

MANGAUNG LOCAL MUNICIPALITY

BY-LAWS RELATING TO THE DISCHARGE OF INDUSTRIAL EFFLUENT

as promulgated by Local Government Notice
No 60 of 26 September 2008

BY-LAWS REGARDING THE DISCHARGE OF INDUSTRIAL EFFLUENT

To provide for the regulation and management of the discharge of industrial effluent, and to provide for matters in connection therewith

Preamble

WHEREAS the Constitution established local government as a distinctive sphere of government, interdependent, and interrelated with the national and provincial spheres of government; and

WHEREAS there is agreement on the fundamental importance of local government to democracy, development and nation-building in our country; and

WHEREAS there is fundamental agreement in our country on a vision of democratic, accountable and developmental local government, in which municipalities must strive within its financial and administrative capacity, to achieve their constitutional objectives by ensuring the provision of sustainable, effective and efficient municipal services to communities, by promoting social and economic development, by promoting a safe and healthy environment, and by encouraging the involvement of communities in the matters of local government; and

WHEREAS the Constitution authorizes and empowers municipalities to administer the local government matters listed in Part B of Schedules 4 and 5, which include industrial effluent and any other matter assigned to it by national or provincial legislation, by making and administering by-laws for the effective administration of these matters;

BE IT THEREFORE ENACTED by the Municipal Council of the **MANGAUNG** Local Municipality as follows:-

TABLE OF CONTENT

CHAPTER 1 INTERPRETATION

1. Definitions

CHAPTER 2 INDUSTRIAL EFFLUENT

1. Definitions
2. Permission to Discharge Industrial Effluent
3. Control of Industrial Effluent
4. Metering and Assessment of Industrial Effluent
5. Prohibited Discharges

CHAPTER 3 POWERS OF OFFICIALS AND SERVICE OF DOCUMENT

6. Delegation of Powers
7. Entering of Premises

8. Obstruction of Officials and Employees in the Performance of their duties
9. Service of Notice, Order or Other Document

CHAPTER 4 MISCELLANEOUS

10. Offences and Penalties
11. Repeal
12. Short title and commencement

CHAPTER 1 INTERPRETATION

1. Definitions

- (1) In these by-laws, unless the context indicates otherwise -

"Council" means the municipal council of the Mangaung Local Municipality in which the executive and legislative authority of the municipality is vested, and which is the decision making body of the municipality, and its delegates;

"drain" means that portion of a drainage installation system which conveys sewerage from a building to a communal drain or any other sewerage disposal system which is situated on the premises concerned or to a sewer;

"drainage installation" means an installation which is situated on the premises and which is intended for catchment, conveyance, storage or treatment of sewerage; including sanitary appliances, drains, septic tanks, sewerage treatment works or matching mechanical appliances;

"employee" means a person who is either permanently or temporarily employed by the Council;

"industrial effluent" means any liquid, whether or not containing matter in suspension, which is given off in the course of or as a result of any trade or industrial process;

A municipality means the Mangaung Local Municipality and its legal successors, and when referred to as -

- (i) a legal entity, means Mangaung Local Municipality as described in section 2 of the Local Government: Municipal Systems Act, 2000 (Act No. 32 of 2000); and
- (ii) a geographic area, means the municipal area of the Mangaung Local Municipality as determined from time to time in terms of the Local Government : Municipal Demarcation Act, 1998 (Act No 27 of 1998);

"occupier" means any person actually in possession or in occupation of a property, without taking into account the right of occupation of such person, and in the case of premises which are subdivided and let to boarders and tenants, includes the person who is lawfully entitled to the rent payable by such boarders and tenants;

"owner", in relation to a building, construction work or land, means:

- (i) the person in whose name the right of ownership of the building, construction work or land is registered, or
- (ii) in the event of such person being deceased, declared insolvent, mentally deranged or defective, a minor or incapable of entering into a contract, the person to whom the administration and control of such person's estate has been given, either as executor, guardian or in any other capacity, or
- (iii) the representative of such person properly authorized thereto by means of power of attorney, or
- (iv) if the property is subject to a hire purchase agreement the registration of which is required by law, the tenant, or
- (v) any person who receives rent or is entitled to receive rent for and on behalf of the owner of such property;

