



SUPPLEMENT

TO THE

NEW ZEALAND GAZETTE

OF

THURSDAY, MARCH 22, 1928.

Published by Authority.

WELLINGTON, TUESDAY, MARCH 27, 1928.

*Regulations under the Explosive and Dangerous Goods Amendment Act, 1920.*

CHARLES FERGUSSON, Governor-General.  
ORDER IN COUNCIL.

At the Government Buildings at Wellington, this 24th day of March, 1928.

Present :

THE RIGHT HONOURABLE J. G. COATES, P.C., PRESIDING  
IN COUNCIL.

IN pursuance and exercise of the powers conferred on him by the Explosive and Dangerous Goods Amendment Act, 1920, and of all other powers and authorities enabling him in this behalf, His Excellency the Governor-General of the Dominion of New Zealand, acting by and with the advice and consent of the Executive Council of the said Dominion, doth hereby revoke, as on and from the twenty-fourth day of March, one thousand nine hundred and twenty-eight, the regulations made under the said Act, on the twenty-seventh day of April, one thousand nine hundred and twenty-one, and gazetted on the twenty-eighth day of April then instant, the regulations made on the twenty-fifth day of October, one thousand nine hundred and twenty-one, and gazetted on the twenty-seventh day of October then instant, the regulations made on the twelfth day of December, one thousand nine hundred and twenty-one, and gazetted on the twenty-second day of December then instant, the regulations made on the third day of September, one thousand nine hundred and twenty-three, and gazetted on the sixth day of September then instant, the regulations made on the fourth day of March, one thousand nine hundred and twenty-four, and gazetted on the sixth day of March then instant, the regulations made on the sixth day of April, one thousand nine hundred and twenty-five, and gazetted on the sixteenth day of April then instant; and in lieu thereof doth hereby make the following regulations for the purposes of the said Act.

A

REGULATIONS.

PART I.—PRELIMINARY.

1. (a) THESE regulations may be cited as "the Dangerous Goods Regulations, 1928."
- (b) These regulations shall come into force on the said 24th day of March, 1928.
- (c) In these regulations, if not inconsistent to the context,—
  - "Approved" means approved by an Inspector :
  - "Carriage" includes any carriage, wagon, cart, truck, vehicle, or other means of conveying goods or passengers by land, in whatever manner it may be propelled or transferred from place to place, and whether at rest or in motion :
  - "Harbour" means a harbour within the meaning of the Harbours Act, 1908 :
  - "In bulk," as applied to liquid dangerous goods, means such goods stored or kept in receptacles of a capacity greater than 90 gallons :
  - "To keep," with respect to dangerous goods on premises, means to retain for a period exceeding one hour :
  - "Protected work" means (a) any dwellinghouse, place of worship, public building, university, college or school, hospital or public institution, Court of Justice, theatre, or other building in which persons are accustomed to assemble ; (b) any factory, workshop, office, store, warehouse, shop, or other building where persons are employed for the purpose of any trade or business ; (c) any dock, wharf, public railway (not being a siding), timber-yard, and any part of a harbour, port, or river where it is customary for ships to berth, moor, or lie :
  - "Screen-wall" means a wall of such substance and so constructed and placed as to be efficient for the purpose of preventing the spread of fire from any one place to any other place ; and where dangerous goods are kept in an underground depot, means the surrounding floor, walls, and covering of such underground depot, if efficient for the purpose aforesaid :

"Storeship" means any ship used for the storage of dangerous goods within the limits of a harbour:

"Wharf" includes any quay, landing-place, landing-stage, jetty, pier, hulk, or other place at which goods are landed, loaded, or unloaded:

"Vessel" means a receptacle or container capable of holding liquids:

"The said Act" means the Explosive and Dangerous Goods Amendment Act, 1920:

#### PART II.—CLASSIFICATION AND EXEMPTIONS.

2. The goods hereunder named are hereby declared to be dangerous goods within the meaning of the said Act, and for the purposes of these regulations the said goods shall be divided into four classes as follows:—

##### Class I:—

Aviation motor spirit.	Distillate.
Benzine.	Gasoline.
Benzene.	Motor spirit.
Benzole.	Naphtha.
Benzoline.	Petroleum ether.

Liquids or materials consisting wholly or in part of petroleum spirit, acetone, carbon bisulphide, amyl acetate, or ether, and having a true flashing-point of less than 73° Fahr.

##### Class II:—

Petroleum-oil.  
Kerosene.  
Power kerosene.  
Methyl alcohol.  
Turpentine and turpentine substitutes.  
Absolute alcohol.  
Methylated spirits and spirits of wine.

##### Class III:—

Phosphorus (yellow).  
Calcium carbide.

##### Class IV:—

Fuel-oil when stored in bulk as hereinbefore defined.

3. Dangerous goods may be kept or stored without a license under the said Act in the quantities and under the conditions of storage shown hereunder:—

- (a) In quantities not exceeding 3 gallons of dangerous goods of Class I, if such goods are kept in separate glass, earthenware, or metal vessels, each of which contains not more than  $\frac{1}{2}$ -pint and is securely stopped.
- (b) In quantities not exceeding 8 $\frac{1}{2}$  gallons of dangerous goods of Class I, kept for private use and not for the purpose of sale, and not used or intended for use in the premises in which the same are kept or stored in connection with any trade or business or any purpose incidental thereto, if such goods are kept in substantial vessels of metal or other approved material so securely closed that neither liquid nor vapour can escape therefrom and not within a dwelling or an outhouse attached to a dwelling, and if due precautions are taken to prevent accident by fire or explosion and to prevent the escape of any such dangerous goods into a sewer or drain.
- (c) In quantities not exceeding 17 gallons of dangerous goods of Class II, kept for the purpose of sale, or not exceeding 50 gallons of such goods kept for private use only and not for the purpose of sale, if no dangerous goods of Class I are kept by any person within a distance of 20 ft. from such dangerous goods of Class II.
- (d) In quantities not exceeding 250 gallons of dangerous goods of Class I or of Class II, kept on any farm premises not less than 10 acres in area, for private use or use in connection with the work on such farm and not for purpose of sale, if all such dangerous goods are kept in a thoroughly ventilated building situated not less than 40 ft. from any other building and if all such dangerous goods are kept in substantial metal vessels so securely closed that neither liquid nor vapour can escape therefrom and if all due precautions are taken to prevent accident from fire or explosion.
- (e) In quantities not exceeding 2 lb. of phosphorus kept under water in securely closed containers.
- (f) In quantities not exceeding 50 lb. of calcium carbide contained in waterproof and airtight tins, each containing not more than 7 lb. and labelled with a distinctive label or mark denoting the nature of the contents.

- (g) On a ship, carriage, railway-station, or wharf while being conveyed in accordance with these regulations.
- (h) In a fuel-tank of a motor-carriage or motor-propelled ship, or the fuel-tank of a stationary internal-combustion engine:

Provided that nothing in this regulation shall authorize the keeping in unlicensed premises of more than 3 gallons at any one time of petroleum spirit used or intended for use in such premises in connection with any trade or business or any purpose incidental thereto.

4. The foregoing provisions for the storage of dangerous goods without a license shall not apply in respect of the storage of dangerous goods on any premises licensed, or required to be licensed, for the storage of dangerous goods; and the following provisions shall not apply in respect of dangerous goods kept or stored without license pursuant to the last-preceding regulation.

#### PART III.—MARKING.

5. (1) Except as provided herein, no person shall keep, convey, sell or expose for sale within New Zealand any dangerous goods of Class I or Class II unless the packages containing such dangerous goods are marked with the trade-name of the dangerous goods, and, in addition, are labelled or marked as follows:—

- (a) Every *outer* package containing dangerous goods of Class I in quantity not less than  $\frac{1}{2}$  gallon shall be conspicuously labelled with a paste-on label, or other label of a kind approved by the Chief Inspector, in the form in the First Schedule to these regulations. Such label shall be printed in *red* letters on a *white* ground, or in the case of an outer package made of wood, in *red* letters on a *white* ground or on the woodwork of the package:
- (b) Every vessel containing dangerous goods of Class I (in quantity less than 1 gallon) shall be conspicuously labelled with a paste-on label, or other label of a kind approved by the Chief Inspector, in the form in the Second Schedule to these regulations. Such label shall be printed in *red* letters on a *white* ground, and shall, wherever possible, be placed on the vessel immediately above or below the label or mark denoting the trade-name of the goods:
- (c) Every *outer* package containing dangerous goods of Class II in quantity exceeding 1 gallon shall be conspicuously labelled with a paste-on label, or other label of a kind approved by the Chief Inspector, in the form in the Third Schedule to these regulations. Such label shall be printed in *black* letters on a *yellow* ground:

Provided that no such label shall be required for kerosene, turpentine, or turpentine substitutes, packed in approved metal vessels each containing not more than 4 $\frac{1}{2}$  gallons, and contained in an approved tightly fitting outer package containing not more than two such vessels.

(2) On application in writing by the importer of any dangerous goods, or by any dealer in dangerous goods, the Chief Inspector may, by writing under his hand, grant exemption from the operation of this Part of these regulations in respect of any dangerous goods while stored in such place or places as may be specified in that behalf in the instrument of exemption, or while being conveyed to any such place, or for such limited time as may be specified.

6. Labels required to be used by this Part of these regulations must conform to the appropriate Schedules as to wording, shape, and comparative size of lettering and, in the case of the label described in the Second Schedule hereto shall be of the size specified in that Schedule, and in the case of the labels described in the First Schedule and the Third Schedule hereto shall, except where otherwise specified, be of the following sizes, measured along the sides of the diamond:—

- (a) On packages containing not more than 100 gallons, 4 in. by 4 in.
- (b) On road tank-wagons, 12 in. by 12 in.
- (c) On railway tank-cars, 18 in. by 18 in.

7. It shall be sufficient defence to any proceedings for a breach of this Part of these regulations committed prior to the 1st day of April, 1931, to show that the dangerous goods in respect of which proceedings were taken were labelled or marked with the appropriate labels prescribed in the Second, Third, and Fourth Schedules of the regulations under the said Act, made on the 27th day of April, 1921.

#### PART IV.—PACKING AND CONVEYANCE.

8. No person shall convey or pack for conveyance or storage dangerous goods of Class I or of Class II, unless such dangerous goods are contained in vessels of metal or other approved

material from which the dangerous goods cannot escape in the form either of liquid or of vapour, and so substantially constructed as not to be liable, except under circumstances of negligence or extraordinary accident, to be broken or to become defective or insecure in course of conveyance; and unless such container and the outer package containing the same (if any) is of a type and constructed to a specification of which the Chief Inspector has given his approval by notice published in the *Gazette*.

*Provisions relating to the Conveyance of Petroleum Spirit in Tank-wagons.*

9. No person shall use a road tank-wagon for the conveyance of dangerous goods of Class I other than a tank-wagon which is constructed in accordance with the provisions contained in the Fourth Schedule to these regulations, and which, together with its connections and fittings, is maintained in good condition and in accordance with the provisions aforesaid.

10. (a) No person shall use for the conveyance of dangerous goods of Class I a road tank-wagon where capacity exceeds 2,500 gallons.

(b) No person shall use for the conveyance of dangerous goods of Class I a road tank-wagon where capacity exceeds 1,500 gallons unless the wagon is a six-wheeled motor-lorry as defined in Section 2 of the Public Works Amendment Act, 1925.

(c) No person shall use for the conveyance of dangerous goods of Class I a road tank-wagon having a trailer attached thereto or used in connection therewith except a tank-trailer used subject to the following conditions:—

- (i) Only four-wheeled tank trailers shall be employed and not more than one such trailer shall be attached.
- (ii) The capacity of the tank trailer shall not exceed 900 gallons.
- (iii) Except as may be approved by the Chief Inspector, the tank-wagon and trailer while in use shall be constantly attended by not less than two competent persons, one of whom shall remain with the trailer if the latter is detached from the tank-wagon.

(d) Nothing herein contained shall exempt any person from compliance with the provisions of the Public Works Act, 1908, and its amendments, and any regulations thereunder for the time being in force relating to any class of vehicle and the use thereof.

(e) The foregoing limitations on the capacity of tank-wagons and tank-trailers shall be construed so as to permit of the tank containing the amount specified under varying degrees of temperature. No person shall fill or permit to be filled any tank or compartment of a tank, which is not provided with a pressure-relief valve, in excess of 95 per cent. of its capacity.

11. No person shall light, bring, or cause or permit to be lit or brought on any tank-wagon any fire or artificial light capable of igniting inflammable vapour, whether the tank is full or empty.

12. No person shall use for the conveyance of dangerous goods of Class I any road tank-wagon unless a 2-gallon fire-extinguisher of the foamite type and a 1-quart fire-extinguisher of the tetra-chloride type, each kept full and in good working order, be carried in an easily accessible position thereon.

13. No person shall smoke while on or attending to any tank-wagon wherever situated, and whether full or empty, and no person other than the person in charge, an Inspector, or an authorized employee of the owner shall ride on any tank-wagon, and the person in charge of any tank-wagon shall not permit any person to smoke while on or attending to such tank-wagon, or permit any person other than as aforesaid to ride on such tank-wagon.

14. Except as may be approved by an Inspector for the purposes of tank calibration, no person shall deliver petroleum spirit from any tank-wagon except under seal—*i.e.*, by stout hose having a liquid-tight and gas-tight connection to the container into which the delivery is made. Except when delivery is made on farm premises exceeding 10 acres in area, provision shall be made to discharge the vapour from such containers not less than 12 ft. above the ground and well clear of any fire or flame.

15. The person in charge of any tank-wagon shall, before commencing delivery, take all due precautions to ensure that the connections are liquid-tight and that the quick-release valves are in working order. Delivery shall be made only by personal operation of the quick-release valve on the delivery pipe-line, and it shall be an offence against these regulations for any person to fasten or secure the lever or operating-handle of any such quick-release valve with the valve in the "open" position.

16. The person in charge of any tank-wagon shall, during the filling or emptying thereof, or of any tank-trailer attached thereto or used in connection therewith, observe the following precautions:—

- (i) If the wagon is mechanically driven the engine shall be stopped the whole time the filling or emptying is proceeding, and shall not be run until all tanks have been securely closed.
- (ii) If the wagon is horse-drawn, the horses shall be removed and the wheels securely scotched before the filling or emptying is begun.
- (iii) Adequate provision shall be made to prevent the accumulation of a dangerous static charge of electricity.
- (iv) The discharge line shall be kept under constant observation while the wagon is being emptied. If any leaks occur the discharge shall be stopped immediately, and no further discharge permitted until the line is repaired.
- (v) Before commencing delivery into any underground tank or other container the dipping-hole pipe of the underground tank or container shall be securely closed gastight and shall be kept so closed during delivery.

17. No person shall deliver petroleum spirit from any tank-wagon unless such tank-wagon is in the open air: Provided that this regulation shall not prohibit delivery from a tank-wagon situated beneath a verandah or roof if such verandah or roof has not more than two sides enclosed and the approval in writing of the Chief Inspector to such delivery has been obtained.

