

**CHAPTER 328**

**ENVIRONMENTAL PROTECTION**  
**(EFFLUENT LIMITATIONS) REGULATIONS**

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**CHAPTER 328**

94 of 1995.  
Act 22 of 1992.

**ENVIRONMENTAL PROTECTION**  
**(EFFLUENT LIMITATIONS) REGULATIONS**

*(Section 45)*

*[26th August, 1995.]*

**PART I**  
**PRELIMINARY**

- Short title. 1. These Regulations may be cited as the
- ENVIRONMENTAL PROTECTION  
(EFFLUENT LIMITATIONS) REGULATIONS.**
- Interpretation. 2. In these Regulations, unless the context otherwise requires:
- CAP. 328. “the Act” means the Environmental Protection Act;
- “Department” means the Department of the Environment established under section 3 of the Act;
- “effluent” means sewage or industrial effluent;
- “industrial effluent” means liquid water or waste water produced by reasons of the process taking place at any industrial or commercial premises;
- “inland waters” includes any reservoir, pond, lake, river, stream, canal, drain, spring or well, any part of the sea abutting on the foreshore, and any other body of natural or artificial surface or subsurface water;
- “licence” means a licence granted to a person under these Regulations;

“licensed premises” means premises occupied by a person who is the holder of a licence issued in respect of the premises under these Regulations;

“parameter” means any of the factors shown in the first column of the First Schedule or of the Second Schedule and any other factors which may be prescribed. First Schedule.  
Second Schedule.

“sewage” means any liquid waste or waste water discharge containing human, animal or vegetable matter in suspension or solution, and may include liquids containing chemicals in solution;

“sewer” means any line of pipes or channel with their appurtenances designed and used to convey effluent;

“sewerage system” means a system incorporating sewers and all other structures, devices, equipment, and appurtenances intended for the collection, transportation, and pumping of effluent including a treatment plant;

“treatment plant” means any facility for the conditioning of effluent to effect reduction or partial reduction of its potential to cause pollution;

3. These Regulations shall apply to discharges of effluent into any inland waters or the marine environment, other than the effluents discharged from premises specified in the Third Schedule. Application.  
Third Schedule.

4. (1) The Minister may by order require that every industry shall install antipollution equipment for the detoxification of effluent and chemical discharges emanating from the industry. Installation of  
antipollution  
equipment.

(2) An installation made pursuant to paragraph (1) of this Regulation shall be based on the Best Practical Technology.

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|---|---|
| Parameter.<br>First Schedule.<br>Second Schedule. | 5. No person shall cause or permit any effluent to be discharged from any industry specified in the First or the Second Schedule in respect of which he is the owner or operator in quantities or concentration higher than those specified in the said Schedules.  |
| Treatment of effluent.                            | 6. (1) Every industry which discharges effluent shall ensure that such effluent can be assimilated by the receiving water into which the effluent is discharged.<br><br>(2) The Department shall be furnished from time to time with the composition of any effluent treated as specified in paragraph (1) of this Regulation.  |
| Operation and maintenance of sewerage systems.    | 7. (1) All sewers and sewerage systems shall be maintained in a good working order and sanitary manner to the satisfaction of the Department.<br><br>(2) The owner of any sewerage system shall keep daily, weekly, and additional records in such forms as may be specified by the Chief Environmental Officer, of the operation and maintenance of the sewage purification plant and all such records shall be open for inspection by the officers of the Department. |

**PART II**  
**NEW SOURCES OF DISCHARGE**

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| Prohibition against new and altered sources of effluent discharge. | 8. Notwithstanding any other provisions of these Regulations, no person shall without prior written permission of the Department carry out any work on any premises that may result in a new source of effluent discharge or cause a material change in the quantity or quality of the discharge from an existing source. |
| Requirement and approval of plans.                                 | 9. (1) An application to carry out any work, building, erection or alteration specified in Regulation 8 shall be submitted to the Chief Environmental Officer in the prescribed form and shall be accompanied by the fee prescribed   |

under Regulation 24.

(2) The Chief Environmental Officer may grant such application either subject to conditions or unconditionally and may require the applicant:

- (a) to repair, alter, replace or install control equipment;
- (b) to conduct a monitoring programme at his own expense or bear the cost of such programme within such period or at such time and in such manner as the Chief Environmental Officer may specify.