“person” includes, but is not limited to an owner or occupier of property, or an employee, agent or contractor of such owner or occupier;

"premises" means any building, room, apartment, hut, shed, tent or any other structure above, on or below ground level, together with the land on which it is situated and the adjacent land used jointly therewith or any land without buildings;

"sewerage" means waste-water, soil-water, industrial effluent and other liquid waste whether together or in combination, but does not include stormwater;

"sewer" means any pipe or conduit owned by the Council and used or intended to be used for the conveyance of sewerage;

"soil-water" means any liquid containing excreta;

"stormwater" means any water resulting from natural precipitation or accumulation and includes rain-water, surface-water, ground-water and spring-water;

"waste-water" means used water which is not polluted by soil-water or industrial effluent and does not include stormwater.

- (2) In these by-laws, unless the context otherwise indicates, words and expressions denoting the singular shall include the plural and vice versa, words and expressions denoting the male sex shall include the female sex and vice versa and reference to a natural person shall include a legal person and vice versa.

CHAPTER 2 INDUSTRIAL EFFLUENT

2. Permission to Discharge Industrial Effluents

- (1) No person shall discharge or allow to be discharged into any sewer any industrial effluent without the written permission of the Council in the form of a permit as included in these by-laws as Annexure 4.

- (2) Every person shall, before discharging any industrial effluent into a sewer, apply in writing to the Council for a permit on the appropriate form, included in these by-laws as Annexure 3, to be completed in duplicate, and shall furnish such additional information and submit such samples as the Council may require.
- (3) The Council may at its discretion, having regard to the capacity of the sewage system or any mechanical appliance used for sewerage or the sewerage treatment works, whether owned by the Council or not, and subject to such conditions as it may deem fit to impose, grant written permission in the form of a permit for the discharge of industrial effluent into a sewer.
- (4) The industrial effluent shall at all times comply with the requirements of the permit which has been issued in respect of the premises.
- (5) Owing to any change arising from an amendment in the method of sewerage treatment or the introduction of new or revised or stricter or other standards by the Council or in terms of the Water Act, 1997 (Act No. 108 of 1997), as amended, or as a result of any amendment to these by-laws or owing to any other adequate reason, the Council may at any time review, amend, modify or revoke any permission given or any conditions imposed and impose new conditions for the discharge of any or all of such effluent into the sewer on giving 4 weeks written notice in advance of its intention to do so.

3. Control of Industrial Effluent

- (1) The owner or occupier of any premises from which industrial effluent is discharged into a sewer, shall provide adequate facilities such as overflow level detection devices, standby equipment, overflow catch-pits or other appropriate means effectively to prevent the discharge into any sewer of any substance prohibited or restricted in terms of the by-laws.
- (2) The Council may by notice served on the owner or occupier of any premises from which industrial effluent is discharged, require of him, without prejudice to any other provision of these by-laws, to do all or any of the following:
 - (a) to subject the effluent before it is discharged to the sewer, to such pre-treatment as will ensure that it conforms in all respects to the provisions of section 5(1), or to modify the effluent cycle of the industrial process to an extent and in such a manner as in the opinion of the Council is necessary to enable any sewerage treatment works receiving the said effluent, whether under the control of the council or not, to produce treated effluent complying with any standards which may be laid down in respect of such works in terms of the Water Services Act, 1997 (Act No. 108 of 1997), as amended;
 - (b) to restrict the discharge of effluents to certain specified hours and the rate of discharge to a specified maximum and to install at his own expense such tanks, appliances and other equipment as in the opinion of the Council may be necessary or adequate for compliance with the said restrictions;
 - (c) to install a separate drainage installation for the conveyance of industrial effluent and to discharge the same into the sewer through a separate connection as directed by the Council, and to refrain from discharging the said effluent through any drainage installation intended or used for the conveyance of domestic soil-water or waste-water or from discharging any domestic soil-water or waste-water through the said separate installation for industrial effluent;
 - (d) to construct at his own expense in any drainage installation conveying industrial effluent to the sewer, one or more inspection sampling or metering chambers of such dimensions and materials and in such positions as the Council may prescribe;
 - (e) to pay in respect of the industrial effluent discharged from the premises such charge as may be assessed in

