Proper Shipping Name division		Notes			
Alcohol hand sanitiser	1170	3	Ethanol, or Ethanol solution			
Alcohol hand sanitiser	1219	3	Isopropanol			
Alcohol wipes	3175	4.1	Solids containing flammable	75% alcohol disinfectant wipes		
Ammunition	0012	1.45	Cartridges, small arms	Ammunition consisting of a centre fire or rim fire primer and containing both a propelling charge and solid projectile, calibre less than 19.1mm. Includes shotgun cartridges of any calibre.		
Batteries and Lithium	2800 2794 2795	8 8 8	Batteries, wet, non-spillable Batteries, wet, filled with acid Batteries, wet, filled with alkali	Contained within: Radios; GPS receivers;		
batteries	3171 3171	9 9	Battery powered equipment Battery powered vehicle	Computers; Photography equipment;		
	3480 3481	9 9	Lithium ion batteries Lithium ion batteries contained within equipment	Drones; Power tools; EPIRBs;		
	3481	9	Lithium ion batteries packed with equipment	Sonar; Radio repeaters.		
	3090	9	Lithium metal batteries			
	3091	9	Lithium metal batteries contained within equipment	Includes spare batteries.		
	3091	9	Lithium metal batteries packed with equipment			
Cylinders	1956	2.2	Compressed gas, n.o.s.	Diving cylinders		
Detonators	0360	1.1B	Detonator assemblies, non- electric, for blasting			
Distraction device	0410	1.4D	Fuses, detonating			
Explosive charges	0065	1.4D	Cord, detonating			
Explosive charges	0084	1.1D	Explosive, blasting, type D			
Explosive charges	0288	1.1D	Charges, shaped, flexible, linear			
First aid kit	3316	9	First aid kit	May contain one or more compatible items of DG used for medical purposes		

Common Name	1 11 0		Notes		
Fuel	1223	3	Kerosene	Fuel for camp stoves, generators, powered tools, etc	
Fuel	1299	3	Turpentine	Fuel for camp stoves, generators, powered tools, etc	
Fuel	1300	3	Turpentine substitute	White spirits: fuel for camp stoves	
Fuel	1203	3	Gasoline	Fuel for camp stoves, generators, powered tools, etc	
Fuel	1203	3	Petrol	Fuel for camp stoves, generators, powered tools, etc	
Fuel	1203	3	Motor spirit	Fuel for camp stoves, generators, powered tools, etc	
Gas cannisters	1954	2.1	Compressed gas, flammable, n.o.s.	Gas cannisters for camp stoves	
Gas cannisters	2037	2.1	Receptacles, small, containing gas	Flammable gas, without a release device, non-refillable	
Generator	3528	3	Machinery, internal combustion, flammable liquid powered		
Grenades	0301	1.4G (6.1,8)	Ammunition, tear producing		
Oxygen	1072	2.2 (5.1)	Oxygen, compressed	Medical oxygen Oxygen for ultra-thermic cutting lance	
Pepper spray	1950	2.2	Aerosols, non-flammable		
Portable Electronic Devices (PEDs)	See bat	teries abov	e		
Smoke grenade	0303	1.4G	Ammunition, smoke		
Stun grenade	0431	1.4G	Articles, pyrotechnic		
Tasers	1066	2.2	Nitrogen, compressed		

Appendix A - Annex B: DG Carried by passengers for recreational use

ltem	Quantity	Notes
Ammunition	5 kg per passenger	Secure in ammunition belt or original box.
		Quantity may not be aggregated among
		passengers.
Camping gas	500 g max per can	Butane or butane mix only (no propane or
	1 kg max per package	isobutane)
		Must be self-sealing
		Must be detached from stove
Diesel	20 L max per jerry can	
Fire lighters	1 kg max per flight	
Fly Spray	1L	Each non-refillable metal container must not
		exceed 1 L capacity. Each non-refillable plastic
		aerosol must not exceed 120 mL capacity.
		The release valve must be protected from
		inadvertent release.
Kerosene	20 L max per jerry can	
Matches		Strike anywhere matches are not permitted.
		Must be tightly and securely packed to prevent
		movement within the package.
Petrol	5 L max per jerry can	
White Spirits	5 L max per jerry can	