**PART III**

**ACCEPTABLE CONDITIONS OF DISCHARGE**

10. No person shall discharge or cause or permit the discharge of any of the following substances into any inland waters or into the marine environment:

Prohibition of discharge of effluent containing certain substances.

- (a) any inflammable liquid;
- (b) any tar or other related liquids;

11. For the purposes of these Regulations, the effluent discharged into any inland waters shall be analysed in accordance with the latest edition of the methods specified in the Fourth Schedule, as amended from time to time, or in accordance with such other methods of analysis as may be prescribed.

Standard methods of analysis of effluents. Fourth Schedule.

**PART IV**

**DISCHARGE OF EFFLUENT AND SLUDGE ONTO LAND**

12. No person shall discharge or cause or permit the discharge of any effluent in or on any soil or surface of any land without the prior written permission of the Department.

Restrictions on the discharge of effluent.

Restrictions on the disposal of sludge.

13. No person shall discharge or cause or permit the discharge of any solid waste or sludge that is generated from any production or manufacturing processes or from any effluent treatment plant in or on any soil or surface of any land without the prior written permission of the Department.

**PART V**  
**LICENCE TO DISCHARGE EFFLUENTS**

Licence for the discharge of effluents, etc.

14. (1) Subject to Regulation 5, no person shall:
- (a) discharge on or cause or permit the entry into waters, on the ground or into the ground, of any effluent or any poisonous, noxious or polluting matter; or
- (b) construct, reconstruct or alter any works for the discharge of any effluent or any poisonous, noxious or polluting matter,

except under and in accordance with a licence for the purpose granted by the Department under these Regulations.

(2) Every application to discharge effluents shall be in the form set out in the Fifth Schedule and an applicant for a licence shall pay to the Department the fee prescribed by Regulation 25. The licence shall be in the form specified in the Fifth Schedule and shall be valid for a period of twelve months from the date of issue.

(3) A licence shall not be required if the discharge results from domestic waste effected by means of absorption or soak-away pits or other prescribed waste disposal system and is in accordance with such provisions as may be prescribed by or under these Regulations or any other law in force pertaining to such disposal.

(4) Any person who contravenes the provisions of sub-section (1) shall be guilty of an offence and shall be liable on summary conviction to a fine not exceeding five hundred dollars or to imprisonment for a term not exceeding six months or to both such fine and imprisonment.

15. (1) The Department may by notice in writing require the owner or operator of any sewage treatment plant, industrial waste treatment facility or any facility for the disposal of solid waste or any other facility for controlling pollution, to submit to the Department at such intervals as the Chief Environmental Officer may specify in the notice, information relating to all or any of the following:

Notice to supply information.

- (a) the performance of the facility;
- (b) the quality of the effluent discharged;
- (c) the area affected by the discharge of effluents;
- (d) the steps being taken to abate or control pollution;

and such owner or operator as aforesaid shall comply with the requirements of the notice.

(2) Any person who refuses or fails to comply with the requirements of a notice under sub-regulation (1) shall be guilty of an offence and shall be liable on summary conviction to a fine not exceeding five hundred dollars or to imprisonment for a term not exceeding six months or to both such fine and imprisonment.

16. Where due to accident or any unforeseen event in any industry, any poisonous, noxious or polluting matter is discharged or likely to be discharged into any inland waters the owner or operator of any such industry shall promptly notify the Department of any such occurrence.

Furnishing information in certain cases.

- Reporting changes in information furnished for purposes of application. 17. An applicant for a licence or for the renewal or transfer of a licence shall, within seven days of the occurrence of any material change in any information furnished in his application or furnished in writing pursuant to a request by the Chief Environmental Officer, give the Department a report in writing of the change.
- Making changes that alter quality of effluent. 18. (1) The holder of a licence shall not make, or cause or permit to be made, any material change to the premises or in the matter of running, using, maintaining or operating the premises or in any operation or process carried on at the premises, which change causes, or is intended or is likely to cause, a material increase in the quantity or quality of effluent or both discharged from the premises, unless prior written approval of the Department has been obtained for the change.
- (2) For the purposes of paragraph (1), material changes to licensed premises include:
- (a) any change in the construction, structure, or arrangement of the premises or any building serving the premises;
  - (b) any change in the construction, structure, arrangement, alignment, direction, or condition of any sewer or sewerage system;
  - (c) any change of, to, or in any plant, machine, or equipment used or installed at the premises; and
  - (d) any changes in the use of raw materials.
- Display of licence. 19. The holder of a licence shall display his licence in a conspicuous position in the principal building of the premises.