*Provisions of General Application.*

18. Every person conveying dangerous goods of Classes I and II, and every person in the vicinity of such goods during conveyance or delivery, whether assisting in such conveyance or delivery or not, shall comply with the following general rules:—

- (a) No fire and no artificial light capable of igniting inflammable vapour shall be allowed on any vehicle conveying the dangerous goods, and no such fire or light shall be brought within 30 ft. of such goods.
- (b) No person shall smoke within 30 ft. of any wharf or depot where the dangerous goods are being handled, and no person shall smoke on any carriage holding or conveying dangerous goods within a borough or town district, or the limits of any harbour for which a Harbour Board has been constituted.
- (c) No explosive or other goods liable to cause or communicate fire or explosion shall be conveyed on the same carriage as the dangerous goods.
- (d) A competent person shall be in charge of every carriage conveying the dangerous goods, and no intoxicated person shall be allowed on any such carriage.
- (e) No carriage conveying dangerous goods shall be allowed to remain stationary within a borough or town district, or the limits of any such harbour as aforesaid except for such time and for such purpose as is reasonably necessary in connection with the loading or delivery of the goods conveyed, or at such place and under such conditions as may be approved by an Inspector.
- (f) No person shall carry dangerous goods of Class I other than such goods contained in the fuel-tanks of the vehicle, on any public vehicle whilst conveying passengers.
- (g) No person shall convey dangerous goods in a mechanically-propelled vehicle unless such vehicle be provided with a fire-extinguisher of the tetra-chloride type of capacity of not less than 1 quart, kept full and in good working order, and placed in an easily accessible position.
- (h) All due precautions, whether herein prescribed or not, shall be taken for the prevention of accidents by fire or explosion and for preventing unauthorized persons having access to the dangerous goods, and for the prevention of any act whatever which tends to cause fire or explosion and is not reasonably necessary for the purposes of the conveyance of the dangerous goods, or of any other article carried therewith, and for preventing any person whomsoever from committing any such act; and any person who, after being warned, commits any such act shall be deemed to commit a breach of these general rules.

19. Notwithstanding anything in this Part of these regulations, in cases where packages containing dangerous goods of Class I or of Class II have on importation into New Zealand or on subsequent conveyance, developed defects which will cause or permit dangerous goods to escape therefrom, either

as liquid or as vapour, the damaged packages may be conveyed in an approved carriage to the nearest convenient place where repairs to the packages can be carried out: Provided that in the handling of such packages, in addition to the general rules hereinbefore contained, the following special rules shall be observed by every person handling or conveying the packages or assisting in such work:—

- (a) Such appliances for preventing and extinguishing a petroleum fire as may be approved or required by an Inspector shall be carried on the carriage.
- (b) Due precautions shall be taken to prevent any of the dangerous goods from escaping or being discharged into a sewer or drain or into the waters of any harbour.

20. The owner of any dangerous goods who employs any other person in the conveyance of such dangerous goods or in any of the operations connected therewith, shall furnish a copy of these regulations to, or affix a copy thereof in some place where it can be conveniently read by, any such person, and shall take all other measures necessary to ensure that any such person is acquainted with and carries out the provisions of these regulations.

21. The foregoing provisions of this Part of these regulations shall not apply to the conveyance of dangerous goods on a vehicle (not being a tank-wagon or a public vehicle used for the conveyance of passengers) in quantity not exceeding 32 gallons of dangerous goods in securely closed metal containers of capacity not exceeding 10 gallons or in quantity not exceeding 50 gallons, contained in a securely closed steel barrel.

22. In the unloading of dangerous goods from any ship on to any wharf the person, firm, or authority controlling such wharf shall take such measures as are necessary to prevent the accumulation on the wharf of a quantity of dangerous goods in excess of that capable of being handled in one hour under the conditions of transport normally available for removal, and shall cause all dangerous goods to be removed from the wharf on the day of discharge from the ship, and it shall be an offence against these regulations for any person to keep or store overnight any dangerous goods on a wharf situated over navigable water, unless such goods are placed in an approved depot licensed under this Act.

23. The consignee of any dangerous goods unloaded from a ship to a wharf, whenever required by the person, firm, or authority controlling such wharf to take delivery thereof, shall remove such dangerous goods from such wharf on the day of discharge from the ship, and at such a rate as shall prevent the accumulation on the wharf of a quantity of dangerous goods prohibited by the last preceding regulation.

24. If any person commits a breach of any of the regulations contained in this Part of these regulations, or fails to comply with any of the rules contained therein, he shall be liable to a fine not exceeding £100.

#### PART V.—STORAGE.

25. No person shall keep or store, otherwise than in bulk, any dangerous goods of Class I or Class II (except such quantity as is withdrawn for immediate use in accordance with a license) unless such dangerous goods are stored in a depot as defined by the said Act which shall comply as regards installation, ancillary attachments, maintenance, use, and all other respects with the requirements hereof as set out in section (a) of this Part of these regulations:

Provided that in cases where, in the opinion of the Chief Inspector, the isolation is sufficient, or where the dangerous goods are contained in approved vessels of a capacity not exceeding 1 gallon or where a quantity of dangerous goods of Class II only, not exceeding 250 gallons, is stored, an approved storage-place other than a depot may be used.

26. No person shall keep or store in bulk any dangerous goods of Class I or Class II otherwise than in—

- (a) A storeroom; or
- (b) An underground tank which shall comply as regards installation, ancillary attachments, maintenance, use, and all other respects with the requirements hereof as set out in section (b) of this Part of these regulations so far as may be applicable; or
- (c) In the above-ground tank depot which shall comply as regards installation, ancillary attachments, maintenance, use, and all other respects with the requirements hereof as set out in section (d) of this Part of these regulations.

27. Except as may be approved by the Chief Inspector no person shall keep or store in bulk any dangerous goods of Class IV otherwise than in—

- (a) A storeroom; or
- (b) An underground tank which shall comply as regards installation, ancillary attachments, maintenance, use, and all other respects with the requirements hereof as set out in section (c) of this Part of these regulations; or

- (c) In an above-ground tank depot which shall comply as regards installation, ancillary attachments, maintenance, use, and all other respects with the requirements hereof as set out in section (d) of this Part of these regulations.

28. No license shall be issued, and no depot shall be established or maintained by any local authority, for the storage of petroleum in bulk in above-ground tanks, or in quantities exceeding 5,000 gallons in underground tanks, or on any storeroom, unless the consent in writing of the Chief Inspector has been obtained to the issue, and to the terms and conditions of such license or of any amendment to the same, or to the establishment or maintenance of the depot by a local authority.

(a) *Depots for Storage otherwise than in Bulk of Dangerous Goods of Class I or Class II.*

29. Every depot shall comply with the following conditions as regards construction:—

- (a) The walls of the depot shall be constructed of brick, stone, concrete, or other non-inflammable material approved by the Chief Inspector: Provided that, subject to the approval of the licensing authority, dangerous goods contained in approved containers of a capacity not exceeding 8 gallons may be stored in a depot constructed with walls of wood and iron which otherwise complies with this regulation. Except as may be approved by the Chief Inspector, the maximum quantities which may be stored in such building shall not exceed 2,000 gallons.
- (b) The depot shall have an effective covering or roof of metal, slate, concrete, or other approved non-inflammable material. Where the depot is situated inside another building, the roof shall be of concrete not less than 6 in. thick, and the depot shall have no openings to the interior of such building.
- (c) The floor of the depot shall be constructed of an impervious and non-inflammable material approved by the Chief Inspector in such manner as to prevent leakage. Doors shall be of fire-resisting construction, and shall be made to close tightly. Windows and skylights (if any) shall be of wired glass in non-combustible frames, or of such other fire-resisting construction as may be approved by the Chief Inspector.
- (d) In order to prevent the escape of dangerous goods from the depot under the action of fire or otherwise, either (i) the floor of the depot shall be lowered so as to form a shallow well; or (ii) a solid wall or "sill" shall be built across the doorway if the lower portion of the depot is of some material such as brick or concrete; or (iii) other method approved by the Chief Inspector shall be adopted. The "well" or enclosed space thus formed shall be of sufficient capacity to contain—

(i) Where the quantity of dangerous goods licensed to be stored in the premises does not exceed 800 gallons, not less than fifty per centum of that quantity:

(ii) Where the quantity of dangerous goods licensed to be stored in the premises exceeds 800 gallons, not less than twenty-five per centum of that quantity, or not less than 400 gallons, whichever quantity is the greater:

(iii) Where the license authorizes storage in containers of capacity exceeding 10 gallons, the whole of the quantity of dangerous goods licensed to be stored in the premises:

Provided that in no instance shall the "well" or enclosed space be required to have a capacity greater than that afforded by sides 3 ft. in depth.

- (e) The depot shall be efficiently ventilated by high and low vents opening direct to the open air above the "well" level. If any such opening is less than 5 ft. above the ground, it shall be covered with metal gauze of not less than 28 meshes to the linear inch.
- (f) No artificial light shall be installed inside a depot except an incandescent electric light of approved pattern. Except as may be approved by the Chief Inspector, all switches and fuses shall be outside the building, and the wires shall be led through earthed metal pipes. In no case shall any current-bearing part be exposed so that inflammable vapour can come into contact therewith.

30. Every depot shall, as regards situation, comply with the following conditions:—

- (a) The depot shall be so situated as not to be within 50 ft. of any fire, forge, furnace, explosive, highly combustible goods, or other source of danger, unless a screen-wall intervenes between the depot and any such fire, forge, furnace, explosive, highly combustible goods, or other source of danger.

- (b) The depot shall not be situated within or attached to a building which is a protected work unless the wall of the building on the side on which the openings of the depot are placed is a screen-wall above, and to a lateral distance of 10 ft. on either side of, the openings of the depot.
- (c) A depot situated within or at a distance less than 10 ft. from another building shall not be licensed to store dangerous goods exceeding in quantity 800 gallons.
- (d) The depot shall be separated as follows from all protected buildings and works :—

Number of Gallons for which the Premises are Licensed.	Where the dangerous goods are stored otherwise than in bulk, and the walls of the depot— are of brick, stone, concrete, or it is an iron tank, and where no screen-wall intervenes be- tween the depot and the pro- tected buildings and works.	Where the dangerous goods consist of a wooden framework covered externally with iron, and where no screen-wall intervenes between the depot and the protected buildings and works.	Distance of depot from protected buildings and works to be not less than
0-250	800-4,000	10 feet.	10 feet.
500	10,000	15 "	15 "
2,000	20,000	20 "	20 "
4,000	40,000	30 "	30 "
10,000	80,000	40 "	40 "
20,000	Unlimited	50 "	50 "
40,000	.. .. .	60 "	60 "
80,000	Unlimited	75 "	75 "
Unlimited	.. .. .	100 "	100 "

31. Subject to the provisions of subclause (a) of the last preceding regulation, dangerous goods contained in approved iron or steel drums or barrels exceeding 10 gallons in capacity may be stored in a depot consisting of a compound of clay or clean binding earth, brick, or concrete, and situated at a distance from any protected work measured from the nearest wall of the compound—

- (a) Not less than 50 ft. where the total quantity of dangerous goods stored does not exceed 200 gallons :
- (b) Not less than 60 ft. where the total quantity of dangerous goods exceeds 200 gallons but does not exceed 800 gallons :
- (c) Not less than 100 ft. where the total quantity of dangerous goods stored exceeds 800 gallons.

Such depot may form part of a wood and iron or other approved building, provided that the latter is adequately ventilated, or it may be protected with a sun-roof of wood and iron, or other approved material.

32. Notwithstanding anything in this Part of these regulations, dangerous goods may be kept on licensed premises in an approved place other than a depot, provided that such dangerous goods are kept in a movable tank receptacle of a kind approved by the Chief Inspector, and containing not more than 60 gallons.

33. Every occupier of licensed premises shall comply with the following rules :—

- (a) There shall be kept upon the licensed premises a supply of sand or other approved means of preventing and extinguishing a petroleum fire :
- (b) Such appliances shall be kept in efficient condition to the satisfaction of an Inspector :
- (c) Such appliances shall be distributed about the premises so as to be immediately available for dealing with any dangerous goods spilled or ignited.

34. Every occupier of premises where dangerous goods are stored and every person in and about the same shall comply with the following general rules, and every such occupier shall keep a copy of the said rules posted in a conspicuous place in the premises :—

- (a) Except as specially provided in the license, all dangerous goods received upon the premises shall be at once placed in a depot or other approved storage-place, and any dangerous goods removed from a depot or storage-place for delivery shall be at once removed from the premises.
- (b) Every depot shall be used exclusively for the keeping of dangerous goods and such other goods as may be approved by an Inspector, and the packages in which the goods are contained.
- (c) No explosives, or anything liable to spontaneous ignition or combustion, and no fire or light, except an artificial light of an approved construction and character which will not ignite inflammable vapour, shall be placed, brought, or allowed to remain within 50 ft. of any depot or of any dangerous goods in the premises, unless such depot or dangerous goods are separated from such explosive, thing, fire, or light by a screen-wall.
- (d) Except as provided in the license, all dangerous goods on the premises shall be kept in closed vessels of metal or other approved material. Every such vessel shall be so substantially constructed and maintained that no leakage whatever of liquid or vapour can take place therefrom. Dangerous goods of Class I shall not be delivered from any container in a depot or other building by gravity flow through a tap, valve, siphon, or other device permitting gravity flow of liquid.
- (e) A vessel containing dangerous goods shall not, save as is provided in the license, be opened on the premises except in the open air, and then not in the immediate vicinity of any depot. Such vessel shall be opened only for the time necessary for drawing-off the dangerous goods, and during such drawing-off every reasonable precaution shall be adopted for preventing the escape of dangerous goods or vapour therefrom :

Provided that this shall not prohibit the opening of a drum or other container for the purpose of affixing a flame-proof connection through which the goods may be pumped through hose or pipe connection to a position outside the depot.

- (f) No dangerous goods shall be conveyed in or about the premises, except in closed vessels or by means of closed pipes so constructed and connected as to be entirely free from leakage.
- (g) Every vessel containing dangerous goods and every outer package containing the same shall be marked or labelled as required by these regulations.
- (h) No dangerous goods shall be received or delivered from the premises, except between the hours of sunrise and sunset, unless an artificial light of an approved construction and character is used.
- (i) No person under the age of fourteen years shall be allowed inside any depot.
- (j) No quantity of dangerous goods in excess of that specified in the license shall be kept in the premises.
- (k) No person shall bring any matches into any depot or place where dangerous goods of Class I are exposed, or smoke in the vicinity of any depot or any place where dangerous goods, whether contained in packages or not, are being used or handled.
- (l) All due precautions shall be taken for the prevention of accidents by fire or explosion, for the prevention of the escape of dangerous goods into any sewer or drain, and for the prevention of unauthorized persons having access to the dangerous goods kept in the premises ; and no person shall do any act whatever which tends to cause fire or explosion.

(b) *Storage of Dangerous Goods of Classes I, II, and IV, in Underground Tanks.*

35. Every underground tank and all pumps, pipes, and fittings thereof shall be strongly constructed of the best materials, and the construction and fitting-up shall be subject to the approval of an Inspector of the licensing authority in whose district the tank is situated. Before the installation

of any tank the owner shall notify such Inspector of the intention to install such tank, and shall test the tank at the pit-side with air-pressure not less than 5 lb. to the square inch. Such test shall, unless otherwise arranged, be carried out in the presence of such Inspector. The owner shall at all times maintain the tank and connections in good order and free from leakage.

36. Every underground tank shall be placed not less than 2 ft. below the surface of the ground, and shall not be placed beneath a building unless the circumstances of the case render this necessary. When so placed it shall either be placed below the lowest floor of the building or if situated in a cellar or basement shall be placed in a concrete pit constructed with concrete walls, roof, and floor extending from basement to ground floor with a space of not less than 2 ft. on all sides of the tank, which space shall be filled with well-rammed earth, sand, or clay. The tank, wherever situated, shall be below the level of any piping to which such tank may be connected: Provided that this regulation shall not apply to underground tanks of capacity exceeding 7,500 gallons, installed to the satisfaction of an Inspector.

37. Except as may be approved by the Chief Inspector, every underground tank shall be set in firm foundations, and shall be either surrounded by soft earth, sand, or preferably clay well tamped into place, or placed in a brick or concrete chamber with the space between tank and chamber filled with dry sand or clay. Where necessary to prevent floating the tank shall be securely anchored or weighted.