Appendix A - Annex C: DG Carried for medical use in flight

Common	UN # Class or Proper Shipping Name Not division		Notes			
Name	1170		Sthewall on			
Alcohol hand	1170	3	Ethanol, or			
sanitiser	1210		Ethanol solution			
Alcohol hand	1219	3	Isopropanol			
sanitiser	0.175					
Alcohol	3175	4.1	Solids containing flammable	75% alcohol disinfectant		
wipes			liquids	wipes		
Batteries	3171	9	Battery powered equipment	Contained within:		
and	3480	9	Lithium ion batteries	Radios;		
Lithium	3481	9	Lithium ion batteries contained	Suction equipment;		
batteries			within equipment	Defibrillators;		
	3481	9	Lithium ion batteries packed			
			with equipment	Includes spare batteries		
	3090	9	Lithium metal batteries	both lithium and non-		
	3091	9	Lithium metal batteries	lithium, lead acid batteries		
			contained within equipment			
	3091	9	Lithium metal batteries packed			
			with equipment			
Cylinders	1956	2.2	Compressed gas, n.o.s	Diving cylinders		
First aid kit	3316	9	First aid kit	May contain one or more		
	5510	5		compatible items of DG		
				used for medical purposes		
Gas	1954	2.1	Compressed gas, flammable,	Gas cannisters for camp		
cannisters	1994	2.1	n.o.s	stoves		
Gas	2037	2.1	Receptacles, small, containing	Flammable gas, without a		
	2037	2.1		0		
cannisters			gas	release device, non-		
	4070			refillable		
Oxygen	1072	2.2	Oxygen, compressed	Medical oxygen		
		(5.1)		Oxygen for ultra-thermic		
				cutting lance		
Portable	See batteries above					
electronic						
devices						

Appendix A - Annex D: DG Carried by passengers and crew

We recommend that participants insert a copy of a table for quick reference, such as <u>IATA Table</u> <u>2.3.A</u>, or <u>Table 6.1</u> from AC92-2, Carriage of Dangerous Goods.

Appendix A - Annex E: Offer of DG

This table details the process to be followed by any staff member offering DG for carriage by air on behalf of an ABC aviation client.

1.	Forbidden DG	Ensure that the DG is not forbidden for carriage under the ICAO TIs:				
		a) Forbidden under any circumstances?				
		b) Forbidden for carriage with passengers?				
		c) Allowable quantity exceeded?				
2.	Packing	Ensure that the DG is packed IAW the ICAO TIs.				
		Ensure, unless the ICAO TIs provide another method of packaging,				
		that:				
		a) Packaging is as specified in the applicable tests; and				
		b) Packaging conforms with the design and the methods of				
		packaging as was tested.				
3.	Marking	Ensure that the DG is marked IAW the ICAO TIs, including:				
		a) Proper shipping name;				
		b) UN number;				
		c) Name and address of consignor and consignee; and				
		d) All other markings required by the ICAO TIs.				
4.	Labelling	Ensure that the DG is labelled IAW the ICAO TIs.				
	_	Ensure that any hazard labels accurately describe the true nature of				
		the hazards.				
5.	Documentation	Complete the Dangerous Goods Transport Document (unless the				
		ICAO TIs do not require the document).				
		Sign and date the Dangerous Goods Transport Document.				

Appendix A - Annex F: Acceptance checklist and NOTOC

This checklist is to be completed by qualified staff who accept DG for carriage by air. A 'No' answer requires the DG to be rejected and returned to the client with a copy of this checklist.

Item	Requirement	Yes/No/NA
1.	Documentation: 2 copies of the DGD correctly competed and signed	
2.	Quantity: quantity of DG indicated on DGD matches the goods provided.	
3.	Quantity: quantity of DG is within the limits for passenger or cargo only	
	aircraft as applicable.	
4.	Marking: package(s) marked IAW description on the DGD.	
5.	Marking: marks are clearly visible.	
6.	Marking: package specification mark matches the packing group	
	requirements of the packing instruction.	
7.	Labelling: hazard and handling labels correct.	
8.	Overpacks: marks and labels appearing on inner packages are correctly	
	repeated on outer packaging.	
9.	Packaging: packaging used is permitted by the packing instruction.	
10.	Segregation: the outer package does not contain different	
	classes/divisions of DG that require segregation.	
11.	Condition: the package is not leaking, is free from any visible damage,	
	and there is no indication that its integrity is compromised.	