20. Where a person becomes the occupier of licensed premises in succession to another person who holds an unexpired licence in respect of the premises, then the conditions and restrictions of the licence shall be binding on the new occupier and shall be observed by him, notwithstanding that he is not yet the holder of the licence.

Continuance of existing conditions and restrictions in case of change of occupancy.

**PART VI**  
**MISCELLANEOUS**

21. (1) The point or points of discharge of effluent shall be approved by the Department.

Point of discharge.

(2) The position and design of the outlet at the point or points of discharge of effluent into any inland waters or onto any land as determined in sub-regulation (1) shall not be altered or changed without the prior written approval of the Department.

(3) Wherever the concentration of any parameter of effluent discharged or to be discharged is mentioned in these Regulations, the reference, unless the context otherwise requires, is to the concentration as at the point of discharge approved in paragraph (1).

22. A person who discharges effluent into any inland waters, the marine environment or onto any land shall, in connection with such discharge, install such sampling test point or points inspection chambers, flowmeters, and recording and other apparatus as may, from time to time, be prescribed.

Provisions for inspection.

23. An occupier of any premises shall provide the Chief Environmental Officer or any other officer duly authorized in writing by him every reasonable assistance or facility available at the premises that he may require for the purpose of taking action that he is empowered by the Act or these Regulations to take in respect of the premises.

Occupier to render assistance during inspections.

**PART VII**  
**FEES**

- Fee for written permission. 24. The fee for a written permission under Regulation 8 is ten dollars.
- Fee for licence including renewal of licence. 25. (1) The annual fee for a licence issued under Regulation 14 is three hundred dollars.
- (2) The fee of three hundred dollars shall accompany the application under Regulation 14 (2) and shall not be refundable.
- Fee for transfer of licence. 26. The fee for a transfer of licence is three hundred dollars.

**PART VIII**  
**PENALTIES**

- Offences and penalties. 27. (1) Any person who contravenes the provisions of these Regulations, shall be guilty of an offence and shall be liable on summary conviction to a fine not exceeding five hundred dollars or to imprisonment for a term not exceeding six months or both such fine and imprisonment.
- (2) No prosecution for an offence under these Regulations shall be instituted except with the leave of the Department or of the Director of Public Prosecutions, as provided in section 41 of the Act.

**MADE** by the Minister responsible for the Environment this 11th day of August, 1995.

**(HENRY YOUNG)**  
*Minister of Tourism and the Environment*

**FIRST SCHEDULE****[Regulations 2 and 5]****EFFLUENT LIMITATIONS  
FOR PLASTIC AND SYNTHETICS**

<b><u>Effluent</u></b>	<b><u>Effluent Standards</u></b>
BOD <sub>5</sub>	10
Total Suspended Solids (TSS)	30
COD	40
Phenolics Less Than	0.50
Zinc Less Than	1.0
Chromium Less Than	0.10
Oil and Grease	10.0
Fluoride (F-) Less Than	1.0
Copper (CU <sup>2+</sup> ) Less Than	0.05

**FOOD PROCESSING**

<b><u>Effluent</u></b>	<b><u>Effluent Standards</u></b>
BOD <sub>5</sub>	15
Oil and Grease	15
Suspended Solids	15
Particulate	100

**SERVICE INDUSTRIES**

<b><u>Effluent</u></b>	<b><u>Effluent Standards</u></b>
BOD <sub>5</sub>	15
Oil and Grease	10

COD	40
Lead Less Than	1
Total Chromium Less Than	0.3
Zinc (ZN) Less Than	0.1

**GARMENT INDUSTRY****Effluent****Effluent Standards**

Waste Water VOL (mgd)	.035
W.W. CONCEN. (mg/l BOD)	50
W.W. LOAD (lb BOD/day)	39
BOD Reduction	303:1
TSS CONCEN (mg/l)	100 <sup>1</sup>
TSS Reduction	
Temp (°C)	40
pH	6-9
NO <sub>3</sub> (mg/l)	10
PO <sub>4</sub> (mg/l)	5
SO <sub>4</sub>	200
COD	100

**CITRUS INDUSTRY****Effluent****Effluent Standards**

Waste Water Vol (mgd)	0.04
W.W. Concn. (mg/l BOD)	50
W.W. Load (lb BOD/day)	26.7
BOD Reduction	2300:1
TSS Concn. (mg/l)	50
TSS Reduction	1176:1