38. All underground tanks shall be fitted with a ventilating pipe of such size that neither pressure nor vacuum can be established in the tank during filling or emptying, but not less than 1 in. in diameter, which shall be carried to an approved position in the open air not less than 12 ft. above the ground and shall there terminate in one or more return bends with an opening or openings whose total area shall (by means of splayed ends or double returns, or a combination of such means) be double the area of the pipe section. Every such opening shall be covered with brass wire gauze of not less than 28 meshes to the linear inch, secured in such manner that the gauze may be removed for examination and cleaning.

39. Except in cases where the dangerous goods are stored over water, all pipes connected to the storage tank, including the dipping-pipe, but excluding the ventilating-pipe, shall be carried down close to the bottom of the tank.

40. The filling-pipe shall be carried to an approved position in the open air, and shall be fitted with a screw cap and protected in an approved manner from access by unauthorized persons. The opening of every filling-pipe, and the opening of every dipping-pipe, when such opening is outside a building, shall be so protected that water cannot overlie such opening except in the event of the flooding of the locality.

41. The maximum quantities of dangerous goods which may be stored in underground tank or tanks on any premises shall be as follows:—

	Gallons.
(a) If tank is situated beneath a building or within 10 ft. from a building and the top of the tank is above the lowest floor of the building . . . . .	550
(b) If tank or tanks are situated beneath a building not of fire-resisting construction and the top of all tanks is below the lowest level of all buildings within a radius of 20 ft. . . . .	1,000
(c) If tank or tanks are situated beneath a building and the building, or that portion of the building above the tanks is of fire-resisting construction approved by an Inspector, and the top of all tanks is below the lowest floor of all buildings within a radius of 20 ft. . . . .	5,000
(d) If tank or tanks are situated in the open not less than 10 ft. from any building and the top of all tanks is below the lowest floor of all buildings within a radius of 25 ft. . . . .	15,000
(e) If tank or tanks are situated in the open not less than 10 ft. from any building and the top of all tanks is below the lowest floor of all buildings within a radius of 30 ft. . . . .	20,000
(f) If tank or tanks are situated in the open not less than 10 ft. from any building and the top of all tanks is below the lowest floor of all buildings within a radius of 40 ft. . . . .	50,000
(g) If tank or tanks are situated in the open not less than 10 ft. from any building and the top of all tanks is below the lowest floor of all buildings within a radius of 50 ft. . . . .	Unlimited.

42. Except as may be approved by an Inspector for the purpose of tank calibration, underground tanks shall be filled only under seal — i.e., by hose having gas-tight and petrol-tight connections to tank-wagon, barrel, or other container at one end and the filling-point of the underground tank at the other. When the tank is filled from barrels or

similar containers there shall be installed in the delivery-line a quick-release valve, or a valve capable of being shut off by a single motion. Before commencing the filling of any underground tank the person in charge of the operation shall securely close the dipping-hole pipe gas-tight and shall keep such pipe so closed during the filling of the tank.

43. When it is necessary to remove from the ground any underground tank which has contained petroleum spirit, or to examine or repair such tank, or the underground pipes connected thereto, the owner of the tank shall notify an Inspector of the Licensing Authority within whose district the tank is situated of the intention to undertake the examination, repair, or removal, which shall be carried out only at such time and under such conditions as such Inspector shall approve. No person shall remove any underground tank from the ground until all openings in the tank are securely closed and made gas-tight.

44. In cases where for any reason dangerous goods contained in any underground tank are placed under seizure by an Inspector, the latter may seal both tank and the attached pump which shall for this purpose be deemed to be one unit, and it shall be an offence against these regulations for any person to break such seal or to remove any dangerous goods from such tank whilst under seizure.

#### *Pumps for Petroleum Spirit.*

45. Petroleum spirit used, or intended to be used for any purpose other than for the purpose of retail sale may be delivered from underground tanks by means of any type of petrol-pump approved by an Inspector, provided that the connections to the storage container shall be both petrol-tight and gas-tight, that the hose on the delivery-side of the pump shall be kept empty when not in use, and that the pump shall be placed in a well-ventilated part of the building, and in such position that exit from the building will not be blocked in the event of a fire occurring in the use of the pump. Pumps may be affixed on the wall or placed in other approved position.

46. No person shall deliver petroleum spirit from an underground tank for the purpose of retail sale otherwise than by means of a pump of a type of which the Chief Inspector has given his approval by notice published in the *Gazette*, and which complies as regards installation and in all other respects with the requirements set out in these regulations and with the terms of the approval. Such approval may be either a general one or may be conditional on the installation of the pump in certain positions only and under restrictions as to the method of operating.

47. Application for the approval of any pump shall be accompanied by detail plans and specifications showing the construction of the pump, and before final approval the Chief Inspector may require the practical working of the pump to be demonstrated under installation conditions. Every application for approval of a pump shall be accompanied by an inspection fee of £1.

48. Pumps used for the retail sale of petroleum spirit shall be installed only in such position as may be approved by an Inspector and, wherever possible, in the open air. A pump shall not be permitted inside any building or in such position that it is or may be used to serve motor-vehicles situated within a building unless the building, or the portion of the building in the vicinity of the pump, is well ventilated and is of fire-resisting construction to the satisfaction of an Inspector. A pump shall not be so situated that exit from the building is likely to be blocked in the event of a fire occurring in the use of the pump.

49. Not more than one pump used for the retail sale of petroleum spirit shall be installed inside any building unless—

- (a) The latter is used solely for the supply of petroleum spirit and such other purposes generally associated with the supply of petroleum spirit as may be approved by an Inspector, but not including car-repair work or garaging, and the building is designed to provide adequate ventilation in the vicinity of the pumps; or
- (b) The portion of the building where the pumps are situated, including all roadways where vehicles stand to refill fuel-tanks, is separated from the remainder of the building by walls of brick, concrete, or other similar type of fire-resisting material approved by the Chief Inspector (and by a roof of similar construction should the building be of more than one floor), and that adequate ventilation is provided in the vicinity of the pumps. Door-openings in the walls between the service area and the remainder of the building shall be fitted with fire-resisting doors, and all windows shall be of wired glass in metal frames.

50. No petroleum spirit shall be allowed to remain in the "visible container" of any pump situated inside or within 8 ft. from any building, and it shall be an offence against this regulation for any person to leave petroleum spirit in the "visible container" of any pump so situated, or to leave the operating-device of any pump so situated in other than



the "return to tank" position, except when the pump is actually in use.

51. The occupier of every premises in or from which petroleum spirit is sold by means of a pump or pumps shall install a fire-extinguisher of the tetra-chloride type of capacity not less than 1 quart, or a fire-extinguisher of the foamite type having a capacity of not less than 2 gallons, in a convenient position not more than 20 ft. from such pump or pumps, and shall at all times keep such extinguisher full and in good working-order, and shall take such measures as are necessary to ensure that every person operating the pump or pumps is acquainted with the location and the method of operating such fire-extinguisher.

52. No person shall fill or permit to be filled with petroleum spirit the fuel-tank of any motor-vehicle when the engine of such motor-vehicle is running.

53. No person shall smoke or bring any light or flame capable of igniting petroleum-spirit vapour, including a lighted acetylene or other flame lamp, within 10 ft. of the fuel-tank of any motor-vehicle while such tank is being filled with petroleum spirit.

54. The occupier of every premises from which petroleum spirit is sold by means of a pump or pumps shall erect a notice either on the pump or pumps or in some other conspicuous place in the vicinity approved by an Inspector. Such notice shall consist of the words, "No Smoking. Stop your engine," and the lettering shall be of such size as may be easily read and as may be approved by an Inspector.

(c) *Storage in Bulk of Fuel-oil for Use in connection with Internal-combustion Engines or Oil-burning Equipments.*

55. Clauses 35 to 41 inclusive of these regulations shall apply to underground tanks for the storage of fuel-oil, with the following exceptions:—

(a) In cases where it is not practicable to comply with clause 36 hereof the tank may be placed in a cellar or basement floor in a brick or concrete pit constructed in such manner as to ensure that the tank is protected on all sides with not less than 2 ft. of insulating material (concrete, earth, sand, or clay). If the tank is not placed below the level of any piping to which it may be connected, an anti-siphoning device of a type approved by the Chief Inspector, shall be installed in such manner as to prevent siphoning or gravity flow of oil in case of accident to the equipment or piping.

(b) A quantity not exceeding 1,000 gallons of fuel-oil may be stored in an installation coming within the provisions of clause 41 (a) hereof.

56. There may be attached to an underground-tank installation a gravity or service tank from which fuel oil is supplied directly or through a feed-tank to the engine or furnace. The following provisions shall apply to the installation of such service tanks:—

(a) The capacity of the service-tank shall not exceed 60 gallons unless the normal oil-consumption of the installation exceeds 60 gallons in eight hours, when a service-tank of such capacity not exceeding 275 gallons as may be approved by an Inspector may be installed.

(b) The service tank shall be sealed and provided with a vent pipe constructed and installed in accordance with clause 38 of these regulations.

(c) The tank must be provided with an overflow-pipe of larger diameter than the supply-pipe. Such overflow-pipe must have a distinct fall all the way to the storage-tank. No valve shall be placed on the overflow-pipe.

(d) Service tanks shall be filled only by pumping from the storage tank or tanks.

(e) Service tanks shall not be situated within 10 ft., measured horizontally, from any fire or flame. Service tanks shall be substantially and rigidly installed on incombustible supports in such manner as to ensure protection against mechanical injury.

57. All piping connections in the installation shall be run as directly as possible without sags, and be so laid that, where possible, pipes pitch towards the supply-tanks without traps. Provision shall be made for expansion, contraction, jarring, and vibration. Piping, after installation, shall be tested and proven tight at a pressure of 20 lb. to the square inch.

58. Where it is necessary to heat oil in storage or service tanks in order to handle it, the oil shall not be heated to a temperature higher than 40° C. below its flashing-point. Heating shall be done by means of properly installed coils in the tank, using only steam or water. Thermostatic control and thermometer shall be provided for all heating devices.

59. All pumps and burners used in connection with any fuel-oil installation shall be of a type approved by the Chief Inspector, and shall be maintained at all times secure against leaks.

60. Valves shall be provided in readily accessible positions near each burner and also close to the service tank in the pipe-line to burners.

61. Means for remote control of the flow of oil to the burner shall be provided for use in emergency, and a sign indicating its purpose shall be located at the control device:

Provided that a switch in the motor supply-circuit may serve this purpose for an electrically driven equipment, or a quick-closing valve in the oil-supply line, arranged to be operated from a safe location, preferably outside the building, may be used.

62. Furnaces or ranges used with fuel-oil burners shall be designed to give adequate ventilation to prevent accumulation of inflammable vapour.

63. The occupier of the premises where fuel oil is stored for use in a burner shall install an approved fire-extinguisher of the foamite or tetrachloride type in the vicinity of each burner or group of burners, and shall at all times maintain such extinguisher in good working-order.

(d) *Storage in Bulk of Petroleum Spirit, Petroleum Oil, and Fuel-oil in Above-ground-tank Depots.*

64. No license shall be issued to store petroleum in bulk in any premises adjacent to any harbour from or to which harbour it is proposed to deliver petroleum by means of pipe-lines, and no local authority shall establish or maintain any such depot in any premises adjacent to any such harbour, unless the situation of the premises and the provisions made or proposed to be made for the public safety and for compliance with these regulations have been approved by a Board consisting of the following persons:—

(a) The Naval Adviser to the Government or a deputy appointed by him:

(b) The Chief Inspector or a deputy appointed by him:

(c) An officer appointed by the Defence Department:

(d) The Harbour Engineer or other officer appointed by the Harbour Board concerned.

65. No person shall discharge or wash out tanks or allow petroleum or sludge to flow or be deposited from any tank or tank depot, storeship, pipe-line, barge, or lighter, or from any vessel—

(a) Into any harbour;

(b) Into a river, stream, channel, or drain flowing or discharging into any harbour; or

(c) On to the foreshore of any harbour.

66. An application for a license for the storage in an above-ground-tank depot of petroleum in bulk in quantities exceeding 5,000 gallons shall be accompanied by a plan of the premises, in duplicate, drawn to scale, showing all buildings and works on such premises, and all buildings and works situated within 100 ft. of the boundaries of the land comprising such premises. Such plan shall, if approved, be included in and form part of any license issued in respect of such premises.

67. Every above-ground-tank depot in which petroleum in bulk is stored shall be constructed of sufficient strength to hold the contents safely. It shall be constructed of metal or, in the case of fuel-oil, may be built of reinforced concrete. Every such tank shall be efficiently ventilated and electrically grounded, and, except in the case of floating-roof tanks, all ventilators or other openings in the tank shall be screened with wire gauze of not less than 28 meshes to the linear inch.

68. Prevention of outflow from every above-ground-tank depot shall be secured by the excavation of a well or pit; or by the erection of a mound of earth or a wall of brick, stone, or concrete; or in other approved manner enclosing a space sufficient to contain the full volume of petroleum capable of being held by the tank or tanks. Such enclosed space shall be occupied only by the storage tank or tanks and such settling and measuring tanks, pumps, piping, valves, and other necessary appliances as may be approved.

69. No water shall be allowed to accumulate in any tank depot. Drainage from the depot shall be provided either by pumping or by a pipe carried through the wall of the depot and actuated by a valve outside the depot. Such valve shall be kept closed except when water is being actually removed from the depot. An approved petroleum trap shall be installed in the drainage line inside the depot.

70. All buildings which are situated on premises licensed for the storage of petroleum and in which petroleum is used or is kept or stored otherwise than in bulk shall comply in all respects with the terms of the license and Parts V (a) and VI of these regulations.

71. The occupier of all premises licensed for the storage of petroleum in bulk (including storeships), and all lighters and barges used in connection therewith, shall provide such efficient appliances for preventing or extinguishing a petroleum fire as may be required or approved by the Chief Inspector, and shall periodically instruct the employees on such premises, lighters, and barges in the use of the various fire appliances.

72. All tanks, containing walls and mounds, pumps, pipes, and fittings, and all depots or other places where petroleum is stored, used, or handled, shall be at all times maintained in good order and to the satisfaction of an Inspector.

73. After the tanks in any tank depot have once been filled no person shall be permitted to enter any such tank without the authority of the manager or person in charge of the installation. Before permitting any person to enter such tank the Manager or person in charge shall ensure that the tank is thoroughly ventilated to remove vapour, and before permitting any repairs to be undertaken he shall take such measures as are necessary to ensure that the tank is found free from vapour after a test by a competent person, who shall furnish a certificate to this effect. Until the tank is certified free of dangerous vapour only portable safety-lamps, oil or electric, of a type approved for use in fiery coal-mines shall be taken into it, and until such certificate shall be granted the use of naked lights or electric lamps with wandering leads shall be strictly prohibited. The test of the tank for vapour shall be carried out in accordance with the Sixth Schedule to these regulations: Provided that this regulation shall not prevent a person from entering such tank for the purpose of examination or for minor repairs that do not involve the use of iron or steel tools, if such person is protected from the effect of vapour by a gas-mask of efficient construction, provided with a life-line, and attended by some person outside the tank.

74. No matches shall be taken into, and no smoking, naked lights, or fires shall be permitted in or about any premises used for the storage of petroleum in bulk, except in such buildings as may be specially set apart for the purpose, and suitable notices to this effect shall be conspicuously posted on the premises.

75. In all premises licensed for the storage of petroleum in bulk the ground in the interior of an installation shall be kept clean and free from goods of inflammable nature, waste vegetation, and rubbish.