DG acceptance: I confirm that I have inspected the DG package(s) and the Dangerous Goods Transport Document IAW the checklist above, and that the shipment is acceptable for carriage by air in ABC's aircraft.

Name:

Date: Signature:

NOTOC

					-			
Date			Uplift location			Drop-off location		
UN#	PSN	Class	# & type of packages	PG	Quantity per package	Loading location	CAO?	Drill code

Loader's acknowledgement: I confirm that the DG listed above has been loaded in the locations indicated, that when loaded was free from any damage, leakage, or contamination, and that I am aware of the hazardous nature of the DG.

Name: Date: Signature:

Pilot-in-command acknowledgement: I confirm that I have received the above information.

Name: Date: Signature:

Appendix A - Annex G: Segregation table

Packages containing DG which might react dangerously with one 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. As a minimum, the segregation in the following table must be followed in order to maintain acceptable segregation. The segregation requirements apply whether the hazard is the primary or a subsidiary hazard.

Hazard Label	1 excl. 1.4S	2.1	2.2,2.3	3	4.1	4.2	4.3	5.1	5.2	8	9 see note 2
1 excl.	Note	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
1.4S	1										
2.1	Х	-	-	-	-	-	-	-	-	-	Х
2.2,2.3	Х	-	-	-	-	-	-	-	-	-	-
3	Х	-	-	-	-	-	-	Х	-	-	Х
4.1	Х	-	-	-	-	-	-	-	-	-	Х
4.2	Х	-	-	-	-	-	-	Х	-	-	-
4.3	Х	-	-	-	-	-	-	-	-	Х	-
5.1	Х	-	-	Х	-	Х	-	-	-	-	Х
5.2	Х	-	-	-	-	-	-	-	-	-	-
8	Х	-	-	-	-	-	Х	-	-	-	-
9 see	Х	Х	-	Х	Х	-	-	Х	-	-	-
note 2											

Table G-1: Segregation of	Dangerous Goods
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Notes:

1. For segregation requirements of different divisions of explosives refer to the ICAO TIs or IATA DGR.

 For segregation of lithium ion and lithium metal batteries refer to the ICAO TIs or IATA DGR. In general lithium ion and lithium metal batteries must not be stowed next to or close to packages containing Class 1 (other than 1.4(s)), Division 2.1, Class 3, Division 4.1, or Division 5.1 DG.

Appendix A - Annex H: Aircraft Emergency Response Drills

Drill #	Inherent risk	Risk to aircraft	Risk to occupants	Spill or leak procedure	Firefighting procedure	Additional considerations
1	Explosion may cause structural failure	Fire and/or explosion	As indicated by the drill letter(s)	Use 100% oxygen, no smoking	All agents according to availability; use standard firefighting procedure	Possible abrupt loss of pressurisation
2	Gas, non-flammable, pressure may create hazard in fire	Minimal	As indicated by the drill letter(s)	Use 100% oxygen; establish and maintain maximum ventilation for 'A', 'I', or 'P' drill letter	All agents according to availability; use standard firefighting procedure	Possible abrupt loss of pressurisation
3	Flammable liquid or solid	Fire and/or explosion	Smoke, fumes, and heat, and as indicated by the drill letter	Use 100% oxygen; establish and maintain maximum ventilation; no smoking; minimum electrics.	All agents according to availability; no water on 'W' drill letter.	Possible abrupt loss of pressurisation
4	Spontaneously combustible or pyrophoric when exposed to air	Fire and/or explosion	Smoke, fumes, and heat, and as indicated by the drill letter	Use 100% oxygen; establish and maintain maximum ventilation	All agents according to availability; no water on 'W' drill letter.	Possible abrupt loss of pressurisation; minimum electrics if 'F' or H' drill letter
5	Oxidiser, may ignite other materials, may explode in heat of a fire	Fire and/or explosion, possible corrosion damage	Eye, nose, and throat irritation; skin damage on contact	Use 100% oxygen; establish and maintain maximum ventilation	All agents according to availability; no water on 'W' drill letter.	Possible abrupt loss of pressurisation
6	Toxic, may be fatal if inhaled, ingested, or absorbed by skin	Contamination with toxic liquid or solid	Acute toxicity, effects may be delayed	Use 100% oxygen; establish and maintain maximum ventilation; do not touch without gloves	All agents according to availability; no water on 'W' drill letter.	Possible abrupt loss of pressurisation; minimum electrics if 'F' or H' drill letter
7	Radiation from broken/unshielded packages	Contamination with spilled radioactive material	Exposure to radiation, and personnel contamination	Do not move packages, avoid contact	All agents according to availably	Call for a qualified person to meet the aircraft
8	Corrosive, fumes disabling if inhaled or in	Possible corrosion damage	Eye, nose, and throat irritation; skin damage	Use 100% oxygen; establish and maintain maximum	All agents according to availability; no	Possible abrupt loss of pressurisation;

