

Unvalidated References:

Harbours Board Act 1964

Merchant Shipping Act 1975

This reprint of this Statutory Instrument incorporates all amendments, if any, made before 25 November 2006 and in force at 1 July 2001.

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Legislative Counsel
Dated 25 November 2006

INDEPENDENT STATE OF PAPUA NEW GUINEA.

Chapter 240B.

Harbours Board (Inflammable Liquid and Dangerous Goods) By-laws 1976

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MADE under the *Harbours Board Act 1964*.

PART I. – PRELIMINARY.

1. INTERPRETATION.

¹In these By-laws, unless the contrary intention appears—

“**API Code 1102**” means the current recommended pressures of pipe-line crossings under rail and road tracks published by the American Petroleum Institute;

“**A.S. CA21**” means the current Australian Standard CA21 published by the Standards Association of Australia;

“**A.S. CB20**” means the current Australian Standard CB20 published by the Standards Association of Australia;

“**A.S. CB23**” means the current Australian Standard CB23 published by the Standards Association of Australia;

“**approved**” means approved by the Board or by an officer of the Board;

“**approved chemist**” means a person who is an Associate of the Royal Australian Chemical Institute, or holds qualifications equivalent to those of an Associate, and who has special knowledge of hazardous substances, or any other person approved by the Board;

“**authorized officer**” means—

- (a) the General Manager of the Harbours Board; or
- (b) a Port Manager; or
- (c) any other officer authorized by the Board for the purposes of these By-laws;

“**away from**”, in relation to goods stowed in a shed, means separated by a distance of not less than 4m;

“**B.S. 1435**” means the current British Standard B.S. 1435 published by the British Standards Institution;

“**battened down**” means and includes all methods of securely closing any hatchway to make the enclosed space gastight as far as practicable;

“**cargo container**” means a dry container, gas receptacle or portable tank, capable of being transferred from one medium of transport to another and includes such devices permanently attached to a vehicle;

“**Certificate of Test**” means a certificate in Form 5 given by an approved chemist in respect of a tank or other part of a vessel that has been

¹ Section 1 amended by No. 26 of 1981, s1.

carrying dangerous goods as cargo, that he has carried out tests for the presence of inflammable vapour or other dangerous goods and has found the space or spaces to be free from it or them;

“**Class 1**” means the class of dangerous goods classified in the Code as Class 1;

“**Class 2**” means the class of dangerous goods classified in the Code as Class 2;

“**Class 5.1**” means the class of dangerous goods classified in the Code as Class 5.1;

“**Class 5.2**” means the class of dangerous goods classified in the Code as Class 5.2;

“**Class 7**” means the class of dangerous goods classified in the Code as Class 7;

“**Classification Society**” means Lloyd’s Register of Shipping or any other classification society recognized by Lloyd’s Register of Shipping;

“**the Code**” means the International Maritime Dangerous Goods Code relating to the carriage of dangerous goods by sea for the time being approved by the Maritime Safety Committee and published by the Inter-Governmental Maritime Consultative Organization;

“**compartment**” means—

(a) a lower hold; or

(b) a cargo space bounded by permanent bulkheads at each end and having decks with closed hatchways above and below; or

(c) an insulated chamber surrounded by steel bulkheads whether or not situated within a compartment referred to in Paragraph (a) or (b); or

(d) a deck house or mast house surrounded by steel bulkheads and effectively closed against the weather;

“**competent authority**” in relation to a country means any national or international authority designated or otherwise recognized by the Board as such for any purpose in connection with the sea carriage of dangerous goods;

“**container base**” means an area separate from a container terminal, in which—

(a) cargo containers may be packed or unpacked; and

(b) cargo containers are assembled before delivery to, or after receipt from, the container terminal;

“**container terminal**” means a berth specially designated for the handling of cargo containers, in which cargo is handled mainly in cargo containers that are loaded onto or discharged from vessels specially designed or converted for the purpose;

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“**correct technical name**” means, in relation to any dangerous goods, the correct technical name assigned to those goods in the Code;

“**cylinder**” means a receptacle specially constructed for the carriage of gas under pressure, the internal volume of which is capable of holding not less than 112 ml nor more than 680 kg of water;

“**dangerous goods**” means all substances listed in the Code, unless exempted in writing by the Board and includes empty cargo containers or packages that have contained dangerous goods unless the cargo container or package has been effectively cleaned;

“**dry container**” means a box larger than 1.1 m³ used for transporting packages of cargo;

“**dry dock**” includes a dry dock, graving dock or slip;

“**fire**” means any kind of fire and means of ignition;

“**fixed tank**” means a tank used for transporting liquids or gases that is permanently fixed to a vessel and includes a space built into the structure of a vessel;

“**flashpoint**” means the flashpoint of an inflammable liquid as determined by the flashpoint test method set out in the Code;

“**gangway**” means a thoroughfare between vessel and wharf;

“**gas receptacle**” means a receptacle that—

- (a) is specially constructed for carriage of gas under pressure; and
- (b) has an internal volume capable of holding more than 680 kg of water;

“**gas tanker**” means a ship that—

- (a) is constructed or adapted for carrying gas in bulk; and
- (b) is classified for this purpose by any Classification Society;

“**handling**” in relation to dangerous goods or other cargo includes the loading, unloading, discharging, stacking, stowing or restowing of the dangerous goods or other cargo and any other operations incidental to or arising out of any such operations;

“**hatchway**” means any hatchway or other opening into a hold not protected to prevent communication of fire;

“**hold**” means a space contained between two permanent athwartship bulkheads;

“**in bulk**”, in relation to a fluid, means fluid—

- (a) kept or conveyed in receptacles or tanks of a capacity exceeding 0.4 m³; and
- (b) intended to be transferred by pipeline or hose;

“inflammable liquid” means any liquid having a flash point of not higher than 61°C;

“the Inter-Governmental Maritime Consultative Organization” means the organization established under that name by the United Nations Organization;

“the International Code of Signals” means the International Code of Signals adopted by the Inter-Governmental Maritime Consultative Organization;

“liquefied inflammable gas” means an inflammable gas which has been liquefied by pressure or by cooling;

“oil” means oil of any description having a flash point higher than 61°C;

“operational area” includes—

- (a) a declared port or any vessel in the port; or
- (b) a wharf, storage tank, or any property vested in or under the management or control of the Board;

“owner” includes—

- (a) in relation to goods—
 - (i) the agent of the owner of the goods; and
 - (ii) any consignor, consignee, shipper or agent for the sale or custody, carriage, loading or unloading of the goods; and
 - (iii) the holder of any bill of lading or other document representing the goods; and
 - (iv) any person having or claiming any right, title or interest to or in the goods; and
- (b) in relation to a vessel—
 - (i) a charterer of the vessel; and
 - (ii) the agent of the owner or charterer of the vessel; and
 - (iii) the master of the vessel; and
 - (iv) any person who, jointly or severally, whether at law or in equity, is entitled to any share or interest in the vessel,

and an agent of any of those persons;

“package” includes every means by which any goods may be cased, covered, enclosed, contained or packed, but does not include a cargo container;

“Packaging Group I” means the packaging group of dangerous goods specified in the Code as Packaging Group I, for the purpose of identifying the degree of danger associated with those goods;

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“Packaging Group II” means the packaging group of dangerous goods specified in the Code as Packaging Group II, for the purpose of identifying the degree of danger associated with those goods;

“Packaging Group III” means the packaging group of dangerous goods specified in the Code as Packaging Group III, for the purpose of identifying the degree of danger associated with those goods; and

“permit” means a permit to convey or handle dangerous goods issued under Part II;

“person responsible for goods” means—

(a) the owner of the vessel, in relation to—

(i) all goods on board the vessel; and

(ii) all goods received at a wharf by him for shipment; and

(iii) goods unshipped from the vessel onto a wharf until delivery has been taken by the owner of the goods; and

