SEWERAGE AND DRAINAGE ACT (CHAPTER 294, SECTIONS 72 AND 74)

SEWERAGE AND DRAINAGE (TRADE EFFLUENT) REGULATIONS

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[1st April 1999]

Citation

1. These Regulations may be cited as the Sewerage and Drainage (Trade Effluent) Regulations.

Definitions

2. In these Regulations, unless the context otherwise requires —

"blood waste" includes human blood, animal blood and any fluid, matter or material which is contaminated with blood;

"grease trap" means any interceptor, arrestor, tank or pit situated above or under the ground which allows culinary wastewater to cool and the grease therein to be separated from the wastewater;

"infectious disease" means any disease —

(*a*) specified in the First Schedule to the Infectious Diseases Act (Cap. 137); or

(*b*) which is caused, or is suspected to be caused, by a micro-organism or any agent of disease and is capable of transmission by any means to human beings or animals;

"infectious waste" means any waste which contains or may produce pathogens of an infectious disease and includes —

(*a*) cultures and stocks of agents of the infectious disease from a laboratory;

(*b*) in relation to a person who has been diagnosed as having or suspected to have the infectious disease, or who has died whilst being diagnosed as having or suspected to have the infectious disease —

(i) any waste from the person or the body of the person, as the case may be;

(ii) any waste from a surgery performed on the person or autopsy performed on the body of the person, as the case may be; and

(iii) any fluid, matter or material that has come into contact with the person or the body of the person, as the case may be; and

(*c*) in relation to an animal which is inoculated with an agent of the infectious disease, or which has been diagnosed as having or suspected to have the infectious disease, or which has died whilst being diagnosed as having or suspected to have the infectious disease —

(i) any waste from the animal or the body of the animal, as the case may be;

(ii) any waste from a surgery performed on the animal or autopsy performed on the body of the animal, as the case may be; and

(iii) any fluid, matter or material that has come into contact with the animal or the body of the animal, as the case may be;

"organic sludge" means organic matter in trade effluent which has a minimum solid content of 3% by weight or a maximum moisture content of 97% by weight.

Lawful discharge into public sewer, etc.

3.—(1) The Board may, by notice in writing, require the owner of any premises to cause all trade effluent from those premises to be discharged into a public sewer in accordance with these Regulations.

(2) [*Deleted by S 46/2013 wef 01/02/2013*]

Approval for discharge into public sewer, etc.

4.—(1) An application for approval to discharge trade effluent into a public sewer or any drain-line or sewer communicating with a public sewer made pursuant to section 16(1) or 16A(1) of the Act, as the case may be, shall be in such form as the Board may require.

[S 46/2013 wef 01/02/2013]

(2) The applicant shall, in his application, furnish to the Board —

(*a*) particulars of the trade, manufacture, business or building construction carried on or to be carried on by him and in the course of which the trade effluent is wholly or partly produced or of which the trade effluent is the waste or refuse;

(*b*) details of all the processes or operations employed or to be employed by him to produce the final products of the trade, manufacture, business or building construction;

(*c*) particulars of all the raw materials and chemicals used or to be used in the processes or operations;

(*d*) details of the layout of all the machinery, plant and equipment used or to be used in the premises in which the trade, manufacture, business or building construction is being or is to be carried on, as the case may be;

(*e*) an estimate of the amount of water consumed or used or to be consumed or used in the trade, manufacture, business or building construction;

(*f*) particulars of the physical, organic and chemical nature of the trade effluent; and

(*g*) such other information relating to the trade effluent and the discharge thereof as the Board may require.

(3) The Board may, in granting any approval referred to in paragraph (1), impose such conditions as it thinks fit.

(4) Where a person has been granted any approval referred to in paragraph (1), he shall notify the Board in writing, within 14 days of any change in —

(*a*) any process or operation employed by the person in paragraph (2)(*b*); or

(*b*) the layout of the machinery, plant and equipment used by the person in paragraph (2)(*d*),

which affects the amount or the physical, organic or chemical nature of the trade effluent discharged.