Inherent risk	Risk to aircraft	Risk to occupants	Spill	or leak procedure	Firefighting procedure	Additional considerations
contact with skin		on contact	vent	ilation; do not touch without gloves	water on 'W' drill letter.	minimum electrics if 'F' or H' drill letter
No general inherent risk	As indicated by the drill letter	As indicated by the di letter	and	maintain maximum	All agents according to availability	None
Gas, flammable, high fire risk if any ignition source present	Fire and/or explosion		ne and vent	maintain maximum tilation; no smoking;	All agents according to availability	Possible abrupt loss of pressurisation
Infectious substances may affect humans or animals if inhaled, ingested, or absorbed through the mucous membrane or an open wound	Contamination with infectious substances				All agents according to availability; no water on 'Y' drill letter.	Call for a qualified person to meet the aircraft.
Fire, heat, smoke, toxic and flammable vapour	Fire and/or explosion	Smoke, fumes, heat			All agents according to availability. Use water if available	Possible abrupt loss of pressurisation; consider landing immediately
er	Additional risk		Drill letter		Additional risk	
Corrosive Explosive Flammable Highly ignitable Irritant/tear producing Other risk low or none Magnetic Noxious	s W X Y	Spontaneously combustible or pyrophoric If wet gives off toxic or flammable gas Oxidiser Depending on the type of infectious substance, the appropriate national authority may be required to quarantine individuals, animals, cargo, and the aircraft Aircraft cargo fire suppression system may not extinguish or contain the fire; consider landing immediately				
	contact with skin No general inherent risk Gas, flammable, high fire risk if any ignition source present Infectious substances may affect humans or animals if inhaled, ingested, or absorbed through the mucous membrane or an open wound Fire, heat, smoke, toxic and flammable vapour Fire, heat, smoke, toxic and flammable vapour rer Anaesthetic Corrosive Explosive Flammable Highly ignitable Irritant/tear producing Other risk low or none Magnetic	contact with skin As indicated by the drill letter No general inherent risk As indicated by the drill letter Gas, flammable, high fire risk if any ignition source present Fire and/or explosion Infectious substances may affect humans or animals if inhaled, ingested, or absorbed through the mucous membrane or an open wound Contamination with infectious substances Fire, heat, smoke, toxic and flammable vapour Fire and/or explosion er Additional risk Anaesthetic Corrosive Explosive Flammable Highly ignitable Irritant/tear producing Other risk low or none Magnetic Noxious	contact with skin on contact No general inherent risk As indicated by the drill letter As indicated by the drill letter Gas, flammable, high fire risk if any ignition source present Fire and/or explosion Smoke, fumes, and he and as indicated by the drill drill letter Infectious substances Contamination with infectious substances Delayed infection to humans or animals if inhaled, ingested, or absorbed through the mucous membrane or an open wound Fire and/or explosion Smoke, fumes, heat Fire, heat, smoke, toxic and flammable vapour Fire and/or explosion Smoke, fumes, heat Additional risk Anaesthetic Corrosive Explosive Flammable Highly ignitable Irritant/tear producing Highly ignitable Irritant/tear producing Other risk low or none Magnetic Noxious	contact with skin on contact vent No general inherent risk As indicated by the drill letter As indicated by the drill letter As indicated by the drill letter Use 1 and went Gas, flammable, high fire risk if any ignition source present Fire and/or explosion Smoke, fumes, and heat, and as indicated by the drill letter Use 1 and went Infectious substances may affect humans or animals if inhaled, ingested, or absorbed through the mucous membrane or an open wound Contamination with infectious substances Delayed infection to humans or animals Do no circulation Fire, heat, smoke, toxic and flammable vapour Fire and/or explosion Smoke, fumes, heat Use 1 and Anaesthetic Corrosive Explosive Flammable Highly ignitable Irritant/tear producing Other risk low or none Magnetic Noxious Fire and/or explosion Smoke, fumes, heat Y J	contact with skin on contact ventilation; do not touch without gloves No general inherent risk As indicated by the drill letter As indicated by the drill letter Use 100% oxygen; establish and maintain maximum ventilation for if 'A' drill letter Gas, flammable, high fire risk if any ignition source present Fire and/or explosion Smoke, fumes, and heat, and as indicated by the drill letter Use 100% oxygen; establish and maintain maximum ventilation; no smoking; minimum electrics. Infectious substances may affect humans or animals if inhaled, ingested, or absorbed through the mucous membrane or an open wound Contamination with infectious substances Delayed infection to humans or animals Do not touch. Minimum re- circulation and ventilation in affected area. Fire, heat, smoke, toxic and flammable vapour Fire and/or explosion Smoke, fumes, heat Use 100% oxygen; establish and maintain maximum ventilation er Additional risk Drill letter S Spontaneously comb if wet gives off toxic Oxidiser Anaesthetic Corrosive Explosive Flammable S Spontaneously comb if wet gives off toxic Oxidiser X Pilmy ignitable Irritant/tear producing Other risk low or none Magnetic Noxious Y Depending on the tyn animals, cargo, and t Aircraft cargo fire suj the fire; consider lan Noxious X	contact with skin on contact ventilation; do not touch without gloves procedure No general inherent risk No general inherent risk As indicated by the drill letter As indicated by the drill letter As indicated by the drill letter Use 100% oxygen; establish and maintain maximum ventilation for if 'A' drill letter All agents according to availability Gas, flammable, high fire risk if any ignition source present Fire and/or explosion Smoke, fumes, and heat, and as indicated by the drill letter Use 100% oxygen; establish and maintain maximum ventilation; no smoking; minimum electrics. All agents according to availability Infectious substances membrane or an open wound Contamination with infectious substances Delayed infection to humans or animals Do to touch. Minimum re- circulation and ventilation in affected area. All agents according to availability; no water on 'Y' drill letter. Fire, heat, smoke, toxic membrane or an open wound Fire and/or explosion and flammable vapour Smoke, fumes, heat Use 100% oxygen; establish and maintain maximum ventilation All agents according to availability. Use water if availabile er Additional risk S Spontaneously combustible or pyrophoric if wet gives off toxic or flammable gas Fire, heat, smoke, toxic Explosive Y Delayed infection highly ignitable Y Depending on the type of infectious substance a