(iv) dangerous goods in a pipeline or hose on the vessel side of the flange on board the vessel to which the shore pipeline or hose is connected for the purpose of transfer of those dangerous goods; and

(b) the owner of the goods, in relation to—

(i) all goods delivered to a wharf until they have been received for shipment by the owner of the vessel; and

(ii) all goods unshipped from a vessel after they have been received at a wharf by the owner of the goods; and

(iii) dangerous goods in the pipeline or hose on the shore side of the flange on board the vessel to which the shore pipeline or hose is connected for the purpose of transfer of those dangerous goods; and

(iv) any leakage that occurs at the flange on board the vessel to which the shore pipeline or hose is connected;

“portable tank” means a demountable tank with an internal volume in excess of 1.1 m³ used for the transport of liquids, and includes tanks on vehicles;

“the Red Book” [*Repealed.*]

“restricted area” means that area required by an authorized officer to be enclosed by a barricade in accordance with Section 45;

“the Safety Convention” means the 1960 International Convention on Safety of Life at Sea;

“separated by a complete compartment from” in relation to goods stowed in a shed, means separated by a distance of not less than 30 m;

“separated completely from”, in relation to goods stowed in a shed, means separated by a distance of not less than 30 m;

“separated from”, in relation to goods stowed in a shed, means separated by a distance of not less than 12 m;

“tanker” means a vessel constructed or adapted for the carriage in bulk of substances in fluid form;

“U.S.A.S. B31” means the current United States of America Standard U.S.A.S. B31 published by the United States of America Standards Institute;

“wharf” includes—

- (a) any wharf, quay, jetty, pier, landing place or stage, platform, slip, basin, siding, dock, wall or other place at which goods can be landed, loaded or unloaded; and
- (b) all buildings and other erections on the wharf and the appurtenances of the wharf and its approaches;

“wire gauze” means a gauze made of copper, brass, stainless steel, or monel metal wire of not less than 0.36 mm diameter (28 Birmingham Wire Gauge) and having not less than 11 meshes to the centimetre.

2. APPLICATION.

Subject to Section 18, these By-laws do not apply to, or in relation to, dangerous goods forming part of the equipment or stores required for the navigation, safety or maintenance of a vessel.

3. MARKING, PACKING AND STOWING OF DANGEROUS GOODS.

Dangerous goods shall be marked, packed and stowed in accordance with the requirements of the competent authority in the country of origin, unless otherwise permitted by an authorized officer.

PART II. – GENERAL REQUIREMENTS FOR VESSELS.

4. PERMIT TO CONVEY OR HANDLE DANGEROUS GOODS.

(1) Before—

- (a) dangerous goods are loaded aboard or unloaded from a vessel or handled in any operational area; or
- (b) any vessel carrying dangerous goods, whether as through cargo or not, berths at a wharf,

the owner of the vessel shall obtain a written permit to convey or handle dangerous goods from an authorized officer.

(2) Notwithstanding Subsection (1) a vessel which is—

- (a) a local ship as defined in the *Merchant Shipping Act 1975*; and
- (b) carrying dangerous goods in conformity with the requirements of the *Navigation Act 1889*, of the former Territory of Papua (Adopted), or of the *Coastal Shipping, Ports and Harbours Regulations 1938*, of the former Territory of New Guinea (Adopted); and
- (c) is under 200 gross registered tons; and
- (d) is not intending to berth at a wharf under the jurisdiction of the Board,

does not require a permit.

5. APPLICATION FOR A PERMIT.

An application for a permit referred to in Section 4 shall be made by the owner of the vessel and shall—

- (a) be in Form 1; and
- (b) contain full and accurate particulars in Form 2 of the dangerous goods to be handled or conveyed in the operational area and shall include the correct technical name, the flash point and a statement of the quantities of each substance; and
- (c) be delivered to an authorized officer on a normal working day at least 24 hours before the proposed operation and at least before noon if the day on which the application is required is a Friday or a day before a public holiday; and
- (d) give the proper identification of any cargo container, including any dry container or gas receptacle or any portable tank; and
- (e) in the case of a vessel having empty tanks or spaces which previously contained in bulk inflammable or injurious liquid or gas, unless the tanks or spaces are certified gas-free—furnish full information in Form 3 on the location, nature and quantity of the inflammable or injurious liquid or gas previously carried.

6. CONDITIONS OF PERMIT.

(1) On receipt of an application, an authorized officer may issue a permit in Form 4 to the owner of the vessel and the permit shall be subject to—

- (a) the requirements of these By-laws; and
- (b) any other requirements or conditions specified in writing by the authorized officer; and
- (c) requirements prescribed in any other law.

(2) In respect of traffic inside a port, an authorized officer may issue a permit for a specified period.

(3) An authorized officer may at any time cancel a permit by giving written notice to the owner of the vessel to whom the permit was granted.

7. NOTIFICATION OF DAMAGE.

(1) The person responsible for dangerous goods shall notify an authorized officer as soon as possible of any damage or deterioration of any package or cargo container containing the dangerous goods for which that person is responsible.

(2) Where—

- (a) there is doubt as to the nature of a substance on a wharf or on a vessel and that substance is suspected of being dangerous goods; or
- (b) there is damage to or deterioration of a package or cargo container containing dangerous goods,

an authorized officer may, at the expense of the person responsible for the goods, consult an approved chemist to assist him in deciding on the action to be taken in respect of those goods.

(3) If required to do so by an authorized officer, the person responsible for the dangerous goods shall promptly remove any spilled dangerous goods and any damaged or deteriorated package or cargo container containing dangerous goods.

8. FIRE PROTECTION EQUIPMENT.

The owner of any vessel on which dangerous goods are conveyed or handled shall provide, and maintain in efficient condition ready for use, sufficient fire-extinguishers and any other fire protection equipment to the satisfaction of an authorized officer.

9. WARNING FLAGS, LIGHTS AND NOTICE BOARDS.

The owner of a vessel which has on board dangerous goods, or which has had inflammable liquid or liquefied inflammable gas in tanks not since certified gas-free, on entering and while in the port, in addition to any navigation flags or lights required by any other law, shall—

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- (a) display by day the International Code of Signals Flag “B”–
 - (i) if the vessel operates solely within a port of metal–of not less than 46 cm²; or
 - (ii) in any other case–of not less than 91 cm²; and
- (b) display by night an all round red light using an approved safety lamp, at the masthead or where it can best be seen, but not less than 6 m above the deck; and
- (c) display in conspicuous positions on the vessel and, when the vessel is tied up at any wharf, at the foot of all gangways, notice boards with the words “DANGER–NO SMOKING–NO NAKED LIGHTS” in red letters, not less than 15 cm high, on a white background, and by night the notice boards shall be illuminated by a white light which is an approved safety lamp.

10. PERSONS IN CHARGE OF WHARF OPERATIONS.

(1) The owner of the vessel shall ensure that a competent person is in charge of the handling of dangerous goods on a wharf, and that a competent person is present at all times while dangerous goods are being handled.

(2) An authorized officer may require any person referred to in Subsection (1) who, in his opinion is unsatisfactory or unsuitable in any way, to be replaced promptly, and the handling of the dangerous goods shall cease until the replacement is effected to the satisfaction of an authorized officer.

11. PROVISION OF CREW.

The owner of a vessel shall provide for–

- (a) a responsible officer of the vessel to be on duty day and night to give effect to these By-laws; and
- (b) a competent member of the engine room staff to be available to operate fire pumps or other fire extinguishing apparatus; and
- (c) a sufficient number of crew members to assist adequately that officer and that engineer; and
- (d) in the case of tankers referred to in Part V, a sufficient staff of officers and men at all times to ensure the efficient carrying on of the work or, if so required, to remove the vessel.