(5) Any approval referred to in paragraph (1) —

(*a*) may be revoked or suspended for any period by the Board without assigning any reason; and

(*b*) shall cease to be valid when the person granted the approval fails to comply with these Regulations or any condition imposed under paragraph (3).

Pre-treatment plant, monitoring and control devices, etc.

5.—(1) Any person who discharges trade effluent into any sewerage system shall, in connection with such discharge, install such sampling test points, inspection chambers, measuring devices, and recording and other apparatuses as the Board may require.

(2) Any person who discharges trade effluent into any sewerage system shall install a pre-treatment plant if the Board so requires and shall —

(*a*) use or operate the plant to treat trade effluent before discharging the trade effluent into the sewerage system; and

(*b*) maintain the plant in an efficient condition at all times.

Installation of grease trap

6.—(1) Any person who discharges trade effluent into any sewerage system shall, in connection with the discharge, install a grease trap, as the Board may require.

(2) The person referred to in paragraph (1) shall ensure that the grease trap is maintained from time to time as the Board may, by notice in writing, require.

Particulars to be furnished

7. Any person who discharges trade effluent into a sewerage system shall, at such times as the Board may require, submit particulars of —

(*a*) the amount of water consumed or used for the purposes of any trade, manufacture, business or building construction carried on by him and in the course of which the trade effluent is wholly or partly produced or of which the trade effluent is the waste or refuse;

(*b*) the physical, organic and chemical nature of the trade effluent;

(*c*) the raw materials and chemicals used in the trade, manufacture, business or building construction and the direction of the flow of any liquid or the trade effluent from

or produced by any machinery, plant or equipment used in the trade, manufacture, business or building construction; and

(*d*) such other matters relating to the trade effluent and the discharge thereof as may be required by the Board.

Nature and type of trade effluent to be discharged

8.—(1) A person must not discharge or caused to be discharged into any public sewer any trade effluent —

(*a*) which is not of a nature or type approved by the Board;

(*b*) the temperature of which exceeds 45° Celsius at the point of its entry into the public sewer;

(*c*) the pH value of which is less than 6 or more than 9 at the point of its entry into the public sewer; or

(*d*) the caustic alkalinity of which is more than 2,000 milligrams of calcium carbonate per litre at the point of its entry into the public sewer.

(2) The Board may require any person who seeks to discharge any trade effluent into any public sewer to treat the trade effluent before discharging the trade effluent into the public sewer, and such person must comply with the requirement.

[S 73/2015 wef 13/02/2015]

Trade effluent to be free of certain substances

9. A person must not discharge or caused to be discharged any trade effluent which contains any of the following substances:

(*a*) any toxic industrial waste specified in the first column of the Schedule to the Environmental Public Health (Toxic Industrial Waste) Regulations (Cap. 95, Rg 11);

(*b*) calcium carbide;

(*c*) petroleum spirit or other inflammable substance;

(*d*) any organic compound specified in the First Schedule;

(*e*) any substance that either by itself or in combination or by reaction with other waste or refuse may give rise to any gas, fume, odour or substance which is or is likely to be a hazard to human life, a public nuisance, injurious or otherwise objectionable, or which prevents or is likely to prevent entry into the public sewer by workmen maintaining or repairing it;

(*f*) yeast, spent or unspent molasses, crude tar, tar oil, crude oil, carbon disulphide, hydro-sulphide and poly-sulphide;

(*g*) any radioactive material;

(*h*) any waste or refuse liable to form a viscous or solid coating or deposit on any part of the public sewer or sewerage system;

(*i*) any excessively discolouring substance;

(*j*) [*Deleted by S 46/2013 wef 01/02/2013*]

(*k*) any pesticide, fungicide, herbicide, insecticide, rodenticide or fumigant;

(*l*) blood waste;

(*m*) infectious waste.