terms of Annexure 2 of these by-laws: Provided that where, owing to the particular circumstances of any specific case, the permanganate value (PV), chemical oxygen demand, (COD) and suspended solids (SS) cannot be determined by the method of assessment prescribed in Annexure 2, the Council may adopt such alternative method of assessment as does reflect the said value and shall assess the charge accordingly;

- (f) to provide all such information as may be required by the Council to assess the charges payable in terms of Annexure 2;
- (g) for the purpose of subparagraph (f), to provide and maintain at his own expense a meter measuring the total quantity of water drawn from any borehole, spring or natural source of water and used on the property.

4. Metering and Assessment of Industrial Effluent

The Council may, at the cost of the owner or occupier, install and maintain in such position as it shall determine in any drainage installation conveying industrial effluent to a sewer, any meter or gauge or other device for the purpose of ascertaining the volume or composition of the said effluent and it shall be an offence for any person to by-pass, open, break into or otherwise interfere with, or to damage any such meter, gauge or other device: Provided that the Council may at its discretion enter into an agreement with any person discharging industrial effluent into the sewer, establishing an alternative method or assessing the volume or composition of effluent so discharged.

5. Prohibited Discharges

- (1) No person shall discharge or cause or permit the discharge or entry into any sewer of any stormwater, sewerage or substance,
 - (a) which does not comply with the specifications in Annexure 1: Provided that the council may relax or grant exemption of some or all of such specifications for such a period as it may specify: Provided further that the council can, in spite of compliance with such specifications, restrict the total mass of any substance or impurity which is discharged into a sewer during any fixed period from any premises;
 - (b) which complies with such specifications, but contains a substance of whatever nature which, in the opinion of the Council:
 - (i) is not amenable to treatment at the sewerage treatment works, or which causes or may cause a breakdown or inhibition of the normal sewerage treatment processes; or
 - (ii) is of such nature as is or may be amenable to treatment only to such degree as to prevent the final treated effluent from the sewerage treatment works from complying in all respects with the requirements imposed in terms of the Water Services Act, 1997 (Act No. 108 of 1997); or
 - (iii) whether alone or in combination with other matter may
 - (aa) generate or constitute a toxic substance dangerous to the health of persons employed at the sewerage treatment works or entering the Council's sewers or manholes in the course of their duties; or
 - (bb) be harmful to sewers, treatment plant or land used for the disposal of treated sewerage effluent; or
 - (cc) adversely affect any of the processes whereby sewerage is treated or any re-use of purified sewerage effluent;

- (c) which in the opinion of the Council may be offensive or may cause a nuisance to the public;
 - (d) which is in the form of steam or vapour;
 - (e) which has a temperature exceeding 44°C at the point where it enters the sewer;
 - (f) which contains a substance of whatever nature which, in the opinion of the Council, may produce or give off explosive, flammable, poisonous or offensive vapours in the sewer;
 - (g) which contains a substance having an open flashpoint of less than 93°C or which gives off a poisonous vapour at a temperature below 93°C;
 - (h) which contains a material of whatever nature, including oil, grease, fat or detergents capable of causing an obstruction to the flow in sewers or drains or interference with the proper operation of a sewerage treatment works;
 - (i) which shows any visible signs of tar or associated products or distillates, bitumens or asphalts;
 - (j) which contains a substance of such concentration that it may in the opinion of the Council cause the final treated effluent from any sewerage treatment works to have an undesirable taste after chlorination or an undesirable odour or colour or which is likely to produce excessive foam;
- (2) (a) If any person in contravention of any provision of these by-laws discharges industrial effluent into a sewer, or causes or permits it to be so discharged or is about to do so, the Council may forthwith, after notifying the owner or occupier of the premises concerned of his intention to do so, and in case of emergency, without notification, close and