12. VESSELS NEAR VESSELS CARRYING DANGEROUS GOODS.

If any vessel is anchored, moored or berthed within 30 m of a vessel displaying Flag “B” or a red light in accordance with Section 9, the owner shall comply with such provisions of these By-laws relating to vessels conveying or handling dangerous goods as an authorized officer deems necessary.

13. BURNING OIL OR COMBUSTIBLE MATTER ON BOARD.

The owner of a vessel shall not permit the heating, boiling or burning of any pitch, tar, resin, inflammable liquid, oil, refuse, rubbish or other combustible matter, in or on the vessel unless the heating, boiling or burning of the substance has been permitted in such place and in such manner as may be approved in writing by an authorized officer.

14. CLEANING OF TANKS.

Where tanks that have previously contained dangerous goods are to be cleaned, prior to testing for the purpose of issuing a Certificate of Test—

- (a) cleaning shall not be commenced without the permission of an authorized officer; and
- (b) all tools used for the cleaning shall be of wood or of such other construction as may be approved by an authorized officer; and
- (c) all residual dangerous goods or any sludge or deposit in the tank shall be removed; and
- (d) any person entering the tank shall be provided with approved breathing apparatus consisting of a helmet or face-piece, fitted with connections by means of which he can breathe uncontaminated air; and
- (e) the tank shall be thoroughly steamed by means of steam-jets or cleaned by any other method approved by the Board, for such period as will ensure the vaporization of all volatile dangerous goods; and
- (f) after the tank has been steamed or otherwise cleaned in accordance with Paragraph (e)—
 - (i) the cover of each manhole and of other openings in the tank shall be removed and the tank shall be thoroughly ventilated by mechanical or such other sufficient means as may be determined by the person in charge of the cleaning so as to ensure the removal of all vapour; and
 - (ii) if any deposit remains in the tank, the interior surfaces shall be washed or scraped down with a wooden or other approved tool; and
- (g) the person in charge of the cleaning shall ensure that a person who is employed in the cleaning of the tank—
 - (i) does not smoke in the tank; or
 - (ii) in the case of tanks which have contained inflammable liquids or gases—carry or take into the tank any matches or other articles that produce or are capable of producing any fire or spark.

15. CERTIFICATE OF TEST FOR TANKS.

(1) Until a Certificate of Test in Form 5 has been issued to the owner of the vessel by an approved chemist, the tanks on the vessel shall be deemed to contain dangerous goods.

(2) Every Certificate of Test, or a copy of it, shall be posted in a conspicuous place adjacent to the tank or space tested.

16. PRECAUTIONS AGAINST INJURIOUS FUMES AND EXPLOSION IN TANKS.

Until any tank which has contained dangerous goods has been cleaned and a Certificate of Test showing safe conditions has been obtained, a person shall not—

- (a) enter the tank, other than for the purpose of testing the atmosphere or for cleaning the tank; and
- (b) where the tank has contained inflammable liquids or inflammable gases—bring near to or take into the tank a naked light, fire or lamp (other than an approved electric lamp) or any apparatus for producing or capable of producing a light or spark.

17. REPAIRS TO TANKS WHICH HAVE CONTAINED DANGEROUS GOODS.

(1) Repair work shall not be commenced on or in any tank which has contained dangerous goods until—

- (a) the approval of an authorized officer has been obtained; and
- (b) a Certificate of Test has been obtained which discloses that the tank tested is, as far as can be ascertained, free from explosive, inflammable or injurious fumes; and
- (c) the Certificate of Test has been endorsed by the person who made the tests to the effect that, provided any precautions specified in the endorsement are observed, the repairs contemplated can be commenced or continued without danger to life or to the vessel.

(2) If, during the course of the repair work, any pipe or joint in the tank is broken or there is any other risk of any dangerous goods, liquid or vapour entering the tank, the owner of the vessel shall cause work in the tank to be stopped until he has obtained a further Certificate of Test disclosing that the tank is free from explosive, inflammable or injurious fumes.

(3) A fresh Certificate of Test indicating that the tank is free from explosive, inflammable or injurious fumes shall be obtained daily before any work is commenced in the tank, and shall apply for such time as the approved chemist may specify.

18. DRY DOCKING OF VESSELS CARRYING DANGEROUS GOODS.

Notwithstanding Section 2, a vessel which has dangerous goods on board as cargo or as fuel shall not be permitted to enter a dry dock unless the permission of an authorized officer has been obtained to do so and the permission may be granted subject to conditions.

PART III. – DANGEROUS GOODS OTHER THAN DANGEROUS GOODS IN BULK.

19. APPLICATION OF PART III.

This Part does not apply to the handling of dangerous goods in bulk.

20. HANDLING AT NIGHT.

(1) Dangerous goods shall not be handled between the hours of sunset and sunrise, unless an authorized officer has given permission and endorsed the permit accordingly.

(2) General cargo shall not be handled between the hours of sunset and sunrise on any vessel on which there are dangerous goods unless an application for this purpose has been made to an authorized officer and the permit has been endorsed with approval to handle general cargo at night subject to any conditions specified.

21. STORAGE ON WHARVES.

²(1) Dangerous goods of Packaging Group I, Class 1 and Class 7 shall not be stored on any wharf.

(2) Dangerous goods of Packaging Group II, Packaging Group III and Class 2 shall not be stored on a wharf unless the approval of an authorized officer has been obtained.

(3) Whenever dangerous goods are on any wharf contrary to these By-laws, an authorized officer may order the person responsible for the goods to remove them promptly.

(4) In the event of failure to comply with Subsection (3) an authorized officer may remove the dangerous goods and may recover from the person responsible for the goods costs incurred in their removal.

22. PRECAUTIONS AGAINST FIRE ON A VESSEL.

Before inflammable goods are handled on a vessel, the owner of the vessel shall ensure that all matches and other means of ignition are collected from members of the crew and from other persons who are on the vessel.

23. SMOKING AND MEANS OF IGNITION.

A person shall not—

- (a) bring any matches or other means of making a fire; or
- (b) use any tool or equipment capable of creating a spark or flames; or
- (c) smoke,

² Section 21 amended by No. 26 of 1981, s2.

aboard a vessel or on a wharf where dangerous goods are being handled, except that persons may smoke or carry out maintenance in places approved for that purpose by an authorized officer.

24. HANDLING OF EXPLOSIVES.

All explosives shall be handled in accordance with these By-laws, with the exception of explosives handled under the supervision of the Defence Force.

25. WATCHMAN.

The owner of a vessel with inflammable goods on board shall cause a watchman to be stationed at each gangway leading to the vessel—

- (a) to prevent smoking by any person; and
- (b) to prevent access to the vessel by unauthorized persons; and
- (c) to warn all persons that inflammable goods are being handled on the vessel.

26. HOLDS CONTAINING INFLAMMABLE GOODS.

(1) All holds containing inflammable liquids or inflammable gases shall be thoroughly ventilated before and during the time the inflammable liquids or gases are being unloaded.

(2) All holds from which inflammable liquids or inflammable gases have been unloaded shall be thoroughly ventilated.

(3) In the case of spillage of inflammable liquids, the bilges shall be carefully cleaned by removing liquids by hand pumps or suitable wooden bailers and by swabbing, and shall be kept suitably ventilated.

(4) Fire or unauthorized lights shall not be permitted at or near holds containing or which have contained inflammable goods until a Certificate of Test and approval of an authorized officer have been obtained.

(5) All inflammable goods loaded on the vessel shall be properly and securely stowed to the satisfaction of an authorized officer.

(6) Proper and efficient ventilation for the place of stowage of inflammable liquids and inflammable gases shall be provided and when required—

- (a) inlet ventilators passing through the deck and terminating just below the deck; and
- (b) outlet ventilators extending to within 15 cm of the bottom of the hold from above the upper deck,

shall be fixed and all ventilators shall be covered with wire gauze.

(7) Holds, after inflammable goods have been stowed in them, shall be securely battened down.

(8) Sufficient hatch coverings and other coverings, as may be required by an authorized officer, shall be provided.