[S 73/2015 wef 13/02/2015]

Maximum concentrations of certain substances

10.—(1) A person must not discharge or cause to be discharged into a public sewer any trade effluent which —

(*a*) contains any substance listed in the Second or Third Schedule in a concentration greater than that specified therein for the substance;

(*b*) has a 5-day Biochemical Oxygen Demand at 20° Celsius (referred to in this regulation and regulation 11 as BOD) greater than 400 milligrams per litre of the trade effluent;

(*c*) has a Chemical Oxygen Demand (referred to in this regulation and regulation 11 as COD) greater than 600 milligrams per litre of the trade effluent;

(*d*) has Total Suspended Solids (referred to in this regulation and regulation 11 as TSS) greater than 400 milligrams per litre of the trade effluent; or

(*e*) has Grease or Oil, which is not hydrocarbon in nature, greater than 100 milligrams per litre of the trade effluent.

[S 73/2015 wef 13/02/2015]

(2) The Board may stipulate —

(*a*) the maximum volume and quantity of a substance which may be discharged into a public sewer under this regulation; and

(*b*) the maximum rate at which the substance may be so discharged.

(3) Where the Board stipulates the maximum volume and quantity of a substance which may be discharged into a public sewer under this regulation and the maximum rate at which the substance may be so discharged, no person who has been informed by the Board by notice in writing of the volume, quantity or rate may discharge the substance into a public sewer in a volume or quantity or at a rate in excess of that so stipulated.

Permission required to discharge certain trade effluent, etc.

11.—(1) Subject to paragraph (2), any person may, notwithstanding regulation 10, with the prior permission of the Board discharge into any public sewer trade effluent containing BOD or TSS greater than 400 milligrams per litre of the trade effluent or COD greater than 600 milligrams per litre of the trade effluent.

(2) No person shall discharge into any public sewer trade effluent containing —

(*a*) BOD greater than 6,000 milligrams per litre of the trade effluent;

(*b*) TSS greater than 6,000 milligrams per litre of the trade effluent; or

(*c*) COD greater than 10,000 milligrams per litre of the trade effluent or 3 times the concentration of BOD in the trade effluent, whichever is the lower.

(3) Any person may, with the prior permission of the Board, dispose of effluent or organic sludge that is transported by vehicle to any sewage treatment works specified by the Board, upon such terms and conditions as may be agreed by the Board and such person.

[S 46/2013 wef 01/02/2013]

(4) The Board may, in granting any permission under paragraph (1) or (3), impose such conditions as it thinks fit.

[S 710/2014 wef 23/10/2014]

(5) A person who has discharged into any public sewer trade effluent containing BOD or TSS greater than 400 milligrams per litre of the trade effluent or COD greater than 600 milligrams per litre of the trade effluent, shall pay to the Board a fee for the disposal of the trade effluent (including any treatment necessary or incidental thereto), in accordance with a bill issued by the Board for such payment.

[S 710/2014 wef 23/10/2014]

(6) Subject to paragraph (7), the fee mentioned in paragraph (5) for a bill issued on or after 1 January 2024 must be calculated in accordance with the scale set out in the Fourth Schedule.

[S 911/2023 wef 01/01/2024]

(7) For the purpose of paragraph (6), any fraction of a dollar of a fee calculated pursuant to that paragraph is to be ignored.

[S 919/2021 wef 01/01/2022]

Permission required to discharge trade effluent containing trace amounts of certain substances

11A.—(1) Subject to paragraph (2), any person may, notwithstanding regulation 9, with the prior permission of the Board, discharge into any public sewer trade effluent containing trace amounts of any substance specified in regulation 9.

