

ENVIRONMENTAL PROTECTION

EP301

ENVIRONMENTAL PROTECTION ACT 1986

ENVIRONMENTAL PROTECTION (RECOVERY OF VAPOURS FROM THE TRANSFER OF ORGANIC LIQUIDS) REGULATIONS 1995

Made by His Excellency the Governor in Executive Council on the recommendation of the Authority.

Citation

1. These regulations may be cited as the *Environmental Protection (Recovery of Vapours from the Transfer of Organic Liquids) Regulations 1995*.

Interpretation

2. In these regulations, unless the contrary intention appears —

“**bulk fuel terminal**” has the meaning given by regulation 3;

“**commencement day**” means the day on which these regulations come into operation;

“**delivery tank**” means a tank mounted on a delivery vehicle (other than the fuel tank of the vehicle) that, either by itself or in combination with other such tanks on the vehicle, has a capacity exceeding 12 kilolitres;

“**delivery vehicle**” means a vehicle used to transport organic liquids from one place to another and includes a vehicle drawn by another vehicle but does not include a train;

“**fill pipe**” means a pipe attached to an underground fuel tank that is designed to be connected to a liquid transfer hose to enable the transfer of organic liquids from a delivery tank to the underground fuel tank;

“**liquid transfer hose**” means a hose used to transfer organic liquids from a delivery tank to an underground fuel tank;

“**metropolitan region**” has the same meaning as in the *Metropolitan Region Town Planning Scheme Act 1959*;

“**organic liquid**” means —

- (a) crude oil (including crude shale oil and crude petroleum) not previously subjected to distillation;
- (b) petrol, or any other liquid, used or normally suitable for use as a fuel for internal combustion engines using spark ignition, or used as a major component of such fuel, but does not include vaporising oil; or
- (c) any liquid containing more than 50% by volume of one or more of the following substances —
 - (i) heptane;
 - (ii) toluene;
 - (iii) trichloroethylene; or
 - (iv) xylene;

“**tank**” means —

- (a) a receptacle, reservoir or container; or
- (b) an isolated section or compartment of a receptacle, reservoir or container,
used or designed to be used for the storage of liquids;

“**underground fuel tank**” has the meaning given by regulation 4.

Meaning of "bulk fuel terminal"

3. For the purposes of these regulations, premises are at a particular time a bulk fuel terminal if —

- (a) more than 30 megalitres of organic liquid have been transferred on or from the premises into delivery tanks during the 12 month period immediately before that time; or
- (b) more than 30 megalitres of organic liquid are likely to be transferred on or from the premises into delivery tanks during any 12 month period that includes that time.

Meaning of "underground fuel tank"

4. For the purposes of these regulations, a tank is at a particular time an underground fuel tank if it —

- (a) is used to store organic liquids;
- (b) is wholly or substantially underground;
- (c) has a capacity exceeding 12 kilolitres; and
- (d) either —
 - (i) has received more than 600 kilolitres of organic liquids during the 12 month period immediately before that time; or
 - (ii) is likely to receive more than 600 kilolitres of organic liquids during any 12 month period that includes that time.

Regulations only apply to bulk fuel terminals and underground tanks in the metropolitan region

5. These regulations apply only to, and in relation to, bulk fuel terminals and underground fuel tanks located in the metropolitan region.

Delayed operation of certain regulations

6. (1) Regulation 7 does not apply to or in relation to any bulk fuel terminal until 1 July 2000.

(2) Regulations 8, 9, 10 and 12 do not apply to or in relation to an underground fuel tank that was installed before the commencement day until 1 July 1999.

(3) Regulation 13 does not apply to or in relation to any underground fuel tank until 1 July 1995.

Transfer of organic liquids to delivery tank

7. (1) The occupier of a bulk fuel terminal must ensure that, when organic liquids are being transferred from the terminal to a delivery tank, the terminal or the tank (as the case requires) is fitted with the equipment referred to in subregulations (2) and (3).

Penalty: \$200.