(9) All holds which contain or have recently contained inflammable liquids or inflammable gases shall be closed gas-tight as far as practicable unless goods are being handled in the holds, or the holds are being cleaned or ventilated.

27. INFLAMMABLE GOODS IN WOODEN VESSELS.

Inflammable goods shall not be carried in a wooden vessel except that a limited quantity may be carried on the weather deck provided that the goods are stowed at a safe distance from the galley, crew's quarters and openings leading into machinery or boiler spaces, as approved by an authorized officer.

28. OXIDIZING SUBSTANCES.

(1) Except with the permission of an authorized officer, no quantity of oxidizing substances Class 5(a) or Class 5(b) shall be placed on any wharf greater than can be handled in a period of one hour with the means of transport available.

(2) Except as provided in Subsections (3) and (4), the total quantity of oxidizing substances Class 5(a) permitted on board a vessel or handled at an ordinary berth shall not exceed the weights specified in Schedule 2, and the total quantity of oxidizing substances Class 5(b) permitted on board a vessel or handled at an ordinary berth shall be as specified by an authorized officer.

(3) Notwithstanding Subsection (2), a quantity not exceeding 2,000,000 kg of ammonium nitrate containing not more than 0.2% combustible matter (including organic matter calculated as carbon) may be handled and conveyed on a vessel at an isolated berth specially designated by an authorized officer and the ammonium nitrate shall be stowed in the vessel in accordance with—

- (a) the requirements specified in the Code for the stowing and packing of ammonium nitrate; and
- (b) such special conditions (if any) as are specified by an authorized officer.

(4) Notwithstanding Subsections (2) and (3) a quantity not exceeding 150,000 kg of ammonium nitrate containing not more than 0.2% combustible matter (including organic matter calculated as carbon) and packed in bags may be conveyed in a vessel as through cargo at an ordinary berth in accordance with the following conditions:—

- (a) the hold in which the ammonium nitrate is stowed remains closed so long as the vessel is in port; and
- (b) any special conditions that may be specified by an authorized officer are observed.

29. SEPARATION OF DANGEROUS AND TOXIC GOODS.

(1) All dangerous goods which are designated in the Code as being of a toxic nature shall be separated from foodstuffs and empty containers intended for foodstuffs.

(2) Dangerous goods of one classification which are permitted to be stored in areas under the jurisdiction of the Board shall be separated from dangerous goods of any other classification.

PART IV. – DANGEROUS GOODS IN CARGO CONTAINERS.

30. IDENTIFICATION OF DANGEROUS GOODS IN CONTAINERS.

Cargo containers in which dangerous goods are carried shall be identified by appropriate reference in the application for a permit, and all goods carried in cargo containers shall be notified in the manner specified in Section 5.

31. LABELS.

³(1) Cargo containers carrying dangerous goods shall be marked with two sets of the appropriate standard dangerous goods labels as illustrated in the Code, one set of the labels to be affixed on each side of the container.

(2) Each set of labels shall comprise one label representing the principal hazard of the substance or substances carried in the cargo container, and, if appropriate, an additional label for each secondary hazard.

(3) Each individual dangerous goods package stowed within the container shall bear a set of the appropriate labels, except where all of the packages would bear the same set of labels.

32. APPROVAL OF GAS RECEPTACLES AND PORTABLE TANKS.

Unless otherwise permitted by an authorized officer, a vessel shall not be permitted to berth at a wharf whilst carrying dangerous goods in gas receptacles or portable tanks unless—

- (a) the receptacle or tank has been approved for carriage in vessels by the competent authority in the country or state of origin, if the country or state is a member government of the Inter-Governmental Maritime Consultative Organization; and
- (b) the application for a permit has been endorsed accordingly by the owner; and
- (c) permission of an authorized officer for the handling of such receptacles or tanks has been received.

33. LIMITATION ON QUANTITIES OF DANGEROUS GOODS.

The person responsible for dangerous goods in cargo containers shall not permit those dangerous goods to be on board a vessel or on a wharf in quantities in excess of the amounts specified in Schedules 2 and 3.

34. CARGO CONTAINERS AT ORDINARY BERTHS.

Where cargo containers containing dangerous goods are being handled at an ordinary berth—

³ Section 31 amended by No. 26 of 1981, s3.

- (a) a person, other than persons engaged in handling the containers, shall not approach within 15 m of them; and
- (b) cargo shall not be worked over or within 15 m of the containers, unless the special permission of an authorized officer has been first obtained; and
- (c) unless the contrary intention appears—they shall be handled in accordance with the requirements related to their contents as specified in Part III.

35. FIRE PROTECTION AT A CONTAINER TERMINAL OR CONTAINER BASE.

The owner, occupier or lessee of a container terminal or container base shall provide fire protection and emergency equipment and arrange personnel training for the protection of the terminal or base to the satisfaction of the Board, having regard to the nature of the dangerous goods being or likely to be handled.

36. SUBSTANCES PROHIBITED AT A CONTAINER TERMINAL.

⁴Dangerous goods of Packaging Group I, Class 1 and Class 7 shall not be handled at a container terminal.

37. REMOVAL AND UNLOADING AT A CONTAINER TERMINAL.

⁵Where cargo containers holding—

- (a) dangerous goods specified in the Code as permitted on cargo vessels as “deck stowage only”; or
- (b) ammonium nitrate and all chlorates; or
- (c) organic peroxides, Class 5.2,

are handled at a container terminal, the cargo containers shall be removed from the terminal area promptly on unloading or shall be loaded on board the vessel promptly after arrival at the terminal.

38. RETENTION OF CARGO CONTAINERS AT CONTAINER TERMINAL OR CONTAINER BASE.

(1) Notwithstanding Section 37, cargo containers holding dangerous goods—

- (a) intended for transshipment; or
- (b) discharged from or to be loaded onto vessels during weekends or public holidays; or
- (c) to be packed or unpacked at a container base,

⁴ Section 36 amended by No. 26 of 1981, s4.

⁵ Section 37 amended by No. 26 of 1981, s5.

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may be held in a section of a container terminal or container base specially set aside for this purpose, provided that the permission of an authorized officer has been given in writing and subject to such terms and conditions as may be specified.

(2) Where cargo containers holding dangerous goods are kept at a container terminal or container base in accordance with Subsection (1), the containers shall be segregated in the stacks at the terminal or base in a similar manner to that required on the container vessel.

PART V. – TANKERS AND VESSELS CONVEYING DANGEROUS GOODS IN BULK.

Division 1.

General.

39. APPLICATION OF PART V.

This Part applies to the handling of dangerous goods carried in tankers in bulk, in deep tanks or tanks fitted to a vessel, and to any vessels taking on oil bunkers.

40. LIMITATION ON DANGEROUS GOODS IN BULK AT WHARVES.

Dangerous goods in bulk shall be handled at a wharf only as approved by an authorized officer.

41. APPROVAL FOR HANDLING DANGEROUS GOODS IN FIXED TANKS.

Dangerous goods shall not be carried in any fixed tank on a vessel at a berth unless—

- (a) the vessel possesses a notation from a Classification Society or a valid certificate of survey issued by the government of the country of registry of the vessel or by an authority on behalf of that government as being a vessel suitable for the carriage of the particular substance, provided that the government concerned is a signatory to the Safety Convention; and
- (b) the application for permit has been endorsed accordingly by the owner of the vessel.

42. DECLARATION AS TO DANGEROUS GOODS IN BULK.

The owner of a vessel having dangerous goods in bulk on board shall sign a declaration before berthing that to the best of his knowledge and belief the vessel is free from hull, tank and container leakages, and the declaration shall be delivered to an authorized officer before the vessel berths.

43. INSPECTION FEE.

An inspection fee as prescribed in Part IX of the *Harbours Board (General) By-Laws*, shall be paid, when required, to the Board in respect of any vessel on which dangerous goods in bulk exceeding 500,000 kg are conveyed or handled.