(2) The Board may refuse or revoke any permission under paragraph (1) if the Board considers that the discharge is likely to

be a hazard to the safety or health of any person at work in the public sewer or the sewerage system to which the public sewer is connected, or interfere with —

(*a*) the proper working of a sewerage system to which the public sewer is connected, or any facility, machinery or equipment related or connected to the sewerage system;

(*b*) the proper working of any facility, machinery or equipment which treats sewage from the public sewer for reuse;

(*c*) any process of treating trade effluent or other waste or refuse from the public sewer; or

(*d*) any process of treating sewage from the public sewer for reuse.

[S 30/2008 wef 01/02/2008]

Method of analysis and collection of samples

12.—(1) For the purposes of these Regulations, trade effluent discharged into a public sewer or any drain-line or sewer to which the public sewer is connected shall be analysed in accordance with the latest edition of "Standard Methods for the Examination of Water and Wastewater" published jointly by the American Public Health Association, the American Water Works Association and the Water Environment Federation of the United States, as amended from time to time, or in accordance with such other method of analysis as the Board thinks fit.

(2) Trade effluent samples required by the Board shall be collected from any sampling test point or inspection chamber installed under regulation 5(1), or any drain-line or sewer to which a public sewer is connected, as determined by the Board.

Payment of fees

13.—(1) The fees payable under regulation 11(5) are inclusive of the goods and services tax chargeable under the Goods and Services Tax Act (Cap. 117A) on the services in respect of which such fees are payable.

[S 46/2013 wef 01/02/2013]

(2) The fees payable under these Regulations shall be paid to the Board by interbank GIRO or such other means as the Board may from time to time specify.

Late payment of fees

13A.—(1) Where —

(*a*) a person who is liable to pay any specified fee fails to pay the whole or any part of the fee in accordance with a bill issued to him; and

(*b*) the whole or any part of the specified fee remains unpaid immediately prior to the issue to him of the next bill,

that next bill shall include, and the person shall be liable to pay, a late payment charge of 1% of the amount remaining unpaid.

(2) In this regulation, "specified fee" means —

(*a*) any fee referred to in regulation 11(5);

(*b*) any late payment fee to which section 35 of the Sewerage and Drainage (Amendment) Act 2012 (Act 10 of 2012) applies in relation to the fee imposed under regulation 11(5) in operation immediately before 1st February 2013; or

(*c*) any late payment charge imposed pursuant to this regulation.

[S 46/2013 wef 01/02/2013]

Offences

14.—(1) Any person who contravenes regulation 5, 6, 7 or 10(1)(*e*) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding $5,000 and, in the case of a continuing offence, to a further fine not exceeding $500 for every day or part thereof during which the offence continues after conviction.

(2) Any person who contravenes regulation 8(1), 9, 10(1)(*a*), (*b*), (*c*) or (*d*) or 11(2) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding $15,000 or to imprisonment for a term not exceeding 3 months or to both and, in the case of a

continuing offence, to a further fine not exceeding $500 for every day or part thereof during which the offence continues after conviction.

[S 73/2015 wef 13/02/2015]

FIRST SCHEDULE

Regulation 9(*d*)

LIST OF PROHIBITED ORGANIC COMPOUNDS

(1) Methylene Chloride

(2) Trichloroethylene

(3) 111-trichloroethane

(4) *Deleted by S 30/2008, wef 01/02/2008.*

(5) Tetra-chloromethane

(6) 112-Trichloroethane

(7) Toluene

(8) Styrene

(9) Methyl tert-butyl-ether

(10) *Deleted by S 30/2008, wef 01/02/2008.*

(11) Nonane

(12) Decane

(13) Tetrachloroethylene

(14) Ethylbenzene

(15) Xylene (o, m, p)

(16) *Deleted by S 30/2008, wef 01/02/2008.*

(17) Hexane

(18) Heptane

(19) Octane

(20) 1,2,4-Trimethylbenzene

(21) *Deleted by S 30/2008, wef 01/02/2008.*

(22) Furan

(23) THF (Tetrahydrofuran)

(24) DMF (N, N-Dimethylformamide)