(2) The following equipment is required to be fitted under subregulation (1) —

- (a) a vapour collection system consisting of pipes and hoses that collect all organic vapours and gases displaced from the delivery tank during filling operations and convey the vapours or gases to a vapour recovery or disposal system;
- (b) an interlock system which prevents the transfer of organic liquids into the delivery tank unless the vapour collection system is first connected to that tank;

- (c) fittings on all liquid and vapour lines which make vapour-tight connections with the respective fittings on the delivery tank and which close automatically when disconnected; and
- (d) a vapour recovery or disposal system that either —
 - (i) recover vapours emitted during filling operations so that the total mass of unrecovered organic vapours emitted to the atmosphere during any period of 4 hours does not exceed 110 milligrams for each litre of organic liquid passing out of the bulk fuel terminal;
 - (ii) incinerate vapours emitted during filling operations so that the concentration of uncombusted organic vapours in each cubic metre of gaseous discharge resulting from the incineration process, when calculated on the basis of 12% carbon dioxide, does not exceed 1.5 grams per cubic metre; or
 - (iii) is of a type approved by the chief executive officer under subregulation (5).

(3) The pipes or hoses referred to in subregulation (2)(a) must have an internal diameter of not less than 65% of the largest fill line used for connection to the delivery tank.

(4) It is a defence in proceedings for an offence against subsection (1) relating to failing to fit an interlock system referred to in subregulation (2)(b) for the person charged to prove that all delivery tanks filled at the terminal have an interlock system which achieves the same result.

(5) The chief executive officer may, for the purposes of this regulation, approve in writing a type of vapour recovery or disposal system other than that referred to in subregulation (2)(d)(i) or (ii).

Vapour control equipment to be fitted to delivery tanks

8. (1) The person in charge of a delivery tank must ensure that, when the delivery tank is being used to receive organic liquids from a bulk fuel terminal or to transfer organic liquids to an underground fuel tank, the delivery tank is fitted with the equipment referred to in subregulations (2), (3) and (4).

Penalty: \$200.

(2) The following equipment is required to be fitted under subregulation (1) —

- (a) a vapour handling system for organic vapours and gases displaced by the transfer of liquids to or from the underground fuel tank, that comprises of —
 - (i) a vapour transfer valve on each delivery tank connecting that tank, through a manifold if desired, to a vapour line coupling;
 - (ii) a vapour return hose of vapour-tight construction fitted to connect at one end with the vapour line coupling or couplings on the vehicle, and at the other end to a vapour return coupling at the liquid unloading location; and
 - (iii) couplings on vapour return hoses that make a vapour-tight connection with the respective fittings on the vehicle;
- (b) an overfill protection device located in each delivery tank that is designed to stop the flow of liquid into the tank as near as practicable to the level of minimum ullage;
- (c) pressure-vacuum valves on all vents to the atmosphere, except on emergency vents, which are set to be closed when the pressure in the tank is between 15 kilopascals above, and 3 kilopascals below, ambient pressure;

- (d) couplings on liquid lines on the delivery tank that make a liquid-tight connection with their respective mating fittings and that close automatically when disconnected;
- (e) couplings on liquid hoses that make a liquid-tight connection with their respective mating fittings; and
- (f) vapour-tight hatch gaskets.

(3) The vapour transfer valve referred to in subregulation (2)(a)(i) must be interlocked so as to be in the open position whenever liquid is being transferred to or from the delivery tank, and to be closed unless the appropriate vapour line coupling is positively connected to a vapour return hose.

(4) The internal diameter of the hose referred to in subregulation (2)(a)(ii) must be not less than 65% of the internal diameter of the largest liquid transfer hose carried by the vehicle.

(5) The person in charge of a delivery tank must ensure that all equipment required under this regulation to be fitted in respect of the delivery tank operates in a proper and efficient manner and is operated correctly.

Penalty: \$200.

Vapour control equipment to be fitted to underground fuel tanks

9. (1) The occupier of any premises on which there is an underground fuel tank must ensure that, when organic liquids are being transferred to the underground fuel tank from a delivery tank, the underground fuel tank is fitted with the equipment referred to in subregulations (2), (3) and (4).

Penalty: \$200.