44. CONSENT REQUIRED TO ENTER ON WHARVES OR VESSELS.

- (1) A person other than—

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- (a) a member of the crew; or
- (b) a person engaged in handling operations of the vessel; or
- (c) a person authorized by an authorized officer,

shall not enter on a wharf at which a vessel carrying dangerous goods in bulk is berthed, unless he first obtains the written consent of an authorized officer in the case of a wharf owned by the Board or of the owner of the wharf in any other case.

(2) A person other than—

- (a) a member of the crew; or
- (b) a person engaged in handling operations of the vessel; or
- (c) a person authorized by an authorized officer,

shall not go aboard a vessel carrying inflammable liquids or gases in bulk, unless he first obtains the written consent of the owner of the vessel.

45. WHARF BARRICADES.

Dangerous goods in bulk shall not be handled at a wharf until—

- (a) a barricade sufficient to prevent access by any unauthorized person to the restricted area and the connections of pipeline hoses has been erected to the satisfaction of an authorized officer; and
- (b) a watchman is stationed at each opening of the barricade—
 - (i) to prevent the entrance of any unauthorized person or vehicle; and
 - (ii) to take any precautions which are appropriate for the goods being handled.

46. HOURS FOR HANDLING.

(1) Dangerous goods in bulk shall not be handled at a wharf between the hours of sunset and sunrise unless an authorized officer has given permission and endorsed the permit accordingly, and such permission is subject to Subsection (3).

(2) Unless otherwise authorized in writing by an authorized officer, and subject to Subsection (3)—

- (a) pipelines, hoses, valves and other appliances shall be coupled up, and pumping shall be commenced, during the hours of daylight up to one hour before sunset; and
- (b) those pipelines, hoses, valves and other appliances shall not be uncoupled or otherwise interfered with except during the hours of daylight; and
- (c) adequate lighting of an approved type shall be provided to the satisfaction of an authorized officer.

(3) Any exemption granted under Subsection (1) or (2) shall be subject to the operations exempted being carried out in the presence, and under the supervision, of a representative of the Board, except that, in the handling of an ignitable liquid with a flashpoint above 61°C or a non-inflammable liquid, written permission may, at the discretion of an authorized officer, be considered adequate.

47. OPERATION OF PIPELINES.

(1) The permission of an authorized officer shall be obtained on each occasion in respect of each particular vessel before pumping operations commence and any additions to conditions stipulated shall be observed.

(2) During pumping operations, pipelines shall be regularly patrolled throughout their full length so that any leakage may be detected, and in the case of pipelines carrying heated or cooled products, the patrol shall include inspection or observation of devices designed to warn against too high or too low a temperature being reached or against excessive thermal expansion or contraction of the pipeline occurring which may lead to pipeline fracture.

(3) Substances which are heated above or cooled below ambient temperature shall not be pumped through any pipeline or flexible hose not designed and constructed for use at the temperature required in accordance with Subsection (2).

(4) During the whole period of pumping operations, the terminal valves on the wharf and the control valves on the vessel shall be attended by competent persons who shall close the valves if it appears that there are circumstances likely to cause danger.

(5) Any circumstances likely to cause danger shall be promptly reported to an authorized officer and a written report shall be furnished to the Port Manager within 24 hours.

(6) If an authorized officer considers it necessary, operations shall be discontinued.

Division 2.

Oil and Inflammable Liquids and Gases in Bulk.

48. MOORING OF TANKERS.

(1) Wire mooring ropes shall not be used in the mooring of tankers conveying oil or inflammable liquids or gases, provided that, subject to the consent of an authorized officer, this subsection need not apply to wire ropes which are—

- (a) attached to automatic tensioning winches and led overboard through leads fitted with suitable sheaves or rollers; and
- (b) fitted at the outboard end with rope tails of vegetable or synthetic fibre.

(2) While a tanker is berthed, a suitable axe for cutting the mooring lines in case of need shall be provided by the vessel and kept readily available on the wharf.

49. PROVISION OF STEEL HAWSERS.

On the berthing of a vessel carrying oil or inflammable liquids or gases in bulk, steel wire hawsers of sufficient strength to enable the vessel to be hauled away from the wharf shall be placed over the fore and aft ends of the vessel, and the hawsers shall remain during the whole of the time the vessel is alongside the wharf and shall be tended and adjusted to meet changes in the draft of the vessel.

50. MATCHES, SMOKING, ETC.

(1) Where oil or inflammable liquids or gases in bulk are being handled, the watchman at the barricade erected in accordance with Section 45 shall take charge of matches and all other means of making a fire or light from all persons entering the barricade.

(2) A person shall not smoke in or on any vessel during the handling of oil or inflammable liquids or gases, except in a location approved by an authorized officer.

(3) A person shall not smoke within 30 m of any pipeline (other than a buried pipeline) or any tank containing oil or inflammable liquids or gases, whether on a vessel or on any property of the Board, or in a restricted area except in a location approved by an authorized officer.

51. FIRE AND LIGHTS ON TANKERS AND IN THE VICINITY OF PIPELINES.

A person shall not, except with the permission of an authorized officer—

- (a) use any electrical equipment including lights, telephones, heaters or stoves, within 30 m of any tank pipeline connection or hose containing inflammable liquid or gas, whether on a vessel or on any property under the jurisdiction of the Board, except that approved electric lamps, approved electric lights and electrical equipment designed, constructed and maintained so as to be incapable of igniting inflammable vapour may be used; or
- (b) bring any internal combustion engine, including any motor vehicle driven by an internal combustion engine into a restricted area or within 30 m of any tank or pipeline connection or hose containing inflammable liquid or gas whether on a vessel or on any property of the Board; or
- (c) bring, cause or use any fire, naked flame or spark or use any tool or equipment capable of creating any fire, naked flame or spark, including the use of oxy-acetylene or electric cutting or welding apparatus into a restricted area or within 30 m of any tank or pipeline connection or hose containing inflammable liquid or gas whether on a vessel or on any property of the Board; or
- (d) use boiler fires for the purpose of supplying power for handling cargo and for heating galley appliances on or in the vicinity of any vessel carrying inflammable liquids or gases unless an authorized officer is

satisfied that the construction of the vessel and the situation of the fires are such that there is no hazard.

52. CHIPPING, SCRAPING AND HAMMERING.

(1) Except with the written permission of an authorized officer the owner of a vessel shall not cause or permit any chipping, scraping or hammering of iron or steel on the vessel while—

- (a) a tank which contains or which has recently contained any inflammable liquid or gas is open; or
- (b) there is any inflammable liquid or gas on deck; or
- (c) any of that liquid or gas is being loaded or unloaded.

(2) The owner of a vessel shall not cause or permit any iron or steel hammer or other instrument that produces or is capable of producing a spark to be used for the purpose of opening or closing a hatch, tank lid, or pumping line containing inflammable liquid or gas.

53. TOWING OF VESSELS.

(1) A vessel (other than a self-propelled vessel) carrying oil or inflammable liquids or gases in bulk shall not be navigated except in tow of, or when attended by, an efficient tug and not more than two such vessels shall be towed together at any one time.

(2) A vessel carrying oil or inflammable liquids or gases in bulk shall not be towed alongside a tug without the consent of an authorized officer.

54. MOORING OF SMALL CRAFT NEAR TANKS OR PIPELINES.

Tugs, launches, barges, boats or other small craft shall not moor alongside or be in the vicinity of any vessel or pipeline containing inflammable liquids or gases when pumping operations are being carried out, except with the permission of an authorized officer.