76. Every above-ground-tank depot shall be separated from all protected buildings and works by not less than the appropriate distances prescribed in the following table: Provided that the Chief Inspector may authorize a reduced distance where in his opinion the public safety will not be unduly prejudiced thereby:—

Number of Gallons for which the Depot is licensed.	Distance of Depot from protected Buildings and Works to be not less than	
	Ft.	Ft.
0-10,000 .. ..	60	2
20,000 .. ..	70	3
50,000 .. ..	80	10
100,000 .. ..	100	15
250,000 .. ..	100	30
Unlimited .. ..	100	50

(e) *Storage of Dangerous Goods of Class III.*

77. No person shall store calcium carbide on licensed premises otherwise than in a building so constructed as to comply with the following general conditions:—

- (a) The building shall be externally unflammable (i.e., of brick, stone, or concrete, or externally covered with galvanized iron), if situated less than 10 ft. from any protected work.
  - (b) Except as may be approved by the Chief Inspector, calcium carbide shall not be stored within a building which is a protected work unless such building is built of brick, stone, or concrete, and the room or receptacle in which the calcium carbide is kept is on the ground floor and is of approved fire-resisting construction.
  - (c) The building or storage-room shall be efficiently ventilated to the outer air.
  - (d) The building shall be so secured as to prevent access by unauthorized persons, and shall be sufficiently weatherproof to prevent access of water to the place where the calcium carbide is stored.
- (2) The provisions of this regulation shall not apply to the storage of a quantity of calcium carbide not exceeding 50 lb. contained in waterproof and airtight tins each containing not more than 7 lb.

78. The occupier of premises licensed for the storage of calcium carbide, and every person in or about the same shall comply with the following rules:—

- (a) Calcium carbide shall be kept stored or conveyed only in strong metal vessels so constructed and closed as to prevent the admission of water and atmospheric moisture, each of which contains not more than 224 lb. of carbide. No more of these vessels than is necessary for immediate requirements shall be opened at one time, and then only for the time necessary for the removal of any required quantity of carbide.
- (b) Only such other goods as may be approved shall be stored in the same building or room as calcium carbide.

(c) Only commercially pure carbide of calcium shall be kept on the premises.

(d) Unalloyed copper shall not be used in the construction of vessels or apparatus used for or with carbide of calcium and the gas produced therefrom.

(e) No appliance for generating acetylene gas other than a portable lamp shall be used on the premises except an apparatus of a type approved by the Chief Inspector, and clear instructions as to the management of the apparatus shall be kept conspicuously posted in the generator-house. The pressure in any acetylene-generating apparatus shall not exceed that of a column of water 250 in. in height. Oxy-acetylene welding shall not be carried on unless an efficient oxygen trap is provided on the acetylene supply-pipe to the blow-pipe in such manner as to prevent the possibility of oxygen finding its way to the acetylene generator.

(f) Suitable arrangements shall be made for the safe disposal of any residue of carbide of calcium removed from a gas-making apparatus, and such residue shall not be introduced into sewers or cesspools unless mixed with at least ten times its bulk of water.

(g) No artificial light capable of igniting inflammable vapour shall be taken into, and no person shall smoke in, any generator-house or calcium carbide storage place.

79. All phosphorus stored on licensed premises shall be kept completely covered with water in vessels of metal or other approved material of such construction as may be approved; provided that no more than 2 lb. of phosphorus shall be stored in any building which is a protected work unless such building is built of brick, stone, or concrete, and the room or compartment where the phosphorus is kept is of approved fire-resisting construction; provided further that only such other goods as may be approved shall be stored in any building or in any room or compartment in which phosphorus is kept.

(f) *General.*

80. Notwithstanding anything in these regulations in cases where the public safety will not be unduly prejudiced thereby a license may, with the approval of the Chief Inspector, be issued to store dangerous goods in the quantities stated in such license in a well-ventilated depot or storage place which does not otherwise comply with the requirements of this Part of these regulations. Such license may be issued either without restriction, or may be for a definite period only, or may be subject to cancellation under certain conditions.

81. Every depot established or maintained by a local authority shall comply with the provisions contained in these regulations regarding the construction, situation, and maintenance of depots on licensed premises.

82. The Minister may, by notice under his hand published in the *Gazette*, make, and may in like manner revoke, alter, or add to, special rules for the regulation of the persons managing or employed in or about any depot maintained by any local authority, or in or about any licensed premises, or storehouse, with a view to secure the observance of the said Act and these regulations therein, and the safety and proper discipline of the said persons and the safety of the public. Any person committing a breach of any such special rules shall be deemed to have committed a breach of these regulations, and shall be liable to a fine not exceeding £10.

PART VI.—USE OF DANGEROUS GOODS OF CLASS I FOR DRY CLEANING AND OTHER INDUSTRIAL PURPOSES.

83. In this Part of these regulations the term "dangerous goods" means dangerous goods of Class I; the term "use" means the use of dangerous goods for industrial purposes involving the exposure of such goods to the air in such manner that inflammable vapour can escape; and the term "workroom" means the room or place where dangerous goods are used.

84. No person shall use dangerous goods except in a workroom situated and constructed in accordance with these regulations.

85. Every workroom where dangerous goods are used or kept for use in quantities exceeding 3 gallons shall, as regards construction, comply with the following conditions:—

- (a) The walls of the workroom shall be of brick, stone, or concrete, and the roof shall be of concrete not less than 6 in. thick.
- (b) Where the workroom is situated within another building it shall have no openings to the interior of such building.
- (c) The floor of the workroom shall be constructed of impervious non-inflammable material, approved by the Chief Inspector, in such manner as to prevent leakage.
- (d) Windows (and skylights, if any) shall be of wired glass with incombustible frames.



- (e) Doors shall be of fire-resisting construction to the satisfaction of an Inspector, and shall open outwards and be fitted into a brick or concrete rebate. Doors shall be of sufficient number and so arranged that the egress of workers from the workroom is not blocked or impeded by the situation of machinery or other plant.
- (f) Provision to prevent the escape of dangerous goods from the workroom under the action of fire or otherwise shall be secured by the lowering of the floor of the workroom so as to form a shallow well; or by a solid wall or "sill" built across the doorway if the lower portion of the workroom is some material such as brick or concrete; or by other method approved by the Chief Inspector. The well or enclosed space shall be of sufficient depth to contain the maximum quantity of dangerous goods required to be in the workroom at any time.
- (g) The workroom shall be efficiently ventilated in such manner that the air is drawn from the floor of the room. The ventilation shall be effective to ensure a change of air in the workroom once every ten minutes.
- (h) No artificial light shall be installed inside the workroom except an incandescent electric light of approved pattern. The electrical installation (if any) shall comply with clauses 125 to 129 of the Electrical Wiring Regulations, 1927, made under the Public Works Act, 1908. In no case shall any current-bearing part be exposed so that inflammable vapour can come into contact therewith.

Provided that where the workroom is situated not less than 50 ft. from any other building the walls and roof may be of such construction as may be approved by an Inspector.

86. Every workroom shall, as regards situation, comply with the following conditions:—

- (a) The workroom shall be so situated as not to be within 50 ft. of any fire, forge, furnace, explosive, highly combustible goods, or other source of danger, unless a screen-wall intervenes between the workroom and any such fire, forge, furnace, explosive, highly combustible goods, or other source of danger.
- (b) The workroom shall not be situated within or attached to a building unless the wall of the building on the side on which the openings of the workroom are placed is a screen-wall above, and to a lateral distance of 10 ft. on either side of, the openings of the workroom.

87. Every workroom in which the maximum quantity of dangerous goods used or kept for use does not exceed 3 gallons shall either comply with the last two preceding regulations or shall have efficient ventilation and shall be so situated, fitted up, or constructed as may be approved by an Inspector as adequate for the limited quantity of dangerous goods used.

88. The occupier of every premises where dangerous goods are used shall provide adequate devices for extinguishing a petroleum fire. Such devices may consist of one or more of the following, as may be approved or required by an Inspector:—

- (a) A steam jet extinguisher system with discharge orifices not less than  $\frac{3}{4}$  in. in diameter and having sufficient steam supply to completely fill the workroom in not more than one minute.
- (b) A supply of sand with suitable means of distribution.
- (c) Chemical fire extinguishers of the foamite or tetrachloride type.

The occupier of the premises shall at all times maintain the fire-extinguishing devices in good order and condition, and shall take such measures as are necessary to ensure that the persons engaged in the workroom are acquainted with the position of and method of operating such fire-extinguishing devices.

89. The occupier of every premises on which dangerous goods are used and every person in and about any workroom shall comply with the following general rules:—

- (a) No larger quantity of dangerous goods than is required for immediate use shall be kept in any workroom.
- (b) Every workroom shall be used exclusively for working with dangerous goods and such other work as may be approved by an Inspector.
- (c) Except as may be essential to any process in which dangerous goods are used such dangerous goods shall be kept in closed vessels of metal, or other approved material, of such construction that neither liquid nor vapour can escape therefrom into the workroom.
- (d) No person shall bring any matches into any workroom or shall smoke in or in the vicinity of any workroom.
- (e) All due precautions shall be taken for the prevention of accidents by fire or explosion, for the prevention of the escape of dangerous goods into any sewer or drain, and for the prevention of unauthorized persons having access to the dangerous goods kept in the premises; and no person shall do any act whatever which tends to cause fire or explosion.

B

PART VII.—MISCELLANEOUS.

*Accidents.*

90. Whenever there occurs any accident by explosion or fire in which dangerous goods are involved on any licensed premises, the occupier shall forthwith send or cause to be sent to the Chief Inspector notice of such accident and of any loss of life or personal injury (if any) occasioned thereby.

91. Where in, about, or in connection with any ship or carriage either carrying any dangerous goods, or on or from which dangerous goods are being loaded, unloaded, or held, there occurs any accident by explosion or fire involving such dangerous goods, the owner or master of such ship or carriage, and the owner of the inflammable liquid being loaded, unloaded, held, or conveyed, shall forthwith send, or cause to be sent, to the Chief Inspector notice of such accident and the loss of life or personal injury (if any) occasioned thereby.

92. When an accident by explosion or fire has wholly or in part destroyed any depot or place where dangerous goods are stored, such depot shall not be reconstructed, and no dangerous goods shall be placed therein, except with the permission of an Inspector, and dangerous goods placed therein in contravention of this regulation shall be deemed to be kept in an unauthorized place.

*Sale, Storage, and Repair of Containers.*

93. No person shall sell any container of capacity exceeding 5 gallons which has contained dangerous goods of Class I, unless such container is completely cleared by steaming out or otherwise so that neither inflammable liquid nor vapour remains therein, or unless written notice is given to the purchaser at the time of sale that the container has contained such dangerous goods and is liable to contain inflammable or explosive liquid or vapour.

94. No person shall repair, or perform any operation liable to cause a spark in connection with or bring any light or fire capable of igniting inflammable liquid or vapour into the vicinity of any container which has contained dangerous goods of Class I, unless such container has first been cleared of inflammable liquid and vapour by steaming out or other process approved by the Chief Inspector.

95. No person shall keep or store any container of capacity exceeding 5 gallons which has contained dangerous goods of Class I, and has not been freed from inflammable liquid and vapour in accordance with the last preceding regulation, except in a licensed depot, or an open yard, or other approved storage place secure from access by unauthorized persons, and reasonably free from danger from fire, and unless such container is securely closed by a bung screwed well home, or in other approved manner.

*Exemptions.*

96. Notwithstanding anything contained in these regulations, the Chief Inspector, in any case in which in his opinion the public safety will not be prejudiced, may by notice in writing under his hand grant exemption to any person from compliance with any of the requirements hereof, and such exemption may be for such term, to such extent, and subject to such restrictions, limitations, and conditions as the Chief Inspector thinks fit.

97. The Chief Inspector shall not, under the powers conferred on him by these regulations, grant any exemption from these regulations so that such exemption shall, or may, take effect within the district of any local authority which is a licensing authority under the said Act, save with the previous consent of an officer for the time being appointed by such local authority to carry out the provisions of the said Act, but the granting of any such exemption by the Chief Inspector shall be *prima facie* evidence that such consent has been duly given.

98. Any exemption granted under these Regulations may at any time be withdrawn by notice under the hand of the person by whom the same was granted or given, or his successor in office.

*Testing.*

99. For the purposes of the said Act and these regulations the "true flashing-point" of an inflammable liquid or preparation shall be that defined in the Fifth Schedule to these regulations when the liquid or preparation is tested in the manner set forth in that Schedule.

*Issue of Licenses in Districts other than those controlled by a Local Authority.*

100. Clauses 100 to 106 of these Regulations shall apply only in districts in respect to which no local authority has been declared the licensing authority under the said Act.

101. Licenses to keep, store, or use dangerous goods shall be issued annually in such form as the Minister may direct, and shall expire on the 31st day of March in each year.

102. All applications for license, and for the renewal, transfer, or amendment of a license, shall be made, in such form as may be approved by the Minister, to the Chief Inspector of Explosives at Wellington.

103. Every application for license shall be accompanied by the fee as specified hereunder :—

	£	s.	d.
For the storage of a quantity of dangerous goods of Classes I, II, and IV, not exceeding 1,000 gallons, and in addition, such quantities of dangerous goods of Class III as may be approved by an Inspector .. .. .	0	10	0
For the storage of a quantity of dangerous goods of Classes I, II, and IV, exceeding 1,000 gallons but not exceeding 2,000 gallons, and in addition, such quantities of dangerous goods of Class III as may be approved by an Inspector .. .. .	1	0	0
For the storage of a quantity of dangerous goods of Classes I, II, and IV, exceeding 2,000 gallons but not exceeding 16,000 gallons, and in addition, such quantities of dangerous goods of Class III as may be approved by an Inspector .. .. .	2	0	0
For the storage of a quantity of dangerous goods of Classes I, II, and IV, exceeding 16,000 gallons, and in addition, such quantities of dangerous goods of Class III as may be approved by an Inspector .. .. .	5	0	0
For the storage of dangerous goods of Class III only .. .. .	0	5	0

Provided that in the case of storage of dangerous goods of Classes I, II, and IV in bulk the license shall be issued for the maximum capacity of the tank or tanks, less an allowance for expansion of 5 per cent.

104. Every license shall be issued subject to the conditions, requirements, and restrictions contained in the said Act, and the regulations under the said Act for the time being in force, and all such conditions, requirements, and restrictions shall be implied in every such license and be binding on the licensee.

105. If upon an inspection of any licensed premises it appears that the licensee is keeping on his premises a greater quantity of any dangerous goods than is specified in his license, or has committed a breach of any of the conditions of his license, he shall be deemed to have committed a breach of these regulations.