Temp (°C)	40
pH	6-9
NO <sub>3</sub> (mg/l)	10
PO <sub>4</sub> (mg/l)	5
SO <sub>4</sub> (mg/l)	200
COD	100

### **BATTERY MANUFACTURING**

#### **Effluent**

#### **Effluent Standards**

BOD Concn. (mg/l)	30
TSS Concn. (mg/l)	30
Temp. (°C)	40
pH	7.6-10
NO <sub>3</sub> (mg/l)	10
PO <sub>4</sub> (mg/l)	5
SO <sub>4</sub> (mg/l)	400
Pb (mg/l)	0.1
Fe (mg/l)	20
Cu (mg/l)	0.1
Pb Reduction	10.1
COD	100

### **FISH PROCESSING**

#### **Effluent**

#### **Effluent Standards**

Waste Water Vol (mgd)	
W.W. Concn. (mg/l BOD)	100
W.W. Load (lb BOD/day)	
BOD Reduction	
TSS Concn. (mg/l)	100
TSS Reduction	

TEMP (°C)	40
pH	6-9
NO <sub>3</sub> (mg/l)	10
PO <sub>4</sub> (mg/l)	30
SO <sub>4</sub> (mg/l)	200
COD	100

**POULTRY INDUSTRY****Effluent****Effluent Standards**

Waste Water Vol (mgd)	0.4
W.W. Concn. (mg/l BOD)	50
W.W. Load (lb BOD/DAY)	18.75
BOD Reduction	2000:1
TSS Concn. (mg/l)	50
TSS Load (tons)	1500:1
Temp (°C)	40
pH	6-9
NO <sub>3</sub> (mg/l)	10.0
PO <sub>4</sub> (mg/l)	5.0
SO <sub>4</sub> (mg/l)	200
COD	100

**DIARY INDUSTRY****Effluent****Effluent Standards**

Waste Water Vol (mgd)	.0005
W.W. Concn. (mg/l BOD)	50
W.W. Load (lb BOD/day)	1.3
BOD Reduction	500:1
TSS Concn. (mg/l)	
TSS Reduction	

Temp (°C)	40
pH	6-9
NO <sub>3</sub> (mg/l)	30
PO <sub>4</sub> (mg/l)	5
SO <sub>4</sub> (mg/l)	200
COD	100

### **RUM REFINERY INDUSTRY**

#### **Effluent**

#### **Effluent Standards**

Waste Water Vol (mgd)	0.03
W.W. Concn. (mg/l BOD)	50
W.W. Load (lb BOD/day)	
BOD Reduction	
TSS Concn. (mg/l)	60
TSS Reduction	
Temp (°C)	40
pH	6-9
NO <sub>3</sub> (mg/l)	10
PO <sub>4</sub> (mg/l)	1
SO <sub>4</sub> (mg/l)	500
COD	200

### **BREWERY INDUSTRY**

#### **Effluent**

#### **Effluent Standards**

Waste Water Vol (mgd)	.015
W.W. Concn. (mg/l BOD)	35
W.W. Load (lb BOD/day)	35
BOD Reduction	175.1
TSS Concn. (mg/l)	50
Temp (°C)	40

pH	6-9
NO <sub>3</sub> (mg/l)	10.0
PO <sub>4</sub> (mg/l)	5.0
SO <sub>4</sub> (mg/l)	200
COD	200

**SUGAR PROCESSING****Effluent****Effluent Standards**

Waste Water Vol (mgd)	25.97
W.W. Concn. (mg/l BOD)	50
W.W. Load (lb BOD/day)	7840
BOD Reduction	1000:1
TSS Concn. (mg/l)	50
TSS Reduction	1500:1
Temp (°C)	40
pH	6-9
NO <sub>4</sub> (mg/l)	10
PO <sub>4</sub> (mg/l)	5
SO <sub>4</sub> (mg/l)	200
COD	200

**SHRIMP PROCESSING****Effluent****Effluent Standards**

Waste Water Vol (mgd)	
W.W. Concn. (mg/l BOD)	30
W.W. Load (lb. BOD/day)	
BOD Reduction	
TSS Concn. (mg/l)	
Temp (°C)	40
pH	6-9

NO <sub>3</sub> (mg/l)	10.0
PO <sub>4</sub> (mg/l)	1.0
SO <sub>4</sub> (mg/l)	200
COD	200