55. TANKS FOR INFLAMMABLE LIQUIDS.

Where tanks or compartments are used for conveying inflammable liquids—

- (a) the tank shall be efficiently screened from any engine on the vessel by a fire-resisting shield placed not less than 15 cm from the tank and carried up above the tank and down below it, and the exhaust of the engine shall be wholly in front of this shield if the engine is in front of the tank, or wholly behind this shield if the engine is behind the tank; and
- (b) all pressure and vacuum relief valves shall be effectively protected by wire gauze; and

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- (c) effective earthing shall be provided to prevent accumulation of static electricity; and
- (d) the bottom end of each fill pipe shall be carried down to near the bottom of the tank to form a liquid seal; and
- (e) all fill pipes and dip pipes and other openings of a tank shall be fitted with screwcaps, bolted covers or other means of closing gas-tight at all times when those fill pipes or dip pipes are not in use for filling or dipping, and there shall be no opening of any kind in the walls of any fill pipe capable of communicating with the gases or vapours in the tank, and where perforations are made in the dip pipe, all such openings shall be covered with wire gauze; and
- (f) vent pipes on all tanks shall be properly protected at the outlets by wire gauze and those outlets shall not be less than 3.5 m above deck and shall be made weatherproof; and
- (g) no tank shall be filled with inflammable liquid to more than 95% of its capacity and a mark indicating the level at which 96% of its capacity will be so occupied shall be permanently fixed in the tank so as to be readily visible.

56. SCUPPERS AND DECK OPENINGS.

All scuppers and overside deck openings on vessels carrying or handling oil or inflammable liquids in bulk shall be effectively plugged before pumping commences, whether for loading or unloading of the vessel or for transferring between tanks.

57. OPERATION OF PIPELINE.

(1) Unless otherwise permitted by an authorized officer the velocity of the liquid in the pipelines shall not be greater than 1 m per second—

- (a) at the commencement of pumping and after each change of grade of liquid at which water clearance is employed, for a period of 30 minutes or for sufficient time to clear the pipe twice, whichever is the longer; and
- (b) when pumping into empty tanks, until the fill pipe is covered or until the roof of a floating roof tank is afloat,

and where the bore of the pipeline varies, the limiting rate shall be applied to the section having the smallest bore.

(2) Flexible hose including hose used for oil shall—

- (a) be handled and operated in accordance with B.S. 1435; and
- (b) not be worked at a pressure exceeding 80% of the marked factory test pressure; and
- (c) be supported and protected against kinking and chafing by means approved by an authorized officer.

(3) Where a non-return valve is by-passed in accordance with Section 85, the rising spindle valve shall be kept closed and locked except when the pipeline is to be cleared of its contents or back loading is taking place or operations are such as to require insertion of a product separation device.

(4) When pumping operations cease temporarily, valves on the vessel and on the shore pipeline shall be closed.

(5) Pipeline connections shall be electrically bonded before flexible hoses are connected and the bonding shall not be broken before flexible hoses are disconnected.

58. COMPLETION OF PUMPING.

(1) On the completion of pumping, pipelines shall be thoroughly freed from inflammable liquid with water and shall be kept full of water unless otherwise approved by an authorized officer, and the hose shall be disconnected from the pipeline.

(2) Notwithstanding Subsection (1), an authorized officer may grant permission to leave inflammable liquid in underwater pipelines subject to any conditions that may be imposed.

(3) Except with the approval of an authorized officer, oil pipelines shall be cleared of oil from the point of loading or discharge to the non-return valve (if any) at the shore end of the wharf.

Division 3.

Inflammable Gases in Bulk.

59. CARRIAGE OF INFLAMMABLE GASES.

Inflammable gases in bulk shall not be carried in any vessel in a port except in a gas tanker or in a vessel which has been approved for the purpose by an authorized officer.

60. SUPERVISION OF PIPELINES.

All pipelines and all transfer pipes or hoses of vessels shall be kept under constant supervision while rigged for transfer operations of inflammable gases in bulk.

61. OPERATION OF PIPELINES.

(1) During pumping of inflammable gases, pipelines shall be regularly patrolled throughout their full length so that any leakage may be detected and in the case of pipelines carrying heated or cooled products, that patrolling shall include inspection or observation of devices designed to warn against too high or too low a temperature being reached or against excessive thermal expansion or contraction of the pipeline occurring which may lead to pipeline fracture.

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(2) All ships' tanks and pipelines containing inflammable gases shall be maintained under a positive pressure and air shall be prevented at all times from entering those tanks or pipelines.

(3) Valves of tanks containing inflammable gases in bulk shall be closed immediately when pumping ceases and every transfer pipeline on the vessel and on shore shall be disconnected and blanked off.

(4) If any fault needing repair occurs in the pipeline or connections during the handling of inflammable gas, or if continuous transfer is interrupted in any way, all pumping or transfer operations shall be stopped until adequate safety measures have been taken.

62. SCUPPERS AND DECK OPENINGS.

All wharf drain holes and pipes, ships' scuppers and pipes and other vents which may permit liquefied gases to escape to the water during an accident shall be opened before starting to handle inflammable gases, and shall be kept open for the whole period of operations.

63. DEPARTURE OF VESSELS.

Every vessel carrying inflammable gases in bulk shall leave port without undue delay after loading or discharging, except that the vessel may remain for the purpose of taking on board bunkers, stores or ballast, or for such other purposes as may be specifically approved on each occasion by an authorized officer.

Division 4.

Poisonous and Corrosive Liquids and Gases in Bulk.

64. GENERAL PRECAUTIONS.

During the loading and unloading of any poisonous or corrosive liquids or gases in bulk—

- (a) while the tanker is tied up at any wharf, a notice board shall be placed at the foot of the gangway with the words "KEEP AWAY—POISONS (*or* CORROSIVES, *as the case may be*) BEING HANDLED" in red letters not less than 15 cm high on a white background; and
- (b) at night the notice board shall be illuminated by a white light, which is an approved safety lamp; and
- (c) if any spillage occurs, an authorized officer shall be informed, all persons in the affected area shall be warned and the spilled substance shall be removed or treated so as to obviate any danger; and
- (d) all special precautions relating to the particular commodity being handled shall be observed whether prescribed by law or not; and

- (e) not less than three sets of protective clothing approved by an authorized officer shall be kept remote from the pumping area, but readily accessible in an emergency; and
- (f) a safety shower or tub, which may be portable, shall be kept remote from the pumping area but readily accessible in an emergency when any handling operation is being carried out.

65. CLEARING OF PIPELINES.

On termination of transfer of any poisonous or corrosive liquids or gases, the section of the pipeline from the shore to the end of the wharf shall be cleared unless prior permission of an authorized officer has been obtained.

66. OPERATION OF ANHYDROUS AMMONIA PIPELINES.

In addition to the general provisions of Sections 64 and 65, the following special provisions apply to the operation of pipelines used for the transfer of anhydrous ammonia:—

- (a) pipelines shall be operated generally in accordance with the relevant sections of A.S. CB23; and
- (b) not less than three sets of self-contained breathing apparatus of compressed air or oxygen type approved by an authorized officer and not less than three protective suits approved by an authorized officer shall be kept remote from the pumping area but readily accessible in an emergency; and
- (c) all operating personnel shall carry approved cannister type respirators; and
- (d) release of gas, when necessary for operation of the pipeline, shall be into water to minimize atmospheric contamination; and
- (e) when the concentration of ammonia exceeds 100 parts per 1,000,000 at a distance greater than 3 m from the vessel or connections, an authorized officer shall direct that the handling cease until the concentration is satisfactorily reduced.

PART VI. – PIPELINES AND FLEXIBLE HOSE CONVEYING DANGEROUS GOODS.

Division 1.

General.

67. INTERPRETATION OF PART VI.

In this Part, “inspector” means any person or class of persons whom the Board considers qualified to carry out the required tests and inspections, and includes inspectors authorized by the Secretary, Department of Labour and Industry, to perform those tests and inspections.

68. APPLICATION OF PART VI.

This Part applies to the use of pipelines and flexible hoses used for the handling of dangerous goods, whether between any vessel and a shore installation or on any property under the jurisdiction of the Board.