106. The Chief Inspector may at any time at his discretion cancel or revoke any license.

107. Notwithstanding anything contained in clause 103 of these regulations, every application for a license to store dangerous goods within any borough to which this regulation applies shall be accompanied by the fee as specified hereunder :—

(a) For the storage of any quantity of dangerous goods of Class I not exceeding 50 gallons, kept for private use only and not for trade purposes or purpose of sale, and in addition, such quantity of calcium carbide as may be approved by an Inspector .. .. .	0	5	0
(b) For the storage of a quantity of dangerous goods of Classes I and II not exceeding 225 gallons, or dangerous goods of Class IV not exceeding 1,000 gallons, and in addition, such quantities of dangerous goods of Class III as may be approved by an Inspector .. .. .	1	0	0
(c) For the storage of a quantity of dangerous goods of Classes I and II, exceeding 225 gallons but not exceeding 1,000 gallons, and in addition, such quantities of dangerous goods of Class III as may be approved by an Inspector .. .. .	2	0	0
(d) For the storage of a quantity of dangerous goods of Classes I, II, and IV, exceeding 1,000 gallons but not exceeding 2,000 gallons, and in addition, such quantities of dangerous goods of Class III as may be approved by an Inspector .. .. .	3	0	0
(e) For the storage of a quantity of dangerous goods of Classes I, II, and IV exceeding 2,000 gallons but not exceeding 16,000 gallons, and in addition, such quantities of dangerous goods of Class III as may be approved by an Inspector .. .. .	5	0	0
(f) For the storage of dangerous goods of Classes I, II, and IV, in quantities exceeding 16,000 gallons but not exceeding 250,000 gallons .. .. .	10	0	0

(g) For the storage of dangerous goods of Classes I, II, and IV in quantities exceeding 250,000 gallons .. .. .	15	0	0
(h) For the storage of dangerous goods of Class III only .. .. .	0	10	0

Provided that in the case of any storage of dangerous goods of Classes I, II, and IV in bulk the license shall be issued for the maximum capacity of the tank or tanks, less an allowance for expansion of 5 per cent.

*Fees payable to Public Account by Local Authorities under Section 10 (5) of the said Act.*

108. (1) Every local authority which is a licensing authority shall, within fourteen days after the last days of March, June, September, and December respectively of each year, pay into the Public Account to the credit of the Consolidated Fund an amount in respect of licenses issued by that local authority equal to one-half the fees prescribed by Regulation 103; and shall forthwith furnish to the Chief Inspector a return, in such form as the Chief Inspector may from time to time require, of all licenses issued by that local authority under the said Act.

(2) The Minister may, on the application of any licensing authority, grant exemption to that authority from the operation of this clause in respect of any license for which no license fee has been charged, or for which a license fee less than the fees prescribed by clause 103 hereof has been charged. Any exemption as aforesaid shall be for such period as the Minister may specify in that behalf.

*Penalties.*

109. Every person who commits a breach of any of the foregoing regulations or fails to comply with any of the rules contained therein, shall, except where otherwise expressly provided, be liable to a fine not exceeding £100.

FIRST SCHEDULE.



SECOND SCHEDULE.

Size, 4½" x 1½"

**DANGER.**  
**HIGHLY INFLAMMABLE.**  
 The contents of this vessel give off a heavy inflammable vapour capable of forming an **EXPLOSIVE MIXTURE** with air, and of travelling to and igniting at a flame some distance from the vessel.  
**DO NOT OPEN** inside a building within 20 ft. of a fire or a candle, lamp, gas, or other flame.

## THIRD SCHEDULE.



## FOURTH SCHEDULE.

1. The vehicle, including the tank and fittings, shall be strongly constructed of fire-resisting material, and shall be maintained in thoroughly good condition. The engine and fuel-tank shall be effectively screened from the tank by a fire-resisting shield carried up above the top of the tank and down to within 12 in. of the ground, and the exhaust shall be wholly in front of this shield. The tank shall be securely fastened to the frame of the vehicle, provided that the removable tank securely fastened to a cradle may be used. A space of not less than 6 in., which shall be left clear and unobstructed except for any part of the framework of the wagon, shall intervene between the tank and the fire-resisting shield: Provided that the fire-resisting shield shall not be required on any tank-wagon constructed prior to 1st January, 1927, until 31st March, 1932.

2. The tank, if of more than 600-gallons capacity, shall be divided into self-contained compartments, no one of which shall contain more than six hundred gallons.

3. The draw-off pipes in each compartment of the tank-wagon shall be fitted with an internal valve, and each delivery-pipe from the tank-wagon shall be fitted with a quick-release valve of a type approved by the Chief Inspector, capable of being operated from such position that the connecting hose is under observation of the person operating the valve. External delivery pipes and valves shall in all cases be protected in such manner as may be approved from damage by collision. Where a syphon system of emptying the tank is employed internal valves shall not be required: Provided that in the case of removable tanks constructed prior to 7th January, 1927, internal valves shall not be required until 31st March, 1932.

4. All filling-pipes shall be carried down to the bottom of the tank, and shall terminate in such a way as to provide a liquid seal at the bottom of the pipe.

5. All dipping-pipes shall be carried down to the bottom of the tank, and any openings in them other than the upper orifice shall be covered with fine wire-gauze of not less than 28 meshes to the linear inch.

6. The ventilating openings shall be covered with fine wire-gauze of not less than 28 meshes to the linear inch, protected by covers when not in use. Except in the case where the dipping-pipe is used for ventilating purposes such fine wire-gauze cover shall, if of a movable character, be fixed in position by wire seal or other method approved by the Chief Inspector.

7. If electric lighting is employed on any vehicle conveying petroleum spirit, the following conditions shall be complied with:—

- (a) The pressure shall not exceed fourteen volts.
- (b) The circuit shall be heavily insulated from the chassis, and the wiring shall be supported and protected from mechanical injury, chafing and exposure to contact with oil, grease, or petrol, and shall be so located as to avoid damage to insulation from heat.
- (c) The generator, battery, switches, and fuzes shall be carried in front of the fire-resisting screen, and the battery shall be in an easily accessible position.
- (d) Means of cutting off the current by a double pole switch or other approved method shall be provided in the cab of the vehicle.

8. The tank, chassis, axles, and springs of the tank-wagon shall be metallically connected.

9. Every tank-wagon shall be equipped with a metallic drag-chain in electrical connection with the tank. Such chains shall be of not less size than  $\frac{3}{8}$  in. diameter, short length, and shall be of such length that not less than 10 in. of chain is resting on the ground when the tank-wagon is stationary.

## FIFTH SCHEDULE.

In this Schedule the expression "oil" means any liquid to be tested for the purpose of ascertaining its true flashing-point. Degrees of temperature are according to Fahrenheit's thermometer.

## I.—NATURE OF THE TEST APPARATUS.

The apparatus consists of the following parts:—

- (1) An oil-cup.
- (2) A cover, with slide, test-lamp for oil, or test-flame arrangement for use with gas, and clockwork arrangement for opening and closing the holes in the cover, and for dipping the test-flame.
- (3) A water bath or heating vessel.
- (4) A tripod (with jacket), and spirit-lamp or gas arrangement for heating the water bath.
- (5) A round bulb thermometer for testing the temperature of the oil, with scale ranging from 55 degrees to 160 degrees.
- (6) A long bulb thermometer for testing the temperature of the water, with scale ranging from 90 degrees to 220 degrees.
- (7) A mercurial or aneroid barometer.

The oil-cup is a cylindrical flat-bottomed vessel, 2 in. in diameter,  $2\frac{1}{2}$  in. in height (internal), made of gun-metal or brass (17 B.W.G.), and tinned or silvered inside. It is provided with a projecting rim,  $\frac{1}{2}$  in. wide,  $\frac{3}{8}$  in. from the top, and  $1\frac{1}{2}$  in. from the bottom of the cup, on which it rests when inserted in the water bath. A gauge is fixed on the inside of the cup to regulate the height to which it is to be filled with the sample under examination. The distance of the point from the bottom of the cup is  $1\frac{1}{2}$  in. The cup is provided with a close-fitting overlapping cover, made of brass (22 B.W.G.), which carries the thermometer, the test-lamp, or test-flame arrangement, and the adjuncts thereto. The test-lamp, which has a spout, the mouth of which is  $\frac{1}{8}$  in. in diameter, or test-flame arrangement, is suspended upon two supports by means of trunnions, which allow it to be easily inclined to a particular angle and restored to its original position. The socket in the cover, which is to hold a round bulb thermometer for indicating the temperature of the oil during the testing operation, is so adjusted that the bulb of the latter is always inserted to distance of  $1\frac{1}{2}$  in. below the centre of the lid.

The cover is provided with three holes—one in the centre (0.2 square inch) and two smaller ones (each 0.06 square inch) close to the sides. These are closed and opened by means of a pivoted slide. When the slide is moved so as to uncover the holes the suspended lamp, or test-flame arrangement, is caught by a projection fixed on the slide, and tilted in such a way as to bring the end of the spout or test-flame just below the surface of the lid. As the slide moves back so as to cover the holes the lamp returns to its original position. Upon the cover, in front of and in a line with the nozzle of the lamp, is fixed a white bead, the diameter of which represents the size of the test-flame to be used.

The water bath or heating vessel consists of two flat-bottomed copper cylinders (24 B.W.G.)—an inner one of 3 in. diameter and  $2\frac{1}{2}$  in. height, and an outer one of  $5\frac{1}{2}$  in. diameter and  $5\frac{1}{2}$  in. height; they are soldered to a circular copper plate (20 B.W.G.) perforated in the centre, which forms the top of the bath, in such manner as to enclose the space between the two cylinders, but leaving access to the inner cylinder. The top of the bath projects both outwards and inwards about  $\frac{3}{8}$  in.—that is, its diameter is about  $\frac{3}{8}$  in. greater than the body of bath, while the diameter of the circular opening in the centre is about the same amount less than that of the inner copper cylinder. To the inner projection of the top is fastened, by six small screws, a flat ring of ebonite, the screws being sunk below the surface of the ebonite to avoid metallic contact between the bath and the oil-cup. The exact distance between the sides and bottom of the bath and the oil-cup is  $\frac{1}{2}$  in. The bath is therefore so constructed that when the oil-cup is placed in position an air-space or air-chamber intervenes between the two; consequently, in applying the test to oils flashing below 115 degrees the heat is transmitted gradually to the oil from the hot water, through the air-space. The water bath is fitted with a socket, set

at a right angle, for receiving a long bulb thermometer, to indicate the temperature of the water. It is also provided with a funnel, an overflow pipe, and two handles.

The water bath rests upon a tripod stand, which is fitted with a copper cylinder or jacket (24 B.W.G.)  $6\frac{1}{2}$  in. diameter, so that the bath is surrounded by an enclosed air-space, which retains and regulates the heat. One of the legs of the stand serves as a support for a spirit-lamp, which is attached to it by a small swing bracket. The distance of the wickholder from the bottom of the bath is 1 in. The clockwork arrangement by which, during the operation of testing, the slide is withdrawn and the test-flame dipped into the cup and raised again as the slide is replaced is provided with a ratchet-key for setting it in action for each test, and with a trigger for starting it each time that the test-flame is applied. From the beginning to the end of the movement of the slide the time taken is to be exactly 2 seconds.

N.B.—When gas is available it may be conveniently used instead of the oil-lamp, and for this purpose a test-flame arrangement for use with gas may be substituted.

## II.—DIRECTIONS FOR PREPARING AND USING THE TEST APPARATUS.

### 1. Preparing the Water Bath.

The water bath is filled by pouring water into the funnel until it begins to flow out at the overflow-pipe. The temperature of the water at the commencement of each test, as indicated by the long bulb thermometer, is to be as follows:—

- (a) 130 degrees, when a flashing-point at or about 73 degrees is to be observed.
- (b) 160 degrees, when a flashing-point at or about 100 degrees is to be observed.
- (c) 180 degrees, when a flashing-point at or about 150 degrees is to be observed.

This is attained in the first instance by mixing hot and cold water, either in the bath or in a vessel from which the bath is filled, until the thermometer which is provided for testing the temperature of the water gives the proper indication, or the water is heated in the bath by means of a spirit-lamp or gas arrangement until the required temperature is indicated.

### 2. Preparing the Test-lamp.

(a) The test-lamp is fitted with a piece of cylindrical wick of such thickness that it fills the wick-holder, but may be readily moved to and fro for the purpose of adjusting the size of the flame. In the body of the lamp, upon the wick which is coiled within it, is placed a small tuft of cotton-wool moistened with petroleum, any oil not absorbed by the wool being removed. When the lamp has been lighted the wick is adjusted by means of a pair of forceps or a pin until the flame is of the size of the bead fixed on the cover of the oil-cup.

Should a particular test occupy so long a time that the flame begins to get smaller through the supply of the oil in the lamp becoming exhausted, three or four drops of petroleum are allowed to fall upon the tuft of wool in the lamp from a dropping-bottle or pipette provided for the purpose. This can be safely done without interrupting the test.

(b) When using gas for testing, the jet is to be lighted and then adjusted by means of the tap controlled by means of a screw pinch-cock or fine tap until the flame is the size of the bead fixed on the cover of the oil-cup.

## III.—FILLING THE OIL-CUP.

Before the oil-cup is filled the lid is to be made ready by being placed upon the cup—i.e., the round bulb thermometer is to be inserted into the socket so that the projecting rim of the collar with which it is fitted touches the edge of the socket, and the test-lamp is to be placed in position. The oil-cup is to be cooled when necessary to a temperature not exceeding—

- (a) 60 degrees, when a flashing-point at or about 73 degrees is being observed;
- (b) 85 degrees, when a flashing-point at or about 100 degrees is being observed;
- (c) 135 degrees, when a flashing-point at or about 150 degrees is being observed;

by placing it bottom downwards in water at a suitable temperature. The oil-cup is now to be rapidly wiped dry, placed on a level surface in a good light, and the oil to be tested is poured in without splashing until its surface is level with the point of the gauge which is fitted in the cup. The lid is then put on the cup at once and pressed down so that its edge rests on the rim of the cup.

## IV.—APPLICATION OF THE TEST.

1. The water bath, with its thermometer in position, is placed in some locality where it is not exposed to currents of air, and where the light is sufficiently subdued to admit of the size of the entire test-flame being compared with that of the bead on the cover. The cup is carefully lifted, without shaking it, and placed in the bath, the test-lamp is lighted, and the clockwork wound up by turning the key. The thermometer in the oil-cup is now watched, and the clockwork is set in motion by pressing the trigger when the temperature has reached—

- (a) 63 degrees, when a flashing-point at or about 73 degrees is being observed.
- (b) 90 degrees, when a flashing-point at or about 100 degrees is being observed.
- (c) 140 degrees, when a flashing-point at or about 150 degrees is being observed.

If no flash takes place the clockwork is at once rewound and the trigger pressed at the next higher degree, and so on at every degree rise of temperature until the flash occurs.

2. When a flashing-point at or about 115 degrees is being observed the air-chamber is to be filled to a depth of  $1\frac{1}{2}$  in. with cold water before the oil-cup containing the oil to be tested is placed in position.

3. The temperature at which a flash occurs, if not within 8 degrees of the temperature at which the testing was commenced, is the observed flashing-point of the oil, and by correction of the observed flashing-point for atmospheric pressure, as hereinafter described, the true flashing-point is obtained.

4. If, however, the flash takes place at any temperature within 8 degrees of the temperature at which the testing was commenced, the test is to be rejected, and the whole operation of testing is to be repeated with a fresh portion of the sample, the testing, however, to begin at 10 degrees lower than the temperature at which the flash has been previously obtained. If necessary, this procedure shall be repeated with fresh portions of oil until a flash has been obtained at a temperature not within 8 degrees of the temperature at which the testing was commenced.

5. The temperature at which the last-mentioned flash occurs is the observed flashing-point of the oil, and by correction of the observed flashing-point for atmospheric pressure, as hereinafter described, the true flashing-point is obtained.

6. In repeating a test a fresh sample of oil must always be used, the tested sample being thrown away, and the cup must be wiped dry from any adhering oil, and cooled, as already described, before receiving the fresh sample.

7. If in any case no flash has occurred when a temperature has been reached which is not within 8 degrees of the temperature at which the testing was commenced, and which, after correction for atmospheric pressure, is not less than 73 degrees, and the tests are not required to be continued, the oil shall be deemed to have a true flashing-point of not less than 73 degrees.

8. If no flash has occurred when a temperature has been reached which is not within 8 degrees of the temperature at which the testing was commenced, and which, after correction for atmospheric pressure, is not less than 100 degrees, and the tests are not required to be continued, the oil shall be deemed to have a true flashing-point of not less than 100 degrees.