**SECOND SCHEDULE****[Regulations 2 and 5]****EFFLUENT LIMITATIONS FOR OTHER INDUSTRIES  
OR COMMERCIAL ACTIVITIES****Parameter**

Temperature °C	33
Colour (LU)	7
pH	6-9
Do	5
BOD <sub>5</sub> at 20 °C	50
COD	100
TSS	50
TDS	2000
Chloride (as Cl <sup>-</sup> )	600
Sulphate (as SO <sup>-4</sup> )	500
Sulphide (as S)	0.2
Cyanide (as CN <sup>-</sup> )	0.1
Detergent (LAS as Methyl Blue active substances)	15
Oil and Grease	10
Arsenic	1
Barium	5
Tin	10
Iron	20
Beryllium	0.5
Boron	5
Manganese	5
Phenolic Compounds (as Phenol)	0.2
Cadmium**	0.1
Chromium**(Trivalent & Hexavalent)	1
Copper**	1

**Parameter**

Lead**	0.1
Mercury**	0.05
Nickel**	1
Selenium**	0.5
Silver*	0.1
Zinc**	1
Total Metals**	2.0
Chlorine	1
Phosphate as (PO <sub>4</sub> <sup>-</sup> )	5
Calcium	200
Magnesium	200
Nitrate as (NO <sub>3</sub> <sup>-</sup> )	3
Total Coliform	0 - 10 MPN/100 ml
Faecal Coliform	0 MPN/100 ml
Fluoride	5
Ammonia (NH <sub>4</sub> <sup>+</sup> )	1
Total Organic Carbon	200

\*\* The concentration of toxic metal should not exceed these limits, individually or in total.

**THIRD SCHEDULE****[Regulation 3]****LIST OF DISCHARGES TO WHICH THESE REGULATIONS  
DO NOT APPLY**

Subject to the provisions of Regulation 6, these Regulations shall not apply to discharges of effluent into any inland waters from any housing development of less than 5 units.

**FOURTH SCHEDULE****[Regulation 11]****STANDARDS METHODS OF ANALYSIS OF EFFLUENT**

1. “Standard Methods of the Examination of Water and Waste water” published jointly by the American Public Health Association, the American Water Works Association and the Water Environment Federation of the United States.

**FIFTH SCHEDULE**

**[Regulation 14 (2)]**

**FORM A**

**ENVIRONMENTAL PROTECTION ACT**

**Application to Discharge Effluents**

- 1. Name of Applicant .....
- .....
- 2. Year of Incorporation and Registration Number of Business Name .....
- .....
- 3. Location of Business Premises .....
- .....
- 4. Description of plant facilities, out-fall location(s), Effluent Characteristic(s) .....
- .....
- .....
- .....
- .....
- .....

- 5. A listing of all toxic substances used or manufactured on the site .....  
.....  
.....  
.....
- 6. Does the establishment have any other permit issued to the facility? (State type): .....  
.....  
.....
- 7. Description of pollution abatement/monitoring facilities on site (including details of year of installation, capacity, etc., and also copies of design plans and sewerage and/or drainage plans .....  
.....  
.....  
.....
- 8. A listing of all chemicals in use at the facility (trade names not acceptable): .....  
.....  
.....  
.....
- 9. Present discharge (youthful) locations (illustrate) and position of inspection tap for

compliance monitoring .....

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10. Volume of raw water consumption .....

11. Source of energy at facility and quantitative estimate of consumption on a monthly basis

.....

.....

.....

12. Production capacity:

(a) current production capacity .....

(b) estimated production capacity as a result of any proposed expansion .....

.....

(c) estimated waste load (lbs., BOB, metals, etc., per year) .....

.....

\_\_\_\_\_  
Date

\_\_\_\_\_  
Applicant

**FORM B**

**ENVIRONMENTAL PROTECTION ACT**

**LICENCE TO DISCHARGE EFFLUENT**

The Department of the Environment hereby grants a licence to discharge effluents pursuant to an application for registration dated ..... day of ..... 2..... in respect of the following:

Full Name and Address of Licence Holder .....  
.....  
.....

Location of site to which Licence relates .....  
.....  
.....

Mode of Discharge of Disposal to which this Permit relates .....

Type/Volume/Quality of Waste/Wastes/Waste stream of which discharge or disposal is authorized  
.....  
.....

This Permit is granted subject to the following conditions: .....  
.....  
.....

\_\_\_\_\_  
Date

\_\_\_\_\_  
Chief Environmental Officer