69. LIABILITY OF OWNERS.

Unless the contrary intention appears, the owner of the pipelines, valves, hoses or other appliances shall be responsible for compliance with this Part.

70. NEW PIPELINES.

Proposals for the installation of new pipelines shall be submitted to the Board, together with all relevant details, and approval must be obtained before installation commences.

71. MAJOR REPAIRS TO PIPELINES.

Where an existing pipeline is to be relaid or renewed or any major repairs are to be effected, including any repairs or alterations involving the use of electric welding apparatus or oxygen and acetylene welding or cutting apparatus, the pipeline shall be classified as a new pipeline for the purposes of this Part.

72. STANDARDS OF PIPELINES.

The construction and testing of every pipeline shall be in accordance with the requirements of U.S.A.S. B31 or of any other Code approved by the Board.

73. PIPELINES SUPPORTED BY WHARVES.

(1) Where a pipeline is supported by a wharf, adequate provision shall be made for expansion, movement and anchorage.

(2) Access openings with covers shall be provided for any valves and outlets in pipelines placed below the deck of a wharf, unless otherwise agreed by the Board.

(3) The seaward end of the pipeline and hose connected to it shall be made liquid tight by fitting with blank flanges secured and fastened with at least four bolts, or with screwed caps.

74. PIPELINES TO BE ABOVE GROUND.

Pipelines not situated on wharves shall be laid above ground wherever possible and shall be properly supported at a height of not less than 15 cm above the ground, but shall not rest directly on wood.

75. PROTECTION OF PIPELINES.

Pipelines shall receive adequate protection against corrosion or other injury, and where required by the Board, an approved cathodic protection system shall be provided.

76. PIPELINES LAID UNDERGROUND.

(1) Pipelines laid under rail tracks, roads, streets or where subjects to heavy loading shall be installed in accordance with API Code 1102 or in accordance with other methods of sleeving or culverting approved by the Board.

(2) Pipelines, other than pipelines referred to in Subsection (1), which are laid underground, the surface of which is subject to vehicular traffic, shall have at least 60 cm of cover over the pipeline, and proper access pits, with covers, shall be provided for valves.

77. FLEXIBLE HOSE.

Flexible hose shall be approved by the Board.

78. MARKING OF PIPELINES, ETC.

Pipelines, hoses and control valves shall be marked as required by the Board.

79. INSPECTION OF PIPELINES.

(1) Pipelines and fittings shall be inspected each time before use in loading or discharge and shall be tested to a pressure 25% in excess of maximum operating pressure not less than every three months by an inspector, and the owner shall keep a record of the tests and make that record available to the Board.

(2) A submarine pipeline shall be inspected not less than once each year by an inspector over its complete underwater length to ensure—

- (a) that the pipeline has not been displaced by wave or current action or by being dragged during ships use; and
- (b) that damage by rocks or any excessive corrosion is not occurring; and
- (c) that a buried pipeline has not been uncovered; and

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(d) that current or tidal action has not undermined the pipeline so as to leave any section unsupported.

(3) The owner of an underground pipeline shall cause the pipeline to be tested and inspected by an inspector as required by the Board, and the inspections shall be made—

(a) in the case of the initial inspection—not later than 10 years from the date of installation; and

(b) in every other case—not less than once every year.

(4) The owner of a pipeline shall, immediately after an inspection has been made in accordance with this section, forward to the Port Manager a certificate signed by the inspector stating—

(a) whether or not the pipeline is in good order and condition; and

(b) whether the inspection was made on visual examination, pressure test or thickness measurements.

80. INSPECTION OF CATHODIC PROTECTION SYSTEMS.

Pipelines to which approved cathodic protection is fitted may at the discretion of the Board remain covered, provided that the system is checked throughout the length of the pipeline not less than once every year and the checks indicate that the system is still effective and has been effectively maintained throughout the lifetime of the pipeline.

81. INSPECTION OF VALVES AND OTHER APPLIANCES.

Valves and other appliances used for pumping operations shall be inspected to ensure certainty of operation on each occasion before pumping commences.

82. RENEWAL OR REPAIR OF PIPELINES.

Where a Port Manager is of the opinion that it is in the interests of public safety to do so, he may, by written notice given to the owner of a pipeline require the owner to re-lay, renew or repair the pipeline.

Division 2.

Pipelines for Liquefied Inflammable Gases.

83. CONSTRUCTION AND MAINTENANCE.

Where pipelines are used for the transmission of liquefied inflammable gases, whether to or from any vessel or on any property under the jurisdiction of the Board—

(a) pipelines and fittings shall be constructed and maintained in accordance with the relevant sections of A.S. CB20; and

- (b) pipelines shall be tested by an inspector as specified in Appendix E of A.S. CB20, before being used for the first time and afterwards not less than every three months; and
- (c) hoses shall be maintained and tested as specified in Section 7.7 of A.S. CB20; and
- (d) pipelines shall be electrically bonded and earthed as required by the Board; and
- (e) means shall be provided at points well removed from the pipelines to close down pumps in an emergency.

Division 3.

Pipelines for Anhydrous Ammonia.

84. CONSTRUCTION AND MAINTENANCE.

(1) Pipelines and fittings used for the transmission of anhydrous ammonia, whether to or from any vessel or on any property under the jurisdiction of the Board, shall be constructed and maintained in accordance with the relevant sections with A.S. CB20.

(2) Pipelines used for the transmission of anhydrous ammonia shall be identified in accordance with A.S. CA21.

Division 4.

Pipelines for Inflammable Liquid and Oil.

85. PIPELINES TO BE FITTED WITH STOP VALVES AND NON-RETURN VALVES.

(1) Subject to Subsections (2) and (3), pipelines used for inflammable liquids and oil which are on wharves shall be fitted with an approved non-return valve and an approved stop valve at the outer or seaward end, and where required by an authorized officer, an approved non-return valve shall be placed in the pipeline at the shore end of the wharf or of a submarine pipeline.

(2) Subject to Subsection (3) and to the written approval of an authorized officer, a non-return valve may be by-passed by an approved branch line controlled by a rising spindle gate valve where a "Go-Devil" or product separation device operation on back loading is practiced.

(3) A non-return valve need not be fitted to a pipeline used exclusively for bunkering but a stop valve approved by an authorized officer shall be fitted at the shore end of the pipeline.

86. RISING SPINDLE GATE VALVES.

Approved rising spindle gate valves shall be used at all pipeline control points on pipelines used for transmission of inflammable liquids.

87. BONDING AND EARTHING.

Pipelines used for inflammable liquids shall be suitably bonded and earthed in a manner approved by an authorized officer, and a suitably designed cathodic protection system may be accepted as meeting this requirement.

88. INSULATING FLANGES.

An approved insulating flange may be inserted on the shore side of the stop valve adjacent to the hose connection to a pipeline used for the transmission of inflammable liquid or oil, to insulate the pipeline completely from any connected hose.

89. DRIP TRAYS AND DRUMS.

Pipelines used in connection with the pumping of inflammable liquids and oil to or from a vessel shall be provided with drip trays or drums, approved by an authorized officer, under the seaward end of the pipeline.

90. TESTING OF PIPELINES.

Pipelines used for inflammable liquids or oil shall be tested by an inspector not less than once every year to ensure that they are suitably bonded and earthed.

91. CONDITIONS RELATING TO FLEXIBLE HOSES.

Flexible hoses used for inflammable liquids or oil shall—

- (a) have a factory test pressure as specified by B.S. 1435, of at least 10.5 kg per cm²; and
- (b) have the number of the hose, the factory test pressure and the ownership of the hose legibly and permanently marked on a metal plate incorporated in and forming part of the hose or in such other manner as may be approved by an authorized officer; and
- (c) be so fitted as to ensure complete electrical continuity over the entire length of the hose, by the use of 44/.012 copper wire mechanically connected to the metal fitting at each end of the hose, or by any other method approved by an authorized officer.