9. In the same manner, if no flash has occurred when a temperature has been reached which is not within 8 degrees of the temperature at which the testing was commenced, and which, after correction for atmospheric pressure, is not less than 150 degrees, and the tests are not required to be continued, the oil shall be deemed to have a true flashing-point of not less than 150 degrees.

## V.—CORRECTION FOR ATMOSPHERIC PRESSURE.

As the flashing-point of an oil is influenced by changes in atmospheric pressure to an average of 1.6 degrees for every inch of the barometer, a correction of the observed flashing-point is necessary whenever the barometer does not stand at 30 in. This correction is to be made in the following manner:

If the barometer stands at less than 30 in. (the normal height of the barometer), add to the observed flashing-point 1.6 times the difference (measured in inches) between the actual and normal barometer. If the barometer stands above 30 in. deduct from the observed flashing-point 1.6 times the difference between the actual and normal barometer.

The nearest whole number to the result of this correction is to be taken as the corrected flashing-point, and if the result is exactly midway between two whole numbers the higher whole number is to be taken.

For example: Suppose an oil has an observed flashing-point of 72 degrees, the barometer being 27.1 in., then the

difference between 30 in. and 27.1 in. is 2.9 in. This result multiplied by 1.6 is 4.64, which has to be added to 72, making 76.64. The nearest whole number to this is 77 degrees, which is to be taken as the corrected flashing-point, and if the testing had been commenced at or below 64 degrees, the true flashing-point is 77 degrees.

Again: Suppose the observed flashing-point of an oil to be 96 degrees, and the testing had been commenced at 87 degrees and the barometer indicated 30.6 in., the true flashing-point of the oil is the nearest whole number to 96 minus the product of 0.6 multiplied by 1.6—that is, 95 degrees.

The readings of the barometer are to be corrected readings, in accordance with the corrections applicable to the instrument in use. The instrument must be compared periodically with the standard barometer at the office of the Chief Inspector, and regulated thereby.

#### VI.—APPLICATION OF THE TEST TO VISCOUS FLUIDS OR PREPARATIONS.

If the flashing-test has to be applied to substances of a viscous or semi-solid nature which cannot be poured (such as solutions of indiarubber in mineral naphtha), the mode of proceeding is as follows:—

One fluid ounce or two tablespoonfuls of the substance to be tested is placed in the cup, and the cover is put on. The air-chamber in the water bath is filled with water to a depth of  $1\frac{1}{2}$  in., and the temperature of the water bath is raised to 90 degrees. The cup is then put into the bath, and the temperature of the water bath maintained at 90 degrees throughout the test. After the lapse of fifteen minutes the test-flame is to be applied. If no flash occurs the heating is continued for another fifteen minutes and the test-flame again applied, and so on until a flash takes place, or the temperature in the cup has reached 90 degrees, and so on.

The temperature at which a flash occurs is the observed flashing-point of the substance, and, subject to correction for atmospheric pressure, as hereinbefore described, is the true flashing-point.

#### SIXTH SCHEDULE.

##### INSTRUCTIONS ON THE USE OF THE SAFETY-LAMP.

1. Before any tank which is not already known to be free from dangerous gas is entered a preliminary test of the atmosphere must be made with a locked safety-lamp.

2. Persons using safety-lamps should be carefully instructed as to the use of these lamps in tanks and confined spaces.

3. To test for small quantities of inflammable gas with a miner's safety-lamp the flame must be carefully turned down until all the white light has disappeared and only a small blue flame is left. The presence of inflammable gas in the air is indicated by a pale triangular flame or "cap" which appears over the top of the blue flame, varying in size and intensity according to the amount of inflammable gas present. The lamp should be held close to the observer's eye in making this examination.

4. It is important to note that petroleum gas is considerably heavier than air and may therefore remain in the lower part of the tank whether closed at the top or not.

5. In order to make a test, after the flame of the safety-lamp has been turned down a careful and detailed examination should be made in both the upper and lower part of the tank. The lamp must be tried as far inside the tank as it can be held without losing sight of the flame and should be lowered by a line if necessary to reach the bottom of the tank, for the purpose of making a preliminary examination. As soon as the lamp will burn steadily in these positions the tank may be entered for the purpose of making a further examination.

6. If a cap, however faint, is visible on the lowered flame or the safety-lamp be extinguished either by explosive or non-explosive gas, or burns dimly, no person should be allowed to work in the tank until it has been thoroughly ventilated and the gas removed.

7. Should any indication of dangerous gas be observed the space is to be further ventilated until no indication of the presence of gas can be detected. The person making a test should keep in communication with those outside the tank.

8. To prevent unauthorized interference with the safety-lamps, the person in charge is to make arrangements for trimming the lamps before they are issued, and for the keys to be retained by some responsible person.

F. D. THOMSON,  
Clerk of the Executive Council.

(I.A. 13/134/11.)

*Regulations under the Explosive and Dangerous Goods Amendment Act, 1920, to take effect as By-laws within certain specified Boroughs.*

CHARLES FERGUSSON, Governor-General.

#### ORDER IN COUNCIL.

At the Government Buildings at Wellington, this 24th day of March, 1928.

Present:

THE RIGHT HONOURABLE J. G. COATES, P.C., PRESIDING IN COUNCIL.

WHEREAS the Minister of Internal Affairs, in pursuance of the powers conferred on him by section fifteen of the Explosive and Dangerous Goods Amendment Act, 1920, did by several requisitions each dated the twentieth day of June, one thousand nine hundred and twenty-seven, require the several Borough Councils mentioned in the First Schedule hereto, being licensing authorities under the said Act, to alter their respective by-laws made pursuant to the said Act:

And whereas the said Borough Councils did not within three months from the respective receipt of the said requisitions alter their said respective by-laws in the manner required by the said requisitions:

Now, therefore, His Excellency the Governor-General of the Dominion of New Zealand, acting by and with the advice and consent of the Executive Council of the said Dominion, and in pursuance and exercise of the powers conferred on him by section fifteen aforesaid, doth hereby made the regulations set forth in the Second Schedule hereto, to give effect to the said respective requisitions.

#### FIRST SCHEDULE.

##### BOROUGH COUNCILS.

Alexandra.	Opotiki.
Arrowtown.	Otauhu.
Ashburton.	Otaki.
Balclutha.	Paeroa.
Blenheim.	Pahiatua.
Bluff.	Palmerston North.
Brunner.	Palmerston, Otago.]
Cambridge	Patea.
Carterton.	Petone.
Cromwell.	Picton.
Dannevirke.	Port Chalmers.
Dargaville.	Pukekohe.
Eastbourne.	Queenstown.
Eketahuna.	Raetihi.
Eltham.	Rangiora.
Featherston.	Riccarton.
Feilding.	Riverton.
Foxton.	Richmond.
Geraldine.	Ross.
Gisborne.	Rotorua.
Gore.	Roxburgh.
Green Island.	Runanga.
Greymouth.	Shannon.
Greytown.	St. Kilda.
Hamilton.	Stratford.
Hastings.	Sumner.
Hawera.	Taihape.
Hokitika.	Tapanui.
Inglewood.	Taumarunui.
Invercargill.	Tauranga.
Kaipoi.	Te Aroha.
Kaitangata.	Te Awamutu.
Lawrence.	Te Kuiti.
Levin.	Temuka.
Lyttelton.	Thames.
Marton.	Timaru.
Masterton.	Upper Hutt.
Mataura.	Waihi.
Milton.	Waikouaiti.
Morrinsville.	Waimate.
Mosgiel.	Waipawa.
Motueka.	Waipukurau.
Naseby.	Wairoa.
Nelson ( City of).	Waitara.
New Brighton.	Wanganui (City of).
New Plymouth.	Westport.
Ngaruawahia.	Whakatane.
Northcote.	Whangarei.
Oamaru.	Woodville.
Ohakune.	

## SECOND SCHEDULE.

## REGULATIONS TO TAKE EFFECT AS BY-LAWS.

1. In the following by-laws, if not inconsistent with the context,—

- “Approved” means approved by an Inspector :  
 “In bulk,” as applied to liquid dangerous goods, means such goods stored or kept in receptacles of a capacity greater than 90 gallons :  
 “Inspector” means an officer appointed by the Council for the purposes of the Explosive and Dangerous Goods Amendment Act, 1920 :  
 “Dangerous goods,” “petroleum,” “petroleum oil,” “petroleum spirit,” and “fuel oil” have the meanings assigned thereto respectively by the Explosive and Dangerous Goods Amendment Act, 1920 :  
 “Dangerous goods of Class I,” “dangerous goods of Class II,” “dangerous goods of Class III,” and “dangerous goods of Class IV” have the meanings assigned thereto respectively by the regulations for the time being in force under the Explosive and Dangerous Goods Amendment Act, 1920.

NOTE.—Under the Dangerous Goods Regulations, 1928—

- “Dangerous goods of Class I” includes aviation motor spirit, benzine, benzene, benzole, benzoline, distillate, gasoline, motor spirit, naphtha, and petroleum ether, also liquids or materials consisting wholly or in part of petroleum spirit, acetone, carbon bisulphide, amyl acetate, or ether, and having a true flashing-point less than 73° Fahr.  
 “Dangerous goods of Class II” includes petroleum oil, kerosene, and power kerosene, methyl alcohol, turpentine, and turpentine substitutes, absolute alcohol, methylated spirits, and spirits of wine.  
 “Dangerous goods of Class III” includes phosphorus (yellow) and calcium carbide.  
 “Dangerous goods of Class IV” includes fuel oil when stored in bulk.

2. No person shall keep or store dangerous goods within the borough except in pursuance of a written license in that behalf as hereinafter mentioned, and then only in the place, to the extent, and in the manner permitted by such license and by these by-laws: Provided always that it shall not be an offence hereunder to keep or store dangerous goods without a license in the quantities and under the conditions of storage shown hereunder:—

- (a) In quantities not exceeding 3 gallons of dangerous goods of Class I, if such goods are kept in separate glass, earthenware, or metal vessels, each of which contains not more than one-half pint, and is securely stopped :  
 (b) In quantities not exceeding 8½ gallons of dangerous goods of Class I, kept for private use and not for the purposes of sale, and not used or intended for use in the premises in which the same are kept or stored, in connection with any trade or business or any purpose incidental thereto, if such goods are kept in substantial vessels of metal or other approved material so securely closed that neither liquid nor vapour can escape therefrom, and not within a dwelling or an outhouse attached to a dwelling, and if due precautions are taken to prevent accident by fire or explosion, and to prevent the escape of any such dangerous goods into a sewer or drain :  
 (c) In quantities not exceeding 17 gallons of dangerous goods of Class II, kept for the purpose of sale, or not exceeding 50 gallons of such goods kept for private use only and not for the purpose of sale, if no dangerous goods of Class I are kept by any person within a distance of 20 ft. from such dangerous goods of Class II :  
 (d) In quantities not exceeding 250 gallons of dangerous goods of Class I or of Class II, kept on any farm premises not less than 10 acres in area, for private use or use in connection with the work on such farm and not for purpose of sale, if all such dangerous goods are kept in a thoroughly ventilated building situated not less than 40 ft. from any other building, and if all such dangerous goods are kept in substantial metal vessels so securely closed that neither liquid nor vapour can escape therefrom, and if all due precautions are taken to prevent accident from fire or explosion :  
 (e) In quantities not exceeding 2 lb. of phosphorus kept under water in securely closed containers :  
 (f) In quantities not exceeding 50 lb. of calcium carbide contained in waterproof and airtight tins, each containing not more than 7 lb., and labelled with a distinctive label or mark denoting the nature of the contents :

(g) On a ship, carriage, railway-station, or wharf while being conveyed in accordance with the regulations under the Explosive and Dangerous Goods Amendment Act, 1920 :

(h) In a fuel-tank of a motor-carriage or motor-propelled ship, or the fuel-tank of a stationary internal-combustion engine :

Provided that nothing in this by-law shall authorize the keeping in unlicensed premises of more than 3 gallons at any one time of petroleum spirit used or intended for use in such premises in connection with any trade or business or any purpose incidental thereto.

3. No person shall store or keep within the borough any gunpowder, blasting-powder, gelnite, detonators, or other explosives for which a license is required under the Explosive and Dangerous Goods Act, 1908, save in pursuance of and under the conditions prescribed by a license under that Act issued by a Government Inspector.

4. No license to store dangerous goods of Class I shall be issued in respect of any premises within the “brick area” of the borough (as defined in any by-laws for the time being in force relating to the erection of buildings in the borough) unless such dangerous goods are stored either in an underground tank or in an approved fire-resisting depot.

5. Any person desirous of keeping “dangerous goods” in or upon any premises in the borough shall deliver to the Town Clerk a written application for a license in such form as may be approved by the Council.

6. Upon receipt of such application the Town Clerk shall cause an inspection of the premises therein named to be made by an Inspector, and it shall be the duty of such Inspector to examine such premises and report in writing to the Town Clerk as to their fitness or otherwise for the storage of any such dangerous goods as aforesaid, having regard to the character of the business carried on therein, the situation and construction of the proposed storage-place, the nature of adjoining premises, and the precautions (if any) which the applicant has taken to guard against the risk of fire or explosion, and to the regulations for the time being in force under the Explosive and Dangerous Goods Amendment Act, 1920.

7. If the officer making such inspection reports that the premises are satisfactory, the Town Clerk shall, on payment of the license fee forthwith issue a license under his hand authorizing the applicant to keep such quantity of all or any such dangerous goods as aforesaid as may be approved by the Inspector :

Provided that no license shall be issued for the storage of any quantity of liquid dangerous goods exceeding 1,000 gallons unless the Council has first approved of the issue of such license.

8. Every such license shall be in such form as may be approved by the Council, and shall terminate on the 31st day of March in each year.

9. The following fees shall be payable by the applicant for a license upon the issue thereof to him:—

	£	s.	d.
(a) For the storage of any quantity of dangerous goods of Class I not exceeding 50 gallons, kept for private use only and not for trade purposes or purpose of sale, and in addition such quantities of calcium carbide as may be approved by an Inspector	0	5	0
(b) For the storage of a quantity of dangerous goods of Classes I and II not exceeding 225 gallons, or dangerous goods of Class IV not exceeding 1,000 gallons, and in addition such quantities of dangerous goods of Class III as may be approved by an Inspector	1	0	0
(c) For the storage of a quantity of dangerous goods of Classes I and II exceeding 225 gallons but not exceeding 1,000 gallons, and in addition such quantities of dangerous goods of Class III as may be approved by an Inspector	2	0	0
(d) For the storage of a quantity of dangerous goods of Classes I, II, and IV exceeding 1,000 gallons but not exceeding 2,000 gallons, and in addition such quantities of dangerous goods of Class III as may be approved by an Inspector	3	0	0
(e) For the storage of a quantity of dangerous goods of Classes I, II, and IV exceeding 2,000 gallons, but not exceeding 16,000 gallons, and in addition such quantities of dangerous goods of Class III as may be approved by an Inspector	5	0	0
(f) For the storage of dangerous goods of Classes I, II, and IV in quantities exceeding 16,000 gallons but not exceeding 250,000 gallons	10	0	0



(g) For the storage of dangerous goods of Classes I, II, and IV in quantities exceeding 250,000 gallons .. .. .	£ s. d. 15 0 0
(h) For the storage of dangerous goods of Class III only .. .. .	0 10 0

Provided that in the case of any storage of dangerous goods of Classes I, II, and IV in bulk, the license shall be issued for the maximum capacity of the tank or tanks, less an allowance for expansion of 5 per cent.