Appendix B: DG Manual Template for a 'will-not-carry' operator.

Definitions					
Baggage	Personal property of a passenger or crew member carried on an aircraft with that person.				
Cargo	Any property carried on an aircraft other than mail and baggage.				
Competency- based Training	Training and assessment characterised by the defining and setting of performance standards, development of training to meet those standards, and training and assessment against those standards.				
Dangerous Goods (DG)	Articles or substances which are capable of posing a hazard to health, safety, property, or the environment and which are shown in the list of DG in the ICAO TIs, or which are classified according to the ICAO TIs.				
Exception	A provision contained within the ICAO TIs which excludes a specific item of DG from the requirements normally applicable to that item.				
IATA DGR	The International Air Transport Association's Dangerous Goods Regulations				
ICAO Technical Instructions Will-carry	The International Civil Aviation Organisation's Document 9284: <i>Technical</i> <i>Instructions for the Safe Transport of Dangerous Goods by Air.</i> An operator who carries DG as cargo.				
Will-not-carry	An operator who elects not to carry DG as cargo. A will-not-carry operator				
	may still carry DG under other provisions such as DG carried by passengers and crew.				

1. Policy and Authorisation

XYZ Aviation does not carry Dangerous Goods (DG) as cargo and has elected to be a 'will-notcarry' operator. XYZ has policies and procedures in place, and staff trained, appropriate to the following carriage of DG:

- a) DG carried by passengers and crew (Rule 92.13);
- b) DG required to be aboard an aircraft IAW the airworthiness or operational requirements of the CARs (Rule 92.1(b)(2)).