(2) The following equipment is required to be fitted under subregulation (1) —

- (a) a coupling on the fill pipe that makes a liquid-tight connection with the transfer hose on the delivery tank;
- (b) a vapour transfer system through which vapours displaced by the transfer of liquids into the tank are returned to the delivery tank being unloaded by means of —
 - (i) a vapour return line of vapour-tight construction that has an internal diameter of not less than 65% of the minimum internal diameter of the fill pipe; and
 - (ii) a coupling on the vapour return line that makes a vapour-tight connection with the relevant fitting on the vapour return hose connected to the delivery tank, and which closes automatically when disconnected;
- (c) in the case of a tank that is filled by the operation of gravity, an overflow protection system designed to stop the flow of organic liquid into the tank before there is insufficient space in that tank to receive the contents of the transfer hose on the delivery tank.

(3) The diameter referred to in subregulation (2)(b)(i) does not apply to that section of the vapour return line that is upstream of the first fitting or change in direction from the underground fuel tank which section —

- (a) in the case of an underground fuel tank installed before 1 January 1994 in which the vapour return line is taken from the atmospheric vent, may have an internal diameter of less than 50% of the internal diameter of the fill pipe, if the internal diameter of that section is as large as practicable having regard to the internal diameter of the existing vent connection;
- (b) in any other case, must have an internal diameter of not less than 50% of the internal diameter of the existing vent connection.

(4) The equipment referred to in subregulation (2) may be used to serve more than one underground fuel tank on the same premises if cross contamination is not likely to adversely affect the use of the contents of any of the underground fuel tanks or the safe operation of the delivery tank.

(5) The occupier of any premises on which there is an underground fuel tank must ensure that on each opening to the underground fuel tank there is a hatch or some other form of cover that is vapour-tight when closed.

Penalty: \$200.

Requirements for loading of organic liquids into underground fuel tanks

10. A person who transfers any organic liquid from a delivery tank into an underground fuel tank must ensure that —

- (a) before the transfer takes place, a vapour return hose of vapour-tight construction is connected —
 - (i) to the appropriate vapour return hose coupling on the delivery tank (except in the case of a permanently connected hose); and
 - (ii) to the appropriate vapour return hose coupling on, or associated with, the underground fuel tank;
- (b) the vapour return hose is not disconnected while the organic liquid is being transferred into the underground fuel tank;
- (c) the liquid transfer hose is not disconnected from the underground fuel tank while the hose contains any organic liquid; and
- (d) the connection or disconnection of any hose is done in such a manner as to avoid or minimise spillage of organic liquid.

Penalty: \$200.

Hatch or manhole on delivery tank not to be opened

11. A person in charge of a delivery tank must ensure that no hatch, manhole or other cover on the delivery tank is opened if, by doing so, organic vapours are likely to be emitted to the atmosphere except —

- (a) for the purpose of dipping through a hatch or the sampling or inspection of contents when the liquid and vapour transfer valves are closed;
- (b) when loading or unloading organic liquids at any premises where vapour control equipment is not required; or
- (c) in an emergency.

Penalty: \$200.

Hatch or manhole on underground fuel tank not to be opened

12. The occupier of any premises on which there is an underground fuel tank must ensure that no hatch, manhole or other cover or opening on the underground fuel tank is opened except —

- (a) for the purpose of reasonable maintenance;
- (b) for the purpose of tank sampling or gauging through an opening designed for that purpose; or
- (c) in an emergency.

Penalty: \$200.

Record of organic liquids received

13. (1) The occupier of any premises on which there is an underground fuel tank must ensure that —

- (a) a record is made, as soon as practicable after any organic liquids are received at the premises, of the volume of liquids received and the date on which the liquids were received;
- (b) the record is kept for a minimum of 2 years after it is made; and
- (c) when required to do so by an inspector the record is produced to the inspector for inspection.

Penalty: \$200.

(2) A person must not obliterate, or make a false or misleading entry in, a record referred to in subregulation (1).

Penalty: \$200.

Exemption

14. (1) If the chief executive officer is satisfied that an underground fuel tank is fitted with vapour control equipment that is of equivalent effectiveness to the vapour control equipment required under these regulations, the chief executive officer may by instrument in writing exempt —

- (a) the occupier of the premises on which the underground fuel tank is located; or
- (b) persons loading organic liquids into the underground fuel tank,

from complying with these regulations or specified provisions of these regulations.

(2) The chief executive officer may, by further instrument in writing, vary or revoke an exemption under this regulation.

Recommended by the Environmental Protection Authority.

R. K. STEEDMAN, Chairman.

By His Excellency's Command,

M. C. WAUCHOPE, Clerk of the Council.