10. Every license issued hereunder shall be issued subject to the conditions, requirements, and restrictions contained in the Explosive and Dangerous Goods Amendment Act, 1920, and any regulations issued thereunder, and all such conditions, requirements, and restrictions shall be implied in every such license and be binding on the licensee.

11. If upon inspection of any licensed premises it appears that the licensee is keeping on his premises a greater quantity of any "dangerous goods" than is specified in his license, or has committed a breach of any of the conditions of his license or of the regulations for the time being in force under the Explosive and Dangerous Goods Amendment Act, 1920, he shall be guilty of an offence against these by-laws, and in such case, or in case the Council shall in its absolute discretion consider it expedient so to do, it shall be lawful for the Council to revoke forthwith such license, and to cause a note of such revocation, under the hand of the Town Clerk, to be left at the premises of the licensee, and thereupon such license shall be absolutely void and of no effect.

These by-laws shall come into force on the 1st day of April, 1928, and all by-laws howsoever made heretofore in force within the borough and enuring under the Explosive and Dangerous Goods Amendment Act, 1920, are hereby revoked.

F. D. THOMSON,  
Clerk of the Executive Council.

(I.A. 19/323/34.)

*Regulations under the Explosive and Dangerous Goods Amendment Act, 1920, to take effect as By-laws within certain specified Town Districts and Road Districts.*

CHARLES FERGUSSON, Governor-General.

ORDER IN COUNCIL.

At the Government Buildings at Wellington, this 24th day of March, 1928.

Present :

THE RIGHT HONOURABLE J. G. COATES, P.C., PRESIDING IN COUNCIL.

WHEREAS the Minister of Internal Affairs, in pursuance of the powers conferred on him by section fifteen of the Explosive and Dangerous Goods Amendment Act, 1920, did by several requisitions each dated the twentieth day of June, one thousand nine hundred and twenty-seven, require the several Town Boards and Road Boards mentioned in the First Schedule hereto, being licensing authorities under the said Act, to alter their respective by-laws made pursuant to the said Act :

And whereas the said Boards did not within three months from the respective receipt of the said requisitions alter their said respective by-laws in the manner required by the said requisitions :—

Now, therefore, His Excellency the Governor-General of the Dominion of New Zealand, acting by and with the advice and consent of the Executive Council of the said Dominion, and in pursuance and exercise of the powers conferred on him by section fifteen aforesaid, doth hereby make the regulations set forth in the Second Schedule hereto, to give effect to the said respective requisitions.

FIRST SCHEDULE.

TOWN BOARDS.	ROAD BOARDS.
Ellerslie.	Mount Roskill.
New Lynn.	One Tree Hill.

SECOND SCHEDULE.

REGULATIONS TO TAKE EFFECT AS BY-LAWS.

1. IN the following by-laws, if not inconsistent with the context—

- "Approved" means approved by an Inspector :
- "In bulk" as applied to liquid dangerous goods means such goods stored or kept in receptacles of a capacity greater than 90 gallons.
- "Inspector" means an officer appointed by the Board for the purposes of the Explosive and Dangerous Goods Amendment Act, 1920 :
- "Dangerous goods," "petroleum," "petroleum oil," "petroleum spirit," and "fuel oil" have the meanings assigned thereto respectively by the Explosive and Dangerous Goods Amendment Act, 1920 :

"Dangerous goods of Class I," "dangerous goods of Class II," "dangerous goods of Class III," and "dangerous goods of Class IV" have the meanings assigned thereto respectively by the regulations for the time being in force under the Explosive and Dangerous Goods Amendment Act, 1920.

NOTE.—Under the Dangerous Goods Regulations, 1928—  
"Dangerous goods of Class I" includes aviation motor spirit, benzine, benzene, benzole, benzoline, distillate, gasoline, motor spirit, naphtha, and petroleum ether, also liquids or materials consisting wholly or in part of petroleum spirit, acetone, carbon bisulphide, amyl acetate, or ether, and having a true flashing-point less than 73° Fahr.

"Dangerous goods of Class II" includes petroleum oil, kerosene, and power kerosene, methyl alcohol, turpentine, and turpentine substitutes, absolute alcohol, methylated spirits, and spirits of wine.

"Dangerous goods of Class III" includes phosphorus (yellow) and calcium carbide.

"Dangerous goods of Class IV" includes fuel oil when stored in bulk.

2. No person shall keep or store dangerous goods within the district except in pursuance of a written license in that behalf as hereinafter mentioned, and then only in the place, to the extent, and in the manner permitted by such license and by these by-laws : provided always that it shall not be an offence hereunder to keep or store dangerous goods without a license in the quantities and under the conditions of storage shown hereunder :—

- (a) In quantities not exceeding 3 gallons of dangerous goods of Class I, if such goods are kept in separate glass, earthenware, or metal vessels, each of which contains not more than one-half pint, and is securely stopped :
- (b) In quantities not exceeding 8½ gallons of dangerous goods of Class I, kept for private use and not for the purpose of sale and not used or intended for use in the premises in which the same are kept or stored, in connection with any trade or business or any purpose incidental thereto, if such goods are kept in substantial vessels of metal or other approved material so securely closed that neither liquid nor vapour can escape therefrom, and not within a dwelling or an outhouse attached to a dwelling, and if due precautions are taken to prevent accident by fire or explosion, and to prevent the escape of any such dangerous goods into a sewer or drain :
- (c) In quantities not exceeding 17 gallons or dangerous goods of Class II, kept for the purpose of sale, or not exceeding 50 gallons of such goods kept for private use only and not for the purpose of sale, if no dangerous goods of Class I are kept by any person within a distance of 20 ft. from such dangerous goods of Class II :
- (d) In quantities not exceeding 250 gallons of dangerous goods of Class I or of Class II, kept on any farm premises not less than 10 acres in area, for private use or use in connection with the work on such farm and not for purpose of sale, if all such dangerous goods are kept in a thoroughly ventilated building situated not less than 40 ft. from any other building, and if all such dangerous goods are kept in substantial metal vessels so securely closed that neither liquid nor vapour can escape therefrom, and if all due precautions are taken to prevent accident from fire or explosion :
- (e) In quantities not exceeding 2 lb. of phosphorus kept under water in securely closed containers :
- (f) In quantities not exceeding 50 lb. of calcium carbide contained in waterproof and airtight tins each containing not more than 7 lb. and labelled with a distinctive label or mark denoting the nature of the contents :
- (g) On a ship, carriage, railway-station, or wharf while being conveyed in accordance with the regulations under the Explosives and Dangerous Goods Amendment Act, 1920 :
- (h) In a fuel-tank of a motor-carriage or motor-propelled ship, or the fuel-tank of a stationary internal-combustion engine :

Provided that nothing in this by-law shall authorize the keeping in unlicensed premises of more than 3 gallons at any one time of petroleum spirit used or intended for use in such premises in connection with any trade or business or any purposes incidental thereto.

3. No person shall store or keep within the district any gunpowder, blasting-powder, gelnite, detonators, or other explosives for which a license is required under the Explosive and Dangerous Goods Act, 1908, save in pursuance of and under the conditions prescribed by a license under that Act issued by a Government Inspector.

4. No license to store dangerous goods of Class I shall be issued in respect of any premises within the "brick area" of the district (as defined in any by-laws for the time being in force relating to the erection of buildings in the district) unless such dangerous goods are stored either in an underground tank or in an approved fire-resisting depot.

5. Any person desirous of keeping "dangerous goods" in or upon any premises in the district shall deliver to the Town Clerk a written application for a license in such form as may be approved by the Board.

6. Upon receipt of such application the Town Clerk shall cause an inspection of the premises therein named to be made by an Inspector, and it shall be the duty of such Inspector to examine such premises and report in writing to the Town Clerk as to the fitness or otherwise for the storage of any such dangerous goods as aforesaid, having regard to the character of the business carried on therein, the situation and construction of the proposed storage-place, the nature of adjoining premises, and the precautions (if any) which the applicant has taken to guard against the risk of fire or explosion, and to the regulations for the time being in force under the Explosive and Dangerous Goods Amendment Act, 1920.

7. If the officer making such inspection reports that the premises are satisfactory, the Town Clerk shall, on payment of the license fee forthwith issue a license under his hand authorizing the applicant to keep such quantity of all or any such dangerous goods as aforesaid as may be approved by the Inspector:

Provided that no license shall be issued for the storage of any quantity of liquid dangerous goods exceeding 1,000 gallons unless the Board has first approved of the issue of such license.

8. Every such license shall be in such form as may be approved by the Board and shall terminate on the 31st day of March in each year.

9. The following fees shall be payable by the applicant for a license upon the issue thereof to him:—

FOR THE STORAGE OF DANGEROUS GOODS OF CLASS I OR OF CLASS II OR OF CLASS IV.

If Quantity kept or stored exceeds: Gallons.	But does not exceed: Gallons.	Fees.		
		£	s.	d.
100	100	1	0	0
250	250	1	5	0
1,000	1,000	2	10	0
5,000	5,000	5	0	0
25,000	25,000	7	10	0
50,000	50,000	10	0	0
100,000	100,000	15	0	0
250,000	250,000	20	0	0
500,000	500,000	25	0	0
1,000,000	1,000,000	30	0	0
2,000,000	2,000,000	40	0	0
2,000,000	..	50	0	0

and, in addition, such quantities of dangerous goods of Class III as may be approved by the Inspecting Officer:

For the storage of any quantity of dangerous goods of

Class I, not exceeding 50 gallons, kept for private use only and not for trade purposes or purpose of sale .. 5 0

Provided that in the case of any storage of dangerous goods of Classes I, II, and IV in bulk the license shall be issued for the maximum capacity of the tank or tanks, less an allowance for expansion of 5 per cent.

10. Every license issued hereunder shall be issued subject to the conditions, requirements, and restrictions contained in the Explosive and Dangerous Goods Amendment Act, 1920, and any regulations issued thereunder, and all such conditions, requirements, and restrictions shall be implied in every such license and be binding on the licensee.

11. If upon inspection of any licensed premises it appears that the licensee is keeping on his premises a greater quantity of any "dangerous goods" than is specified in his license, or has committed a breach of any of the conditions of his license or of the regulations for the time being in force under the Explosive and Dangerous Goods Amendment Act, 1920, he shall be guilty of an offence against these by-laws, and in such case, or in case the Board shall in its absolute discretion consider it expedient so to do, it shall be lawful for the Board to revoke forthwith such license, and to cause a note of such revocation, under the hand of the Town Clerk, to be left at the premises of the licensee, and thereupon such license shall be absolutely void and of no effect.

12. These by-laws shall come into force on the 1st day of April, one thousand nine hundred and twenty-eight, and all by-laws howsoever made heretofore in force within the district and enuring under the Explosive and Dangerous Goods Amendment Act, 1920, are hereby revoked.

F. D. THOMSON,  
Clerk of the Executive Council.

(I.A. 19/323/34.)

*Regulations under the Explosive and Dangerous Goods Amendment Act, 1920, to take effect as By-laws within certain specified Town Districts.*

CHARLES FERGUSSON, Governor-General.

ORDER IN COUNCIL.

At the Government Buildings at Wellington, this 24th day of March, 1928.

Present:

THE RIGHT HONOURABLE J. G. COATES, P.C., PRESIDING IN COUNCIL.

WHEREAS the Minister of Internal Affairs, in pursuance of the powers conferred on him by section fifteen of the Explosive and Dangerous Goods Amendment Act, 1920, did by several requisitions, each dated the twentieth day of June, one thousand nine hundred and twenty-seven, require the several Town Boards mentioned in the First Schedule hereto, being licensing authorities under the said Act, to alter their respective by-laws made pursuant to the said Act:

And whereas the said Town Boards did not within three months from the respective receipt of the said requisitions alter their said respective by-laws in the manner required by the said requisitions:

Now, therefore, His Excellency the Governor-General of the Dominion of New Zealand, acting by and with the advice and consent of the Executive Council of the said Dominion, and in pursuance and exercise of the powers conferred on him by section fifteen aforesaid, doth hereby make the regulations set forth in the Second Schedule hereto, to give effect to the said respective requisitions.

FIRST SCHEDULE.

TOWN BOARDS.

Bull's.	Matamata.
Cobden.	Mercer.
Edendale.	Nightcaps.
Havelock.	Opunake.
Havelock North.	Otane.
Helensville.	Otautau.
Howick.	Otorohanga.
Huntly.	Outram.
Huntermville.	Papakura.
Hikurangi.	Papatoetoe.
Kaitaia.	Raglan.
Kaponga.	Southbridge.
Leamington.	Taradale.
Lecston.	Te Puke.
Lumsden.	Tuakau.
Manaia.	Waiuku.
Mangaweka.	Waverley.
Manurewa.	Wyndham.
Martinborough.	

SECOND SCHEDULE.

REGULATIONS TO TAKE EFFECT AS BY-LAWS.

1. IN the following by-laws, if not inconsistent with the context,—

"Approved" means approved by an Inspector:

"In bulk" as applied to liquid dangerous goods, means such goods kept or stored in receptacles of a capacity greater than 90 gallons;

"Inspector" means an officer appointed by the Board for the purposes of the Explosive and Dangerous Goods Amendment Act, 1920:

"Dangerous goods," "petroleum," "petroleum oil," "petroleum spirit," and "fuel oil" have the meanings assigned thereto respectively by the Explosive and Dangerous Goods Amendment Act, 1920:

"Dangerous goods of Class I," "dangerous goods of Class II," "dangerous goods of Class III," and "dangerous goods of Class IV" have the meanings assigned thereto respectively by the regulations for the time being in force under the Explosive and Dangerous Goods Amendment Act, 1920.

NOTE.—Under the Dangerous Goods Regulations, 1928—

"Dangerous goods of Class I" includes aviation motor spirit, benzene, benzene, benzole, benzoline, distillate gasoline, motor spirit, naphtha, and petroleum ether; also liquids or materials consisting wholly or in part of petroleum spirit, acetone, carbon bisulphide, amyl acetate, or ether, and having a true flashing-point less than 73° Fahr.

"Dangerous goods of Class II" includes petroleum oil, kerosene, and power kerosene, methyl alcohol, turpentine, turpentine substitutes, absolute alcohol, methylated spirits, and spirits of wine.

"Dangerous goods of Class III" includes phosphorus (yellow) and calcium carbide.

"Dangerous goods of Class IV" includes fuel oil when stored in bulk.

2. No person shall keep or store dangerous goods within the town district except in pursuance of a written license in that behalf as hereinafter mentioned, and then only in the place, to the extent, and in the manner permitted by such license and by these by-laws: Provided always that it shall not be an offence hereunder to keep or store dangerous goods without a license in the quantities and under the conditions of storage shown hereunder:—

- (a) In quantities not exceeding 3 gallons of dangerous goods of Class I, if such goods are kept in separate glass, earthenware, or metal vessels, each of which contains not more than one-half pint and is securely stopped:
- (b) In quantities not exceeding 8½ gallons of dangerous goods of Class I, kept for private use and not for the purpose of sale, and not used or intended for use in the premises in which the same are kept or stored, in connection with any trade or business or any purpose incidental thereto, if such goods are kept in substantial vessels of metal or other approved material so securely closed that neither liquid nor vapour can escape therefrom, and not within a dwelling or an outhouse attached to a dwelling, and if due precautions are taken to prevent accident by fire or explosion and to prevent the escape of any such dangerous goods into a sewer or drain:
- (c) In quantities not exceeding 17 gallons of dangerous goods of Class II, kept for the purpose of sale, or not exceeding 50 gallons of such goods kept for private use only and not for the purpose of sale, if no dangerous goods of Class I are kept by any person within a distance of 20 ft. from such dangerous goods of Class II:
- (d) In quantities not exceeding 250 gallons of dangerous goods of Class I or of Class II, kept on any farm premises not less than 10 acres in area, for private use or use in connection with the work on such farm and not for purpose of sale, if all such dangerous goods are kept in a thoroughly ventilated building situated not less than 40 ft. from any other building, and if all such dangerous goods are kept in substantial metal vessels so securely closed that neither liquid nor vapour can escape therefrom, and if all due precautions are taken to prevent accident from fire or explosion:
- (e) In quantities not exceeding 2 lb. of phosphorus kept under water in securely closed containers:
- (f) In quantities not exceeding 50 lb. of calcium carbide contained in waterproof and airtight tins each containing not more than 7 lb. and labelled with a distinctive label or mark denoting the nature of the contents:
- (g) On a ship, carriage, railway-station, or wharf while being conveyed in accordance with the regulations under the Explosive and Dangerous Goods Amendment Act, 1920:
- (h) In a fuel-tank of a motor-carriage or motor-propelled ship, or the fuel-tank of a stationary internal-combustion engine:

Provided that nothing in this by-law shall authorize the keeping in unlicensed premises of more than 3 gallons at any one time of petroleum spirit used or intended for use in such premises in connection with any trade or business or any purpose incidental thereto.