92. TESTING OF HOSES.

(1) Flexible hoses used for inflammable liquids or oil shall be tested in accordance with B.S. 1435, and the results of the test shall be available for inspection by an authorized officer.

(2) Hoses shall be retired from service when the elongation exceeds the figure specified in Clause A3.a. and A3.b. of the Appendix to B.S. 1435.

(3) A report on the tests signed by an inspector shall be provided to an authorized officer in January and July of each year.

(4) At the conclusion of each test, the hose shall be tested for electrical continuity by an inspector and the result shall be recorded.

Division 5.

Pipelines for Corrosive Liquids.

93. CONSTRUCTION AND MAINTENANCE.

Pipelines used for the transmission of corrosive liquids whether to or from any vessel or on any property under the jurisdiction of the Board, shall be identified in accordance with A.S. CA21.

Sch. 1 *Harbours Board (Inflammable Liquid and Dangerous Goods) By-laws
9999*

SCHEDULE 1

PAPUA NEW GUINEA.

Harbours Board Act 1963.

***Form 1 – Application for Permit to Handle Dangerous Goods or Cargo
Adjacent to Dangerous Goods.***

By-laws, Sec. 5(a). Form 1.

Name of vessel:

Agent or owners:

Master:

Port and berth, or proposed port and berth:

Application is made for a permit to—

- *(a) load
- *(b) unload
- *(c) handle
- *(d) handle non-dangerous goods in an under-deck space in which is stowed, or on or over a part of a deck on which is stowed,

the dangerous goods as in the attached list on . . . at about . . . a.m./p.m.

I certify that:—

- *(a) to the best of my knowledge and belief there are no damaged or deteriorated containers or packages containing dangerous goods amongst the dangerous goods described in the attached list.
- *(b) the following are particulars relating to damaged or deteriorated containers or packages containing dangerous goods that have come to my knowledge:—
- *(c) the gas receptacles/portable tanks* identified as . . . have been approved by (*name of competent authority*) in accordance with Notice of Approval dated . . . , 20..., for the conveyance of the dangerous goods carried in them.
- *(d) the fixed tank identified as (*name or position*) has been approved by (*name of competent authority*) in accordance with the Certificate of Approval dated . . . , 20..., for the conveyance of the dangerous goods carried in it.

(*Signature of Master, Owner or Agent.*)

Dated . . . 20...

*Strike out if inapplicable.

PAPUA NEW GUINEA.

Harbours Board Act 1963.

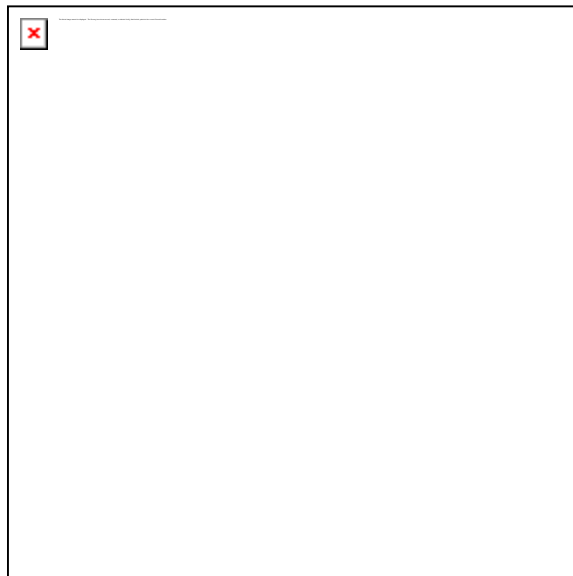
Form 2 – Dangerous Goods List.



PAPUA NEW GUINEA.

Harbours Board Act 1963.

***Form 3 – Notification of Empty Tanks or Spaces having Previously
Contained Dangerous Liquids or Gases in Bulk and
not Certified Gas Free.***



Sch. 1 *Harbours Board (Inflammable Liquid and Dangerous Goods) By-laws
9999*

PAPUA NEW GUINEA.

Harbours Board Act 1963.

***Form 4 – Permit to Convey or Handle Dangerous Goods or Bulk
Quantities of Oil.***

By-laws, Sec. 6. Form 4.

Name of vessel: Date:

Agent or owner:

Port and berth:

Permission is granted to the owner of the above vessel to—

- *(a) load
- *(b) unload
- *(c) convey

the dangerous goods in the attached list at the port and berth abovenamed, in relation to the above vessel, subject to compliance with the *Harbours Board (Inflammable Liquid and Dangerous Goods) By-Laws* and to any additional conditions specified below:

Conditions

(*Signature of Authorized officer.*)

This permit expires at . . . a.m./p.m. on . . . , 20...

*Strike out whichever is inapplicable.

To the Port Manager,

I certify that on . . . , 20... , I collected and tested samples of air from the holds, spaces and tanks shown in the following Schedule, of the vessel . . . berthed at . . .

SCHEDULE

1.	2.	3.	4.
No. of samples collected.	From where collected.	Results of tests for fumes, gases and vapours.	Results of tests for substances.

The results of the analytical tests made by me for the presence of explosive or inflammable or injurious fumes, gases, and vapours are shown in Column 3, and for the presence of substances capable of forming an explosive or inflammable gas during the course of the proposed alterations and/or repairs to the abovesaid vessel, are as shown in Column 4.

In my opinion the proposed alterations and/or repairs may be commenced—

- *(a) without danger to life or property, including the abovesaid or any other vessel;
- *(b) without danger to life or property, including the abovesaid or any other vessel, subject to the following terms and conditions:—
 1. **
 - 2.
 - 3.
 - 4.

(Signature.)
(Qualifications.)

Dated . . . , 20...

*Strike out words which are unnecessary.

**State terms and conditions suggested in detail.

**SCHEDULE 2 – LIMITATION OF CLASS 5(A) DANGEROUS GOODS
PERMITTED TO BE ON BOARD A VESSEL AT AN ORDINARY BERTH.**

By-laws, Sec. 21, 33.

No. Substance. Maximum.

1. Nitrates of barium lead, potassium, sodium, strontium Not Limited
2. Ammonium perchlorate 10,000 kg
3. Ammonium nitrate containing not more than 0.2% by weight of combustible material (including organic matter calculated as carbon)–
 - (a) in sound steel drums 150,000 kg
 - (b) in bags within cargo containers 150,000 kg
 - (c) in other than sound steel drums or cargo containers 10,000 kg
4. Ammonium nitrate containing more than 0.2% by weight of combustible material (including organic material calculated as carbon)–other than authorized explosives
Nil
5. Other substances of Class 5(a) 200,000 kg
6. Total quantity of all substances Class 5(a) excluding nitrates under Item 1
200,000 kg

Note The conditions for handling, and the maximum permitted quantities of ammonium nitrate/chalk fertilizer mixtures shall be the same as for ammonium nitrate without admixtures when the ammonium nitrate exceeds 80% by weight (exceeds 28% nitrogen content). Mixtures containing not less than 60% nor more than 80% ammonium nitrate (not less than 21% nor more than 28% nitrogen content) are not limited in quantity, but in all other respects must be handled as oxidizing substances Class 5(a). Mixtures containing less than 60% ammonium nitrate are not classed as dangerous goods.

**SCHEDULE 3 – LIMITATION ON QUANTITIES OF DANGEROUS GOODS
PERMITTED IN PORTABLE TANKS ON BOARD A VESSEL AT AN
ORDINARY BERTH.**

By-laws, Sec. 33.

Substances.	Maximum Quantity.	
	In each tank.	On board a vessel.
Tetraethyl lead and tetramethyl lead	4,500 <i>l</i>	Subject to the approval of an authorized officer.
Aluminium alkyls, butyl lithium and similar materials	1,360 kg	
Other dangerous goods	18,000 <i>l</i>	

Harbours Board (Inflammable Liquid and Dangerous Goods) By-laws
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