FIRST SCHEDULE — *continued*

(25) Benzene

(26) Turpentine

(27) *Deleted by S 30/2008, wef 01/02/2008.*

(28) Polybrominated Diphenyl Ether

(29) Isobutanol

(30) Methyl Ethyl Ketone

(31) Methyl Isobutyl Ketone

(32) Isopropyl ether

(33) Diethyl ether

(34) Dimethyl Sulphide

(35) Dimethyl Sulphoxide

SECOND SCHEDULE

Regulation 10(1)(*a*)

MAXIMUM CONCENTRATIONS OF CERTAIN SUBSTANCES IN TRADE EFFLUENT

	Limit in milligrams per litre of trade effluent
(1) Total Suspended Solids	400
(2) Total Dissolved Solids	3,000
(3) Chloride (as chloride ion)	1,000
(4) Sulphate (as SO_4)	1,000
(5) Sulphide (as sulphur)	1
(6) Cyanide (as CN)	2
(7) Detergents (linear alkylate sulphonate as methylene blue active substances)	30
(8) Grease and Oil (Hydrocarbon)	60
(9) [*Deleted by S 73/2015 wef 13/02/2015*]	
(10) Arsenic	5
(11) Barium	10

SECOND SCHEDULE — *continued*

(12) Tin	10
(13) Iron (as Fe)	50
(14) Beryllium	5
(15) Boron	5
(16) Manganese	10
(17) Phenolic Compounds (expressed as phenol)	0.5
(18) Fluoride (expressed as fluoride ion)	15

[S 73/2015 wef 13/02/2015]

THIRD SCHEDULE

Regulation 10(1)(*a*)

MAXIMUM CONCENTRATIONS OF METALS IN TRADE EFFLUENT

	Limit in milligrams per litre of trade effluent
(1) Cadmium	1
(2) Chromium (trivalent and hexavalent)	5
(3) Copper	5
(4) Lead	5
(5) Mercury	0.5
(6) Nickel	10
(7) Selenium	10
(8) Silver	5
(9) Zinc	10

Note: Where 2 or more of the metals listed in the table are present in the trade effluent, the total concentration of the metals shall not exceed 10 milligrams per litre.

FOURTH SCHEDULE

Regulation 11(6)

SCALE OF FEES

Concentration of BOD or TSS in milligrams per litre of trade effluent	*Fee for Biochemical Oxygen Demand (Cents per cubic metre or part of a cubic metre)*	*Fee for Total Suspended Solids (Cents per cubic metre or part of a cubic metre)*
1. Exceeding 400 but not exceeding 600	38.15	38.15
2. Exceeding 600 but not exceeding 800	76.30	76.30
3. Exceeding 800 but not exceeding 1,000	114.45	114.45
4. Exceeding 1,000 but not exceeding 1,200	152.60	152.60
5. Exceeding 1,200 but not exceeding 1,400	190.75	190.75
6. Exceeding 1,400 but not exceeding 1,600	228.90	228.90
7. Exceeding 1,600 but not exceeding 1,800	267.05	267.05
8. Exceeding 1,800 but not exceeding 2,000	305.20	305.20
9. Exceeding 2,000 but not exceeding 2,200	343.35	343.35
10. Exceeding 2,200 but not exceeding 2,400	381.50	381.50
11. Exceeding 2,400 but not exceeding 2,600	419.65	419.65
12. Exceeding 2,600 but not exceeding 2,800	457.80	457.80
13. Exceeding 2,800 but not exceeding 3,000	495.95	495.95
14. Exceeding 3,000 but not exceeding 3,200	534.10	534.10