3. No person shall store or keep within the town district any gunpowder, blasting-powder, gelignite, detonators, or other explosives for which a license is required under the Explosive and Dangerous Goods Act, 1908, save in pursuance of and under the conditions prescribed by a license under that Act issued by a Government Inspector.

4. No license to store dangerous goods of Class I shall be issued in respect of any premises within the "brick area" of the town district (as defined in any by-laws for the time being in force relating to the erection of buildings in the town district) unless such dangerous goods are stored either in an underground tank or in an approved fire-resisting depot.

5. Any person desirous of keeping "dangerous goods" in or upon any premises in the town district shall deliver to the Town Clerk a written application for a license in such form as may be approved by the Board.

6. Upon receipt of such application the Town Clerk shall cause an inspection of the premises therein named to be made by an Inspector, and it shall be the duty of such Inspector to examine such premises and report in writing to the Town Clerk as to their fitness or otherwise for the storage of any such dangerous goods as aforesaid, having regard to the character of the business carried on therein, the situation and construction of the proposed storage-place, the nature of adjoining premises, and the precautions (if any) which the

applicant has taken to guard against the risk of fire or explosion, and to the regulations for the time being in force under the Explosive and Dangerous Goods Amendment Act, 1920.

7. If the officer making such inspection reports that the premises are satisfactory, the Town Clerk shall, on payment of the license-fee, forthwith issue a license under his hand authorizing the applicant to keep such quantity of all or any such dangerous goods as aforesaid as may be approved by the Inspector:

Provided that no license shall be issued for the storage of any quantity of liquid dangerous goods exceeding 1,000 gallons unless the Board has first approved of the issue of such license.

8. Every such license shall be in such form as may be approved by the Board, and shall terminate on the 31st day of March in each year.

9. The following fees shall be payable by the applicant for a license upon the issue thereof to him:—

	£	s.	d.
(a) For the storage of any quantity of dangerous goods of Class I not exceeding 50 gallons, kept for private use only and not for trade purposes or purpose of sale, and in addition such quantities of calcium carbide as may be approved by an Inspector ..		0	5 0
(b) For the storage of a quantity of dangerous goods of Classes I and II not exceeding 225 gallons, or dangerous goods of Class IV not exceeding 1,000 gallons, and in addition such quantities of dangerous goods of Class III as may be approved by an Inspector ..	1	0	0
(c) For the storage of a quantity of dangerous goods of Classes I and II exceeding 225 gallons but not exceeding 1,000 gallons, and in addition such quantities of dangerous goods of Class III as may be approved by an Inspector ..	2	0	0
(d) For the storage of a quantity of dangerous goods of Classes I, II, and IV exceeding 1,000 gallons but not exceeding 2,000 gallons, and in addition such quantities of dangerous goods of Class III as may be approved by an Inspector ..	3	0	0
(e) For the storage of a quantity of dangerous goods of Classes I, II, and IV exceeding 2,000 gallons, but not exceeding 16,000 gallons, and in addition such quantities of dangerous goods of Class III as may be approved by an Inspector ..	5	0	0
(f) For the storage of dangerous goods of Classes I, II, and IV in quantities exceeding 16,000 gallons but not exceeding 250,000 gallons ..	10	0	0
(g) For the storage of dangerous goods of Classes I, II, and IV in quantities exceeding 250,000 gallons ..	15	0	0
(h) For the storage of dangerous goods of Class III only ..	0	10	0

Provided that in the case of any storage of dangerous goods of Classes I, II, and IV in bulk, the license shall be issued for the maximum capacity of the tank or tanks, less an allowance for expansion of 5 per cent.

10. Every license issued hereunder shall be issued subject to the conditions, requirements, and restrictions contained in the Explosive and Dangerous Goods Amendment Act, 1920, and any regulations issued thereunder, and all such conditions, requirements, and restrictions shall be implied in every such license and be binding on the licensee.

11. If upon inspection of any licensed premises it appears that the licensee is keeping on his premises a greater quantity of any dangerous goods than is specified in his license, or has committed a breach of any of the conditions of his license or of the regulations for the time being in force under the Explosive and Dangerous Goods Amendment Act, 1920, he shall be guilty of an offence against these by-laws, and in such case or in case the Board shall in its absolute discretion consider it expedient so to do, it shall be lawful for the Board to revoke forthwith such license, and to cause a note of such revocation under the hand of the Town Clerk to be left at the premises of the licensee, and thereupon such license shall be absolutely void and of no effect.

12. These by-laws shall come into force on the 1st day of April, one thousand nine hundred and twenty-eight, and all by-laws howsoever made heretofore in force within the town district and enuring under the Explosive and Dangerous Goods Amendment Act, 1920, are hereby revoked.

F. D. THOMSON,  
Clerk of the Executive Council.

(I.A. 19/323/34.)

*Regulations under the Explosive and Dangerous Goods Amendment Act, 1920, to take effect as By-laws within certain specified Boroughs.*

CHARLES FERGUSSON, Governor-General.

ORDER IN COUNCIL.

At the Government Buildings, at Wellington, this 24th day of March, 1928.

Present :

THE RIGHT HONOURABLE J. G. COATES, P.C., PRESIDING IN COUNCIL.

WHEREAS the Minister of Internal Affairs, in pursuance of the powers conferred on him by section fifteen of the Explosive and Dangerous Goods Amendment Act, 1920, did by several requisitions each dated the twentieth day of June, one thousand nine hundred and twenty-seven, require the several Borough Councils mentioned in the First Schedule hereto, being licensing authorities under the said Act, to alter their respective by-laws made pursuant to the said Act :

And whereas the said Borough Councils did not within three months from the respective receipt of the said requisitions alter their said respective by-laws in the manner required by the said requisitions :

Now, therefore, His Excellency the Governor-General of the Dominion of New Zealand, acting by and with the advice and consent of the Executive Council of the said Dominion, and in pursuance and exercise of the powers conferred on him by section fifteen aforesaid, doth hereby make the regulations set forth in the Second Schedule hereto, to give effect to the said respective requisitions.

FIRST SCHEDULE.

BOROUGH COUNCILS.

Christchurch (City of).	Newmarket.
Devonport.	Onehunga.
Mount Albert.	Takapuna.
Mount Eden.	

SECOND SCHEDULE.

REGULATIONS TO TAKE EFFECT AS BY-LAWS.

1. In the following by-laws, if not inconsistent with the context,—

“Approved” means approved by an Inspector :

“In bulk,” as applied to liquid dangerous goods, means such goods stored or kept in receptacles of a capacity greater than 90 gallons :

“Inspector” means an officer appointed by the Council for the purposes of the Explosive and Dangerous Goods Amendment Act, 1920 :

“Dangerous goods,” “petroleum,” “petroleum oil,” “petroleum spirit,” and “fuel oil” have the meanings assigned thereto respectively by the Explosive and Dangerous Goods Amendment Act, 1920 :

“Dangerous goods of Class I,” “dangerous goods of Class II,” “dangerous goods of Class III,” and “dangerous goods of Class IV” have the meanings assigned thereto respectively by the regulations for the time being in force under the Explosive and Dangerous Goods Amendment Act, 1920.

NOTE.—Under the Dangerous Goods Regulations, 1928—  
“Dangerous goods of Class I” includes aviation motor spirit, benzene, benzene, benzole, benzoline, distillate, gasoline, motor spirit, naphtha, and petroleum ether, also liquids or materials consisting wholly or in part of petroleum spirit, acetone, carbon bisulphide, amyl acetate, or ether, and having a true flashing-point less than 73° Fahr.

“Dangerous goods of Class II” includes petroleum oil, kerosene, and power kerosene, methyl alcohol, turpentine, and turpentine substitutes, absolute alcohol, methylated spirits, and spirits of wine.

“Dangerous goods of Class III” includes phosphorus (yellow) and calcium carbide.

“Dangerous goods of Class IV” includes fuel oil when stored in bulk.

2. No person shall keep or store dangerous goods within the borough except in pursuance of a written license in that behalf as hereinafter mentioned, and then only in the place, to the extent, and in the manner permitted by such license and by these by-laws : Provided always that it shall not be an offence hereunder to keep or store dangerous goods without a license in the quantities and under the conditions of storage shown hereunder :—

(a) In quantities not exceeding 3 gallons of dangerous goods of Class I, if such goods are kept in separate

glass, earthenware, or metal vessels, each of which contains not more than one-half pint and is securely stopped :

(b) In quantities not exceeding 8½ gallons of dangerous goods of Class I, kept for private use and not for the purpose of sale and not used or intended for use in the premises in which the same are kept or stored, in connection with any trade or business or any purpose incidental thereto, if such goods are kept in substantial vessels of metal or other approved material so securely closed that neither liquid nor vapour can escape therefrom and not within a dwelling or an outhouse attached to a dwelling, and if due precautions are taken to prevent accident by fire or explosion and to prevent the escape of any such dangerous goods into a sewer or drain :

(c) In quantities not exceeding 17 gallons of dangerous goods of Class II, kept for the purpose of sale, or not exceeding 50 gallons of such goods kept for private use only and not for the purpose of sale, if no dangerous goods of Class I are kept by any person within a distance of 20 ft. from such dangerous goods of Class II :

(d) In quantities not exceeding 250 gallons of dangerous goods of Class I or of Class II, kept on any farm premises not less than 10 acres in area, for private use or use in connection with the work on such farm and not for purpose of sale, if all such dangerous goods are kept in a thoroughly ventilated building situated not less than 40 ft. from any other building, and if all such dangerous goods are kept in substantial metal vessels so securely closed that neither liquid nor vapour can escape therefrom, and if all due precautions are taken to prevent accident from fire or explosion :

(e) In quantities not exceeding 2 lb. of phosphorus kept under water in securely closed containers :

(f) In quantities not exceeding 50 lb. of calcium carbide contained in waterproof and airtight tins each containing not more than 7 lb., and labelled with a distinctive label or mark denoting the nature of the contents :

(g) On a ship, carriage, railway-station, or wharf while being conveyed in accordance with the regulations under the Explosive and Dangerous Goods Amendment Act, 1920 :

(h) In a fuel-tank of a motor-carriage or motor-propelled ship, or the fuel-tank of a stationary internal-combustion engine :

Provided that nothing in this by-law shall authorize the keeping in unlicensed premises of more than 3 gallons at any one time of petroleum spirit used or intended for use in such premises in connection with any trade or business or any purpose incidental thereto.

3. No person shall store or keep within the borough any gunpowder, blasting-powder, gelignite, detonators, or other explosives for which a license is required under the Explosive and Dangerous Goods Act, 1908, save in pursuance of and under the conditions prescribed by a license under that Act issued by a Government Inspector.

4. No license to store dangerous goods of Class I shall be issued in respect of any premises within the “brick area” of the borough (as defined in any by-laws for the time being in force relating to the erection of buildings in the borough) unless such dangerous goods are stored either in an underground tank or in an approved fire-resisting depot.

5. Any person desirous of keeping “dangerous goods” in or upon any premises in the borough shall deliver to the Town Clerk a written application for a license in such form as may be approved by the Council.

6. Upon receipt of such application the Town Clerk shall cause an inspection of the premises therein named to be made by an Inspector, and it shall be the duty of such Inspector to examine such premises and report in writing to the Town Clerk as to their fitness or otherwise for the storage of any such dangerous goods as aforesaid, having regard to the character of the business carried on therein, the situation and construction of the proposed storage-place, the nature of adjoining premises, and the precautions (if any) which the applicant has taken to guard against the risk of fire or explosion, and to the regulations for the time being in force under the Explosive and Dangerous Goods Amendment Act, 1920.

7. If the officer making such inspection reports that the premises are satisfactory, the Town Clerk shall, on payment of the licensee fee forthwith issue a license under his hand authorizing the applicant to keep such quantity of all or any such dangerous goods as aforesaid as may be approved by the Inspector :

Provided that no license shall be issued for the storage of any quantity of liquid dangerous goods exceeding 1,000 gallons unless the Council has first approved of the issue of such license.

8. Every such license shall be in such form as may be approved by the Council, and shall terminate on the 31st day of March in each year.

9. The following fees shall be payable by the applicant for a license upon the issue thereof to him :—

FOR THE STORAGE OF DANGEROUS GOODS OF CLASS I OR OF CLASS II OR OF CLASS IV.

If Quantity kept or stored exceeds : Gallons.	But does not exceed : Gallons.	Fees. £ s. d.
..	100	1 0 0
100	250	1 5 0
250	1,000	2 10 0
1,000	5,000	5 0 0
5,000	25,000	7 10 0
25,000	50,000	10 0 0
50,000	100,000	15 0 0
100,000	250,000	20 0 0
250,000	500,000	25 0 0
500,000	1,000,000	30 0 0
1,000,000	2,000,000	40 0 0
2,000,000	..	50 0 0

and, in addition, such quantities of dangerous goods of Class III as may be approved by the Inspecting Officer :  
For the storage of any quantity of dangerous goods of

Class I, not exceeding 50 gallons, kept for private use only and not for trade purposes or purpose of sale .. .. . 5 0

Provided that in the case of any storage of dangerous goods of Classes I, II, and IV in bulk, the license shall be issued for the maximum capacity of the tank or tanks, less an allowance for expansion of 5 per cent.

10. Every license issued hereunder shall be issued subject to the conditions, requirements, and restrictions contained in the Explosive and Dangerous Goods Amendment Act, 1920, and any regulations issued thereunder, and all such conditions, requirements, and restrictions shall be implied in every such license and be binding on the licensee.

11. If upon inspection of any licensed premises it appears that the licensee is keeping on his premises a greater quantity of any "dangerous goods" than is specified in his license, or has committed a breach of any of the conditions of his license or of the regulations for the time being in force under the Explosive and Dangerous Goods Amendment Act, 1920, he shall be guilty of an offence against these by-laws, and in such case, or in case the Council shall in its absolute discretion consider it expedient so to do, it shall be lawful for the Council to revoke forthwith such license, and to cause a note of such revocation under the hand of the Town Clerk, to be left at the premises of the licensee, and thereupon such license shall be absolutely void and of no effect.

12. These by-laws shall come into force on the 1st day of April, one thousand nine hundred and twenty-eight, and all by-laws howsoever made heretofore in force within the borough, and enuring under the Explosive and Dangerous Goods Amendment Act, 1920, are hereby revoked.

F. D. THOMSON,  
Clerk of the Executive Council.

(I.A. 19/323/24.)

By Authority: W. A. G. SKINNER, Government Printer, Wellington.

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