The primary reference for carriage of DG by air is the International Civil Aviation Organisation Doc 9284: *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (ICAO TIs). The information in the following paragraphs is taken from this document and from the International Air Transport Association's Dangerous Goods Regulations (IATA DGR). Use of the IATA DGR will satisfy the requirement to comply with the ICAO TIs.

2. Articles or substances excluded from Part 92 requirements Rule 92.1(b)(2)

Articles or substances that are required to be aboard an aircraft IAW the airworthiness or operational requirements of the CARs, or that are approved by the Director to meet special operational requirements, are not subject to the requirements of Part 92. However, articles and substances intended as replacements for such items must be shipped and carried as DG. Examples of such articles are:

- a. Dry cell batteries;
- b. Fire extinguishers; and
- c. First-aid kits.

This provision **<u>does not</u>** allow for the carriage of aviation fuel in jerry cans or drums.

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3. Carriage of DG by passengers and crew

DG may be carried by passengers and crew if:

- a. The goods are carried in carry-on baggage, checked baggage, or on the person;
- b. The goods are permitted in the table attached at Annex A; and
- c. The goods are for personal use only.

4. Information to employees

All employees of XYZ are to have read this DG section prior to undertaking any actions involving DG. Employees who have a role in the handling and carriage of DG will receive DG awareness training conducted by a Part 141 training provider (see section xxx).

5. Information to passengers

Passengers must be informed of the type of goods that they are prohibited from carrying aboard an aircraft. This information is conveyed by:

- a. CAA DG notices being prominently displayed in the reception area and hangar;
- b. Being included as part of all pre-flight passenger safety briefings;
- c. Being included during the booking process for all advance bookings.

6. Notification, reporting, and custody requirements Rules 12.51, 12.55, 92.17, 92.181

When an incident or accident occurs that involves DG or where DG is being carried, whether or not it is apparent that the DG contributed to the incident or accident, the DG is to be deemed to be in the custody of the Director of CAA. Any staff involved in such an event are to take reasonable measures to secure the DG until it is taken into possession by CAA, or CAA advises that the DG is no longer needed.

If a DG accident or incident occurs, the notification and reporting requirements of Part 12 apply. Details of these requirements are found in the company SMS Manual. In summary:

- a. If the incident is a serious incident, or is an immediate hazard to the safety of an aircraft operation, the Safety Manager is to notify CAA as soon as practicable;
- b. In the absence of the Safety Manager, any person involved in the incident should notify CAA as soon as practicable;
- c. Any notification is to include the date and time of the incident, brief details, and the name and contact details of both the organisation and the person reporting the incident; and
- d. A CA005 report is to be submitted to CAA within 14 days by the Safety Manager.

A DG incident is defined as an incident associated with and related to the carriage of dangerous goods by air after acceptance by the operator, that:

A DG incident is defined as an incident associated with and related to the carriage of dangerous goods by air, after acceptance by the operator, that:

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Rule 92.13

Rule 92.179

Rule 92.175

- a. results in injury to a person, property damage, fire, breakage, spillage, leakage of fluid or radiation;
- b. involves, or other evidence that the integrity of the packaging has not been maintained; or
- c. involves dangerous goods incorrectly declared, packaged, labelled, marked, or documented.

7. Dangerous goods training

Rule 92.203, 92.205

DG awareness training is required for all XYZ pilots. The Training Manager is responsible for arranging initial DG training for new employees, and for DG recurrent training each two years IAW Part 92.

All DG training is to be conducted using the philosophy of Competency Based Training. Competency standards for training and assessment are compiled by the Safety Manager and Training Manager and forwarded to the DG training provider. Competency standards are defined for four basic areas as follows:

a. General awareness:

- i. Identification of DG.
- ii. Hidden, undeclared, and mis-declared DG.
- b. Carriage of DG by passengers and crew.
- c. Carriage of DG for airworthiness and operational requirements.
- d. Communication:
 - i. Passenger briefing and awareness.
 - ii. Notification of DG incidents or accidents.

While the competency standards are defined for the limited roles that XYZ personnel fulfil, they also are designed around the types of DG that XYZ carry and the operating environment of the company.

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Appendix B - Annex A: DG Carried by passengers and crew

We recommend that participants insert a copy of a table for quick reference, such as <u>IATA Table</u> <u>2.3.A</u>, or <u>Table 6.1</u> from AC92-2, Carriage of Dangerous Goods.