FOURTH SCHEDULE — *continued*

Concentration of BOD or TSS in milligrams per litre of trade effluent	*Fee for Biochemical Oxygen Demand (Cents per cubic metre or part of a cubic metre)*	*Fee for Total Suspended Solids (Cents per cubic metre or part of a cubic metre)*
15. Exceeding 3,200 but not exceeding 3,400	572.25	572.25
16. Exceeding 3,400 but not exceeding 3,600	610.40	610.40
17. Exceeding 3,600 but not exceeding 3,800	648.55	648.55
18. Exceeding 3,800 but not exceeding 4,000	686.70	686.70
19. Exceeding 4,000 but not exceeding 4,200	724.85	724.85
20. Exceeding 4,200 but not exceeding 4,400	763	763
21. Exceeding 4,400 but not exceeding 4,600	801.15	801.15
22. Exceeding 4,600 but not exceeding 4,800	839.30	839.30
23. Exceeding 4,800 but not exceeding 5,000	877.45	877.45
24. Exceeding 5,000 but not exceeding 5,200	915.60	915.60
25. Exceeding 5,200 but not exceeding 5,400	953.75	953.75
26. Exceeding 5,400 but not exceeding 5,600	991.90	991.90
27. Exceeding 5,600 but not exceeding 5,800	1030.05	1030.05
28. Exceeding 5,800 but not exceeding 6,000	1068.20	1068.20

[S 911/2023 wef 01/01/2024]

FIFTH SCHEDULE

[*Deleted by S 911/2023 wef 01/01/2024*]

LEGISLATIVE HISTORY

SEWERAGE AND DRAINAGE (TRADE EFFLUENT) REGULATIONS (CHAPTER 294, RG 5)

This Legislative History is provided for the convenience of users of the Sewerage and Drainage (Trade Effluent) Regulations. It is not part of these Regulations.

1. **G. N. No. S 170/1999 — Sewerage and Drainage (Trade Effluent) Regulations 1999**

   Date of commencement : 1 April 1999

2. **G. N. No. S 133/2000 — Sewerage and Drainage (Trade Effluent) (Amendment) Regulations 2000**

   Date of commencement : 1 April 2000

3. **2001 Revised Edition — Sewerage and Drainage (Trade Effluent) Regulations**

   Date of operation : 31 January 2001

4. **G. N. No. S 159/2001 — Sewerage and Drainage (Trade Effluent) (Amendment) Regulations 2001**

   Date of commencement : 1 April 2001

5. **G. N. No. S 163/2002 — Sewerage and Drainage (Trade Effluent) (Amendment) Regulations 2002**

   Date of commencement : 1 May 2002

6. **G. N. No. S 444/2006 — Sewerage and Drainage (Trade Effluent) (Amendment) Regulations 2006**

   Date of commencement : 1 August 2006

7. **2007 Revised Edition — Sewerage and Drainage (Trade Effluent) Regulations**

   Date of operation : 15 May 2007

8. **G. N. No. S 30/2008 — Sewerage and Drainage (Trade Effluent) (Amendment) Regulations 2008**

   Date of commencement : 1 February 2008

9. **G.N. No. S 46/2013 — Sewerage and Drainage (Trade Effluent) (Amendment) Regulations 2013**

   Date of commencement : 1 February 2013

10. G.N. No. S 710/2014 — Sewerage and Drainage (Trade Effluent) (Amendment) Regulations 2014

Date of commencement : 23 October 2014

11. G.N. No. S 73/2015 — Sewerage and Drainage (Trade Effluent) (Amendment) Regulations 2015

Date of commencement : 13 February 2015

12. G.N. No. S 590/2015 — Sewerage and Drainage (Trade Effluent) (Amendment No. 2) Regulations 2015

Date of commencement : 23 October 2015

13. G.N. No. S 483/2016 — Sewerage and Drainage (Trade Effluent) (Amendment) Regulations 2016

Date of commencement : 23 October 2016

14. G.N. No. S 919/2021 — Sewerage and Drainage (Trade Effluent) (Amendment) Regulations 2021

Date of commencement : 1 January 2022

15. G.N. No. S 911/2023 — Sewerage and Drainage (Trade Effluent) (Amendment) Regulations 2023

Date of commencement : 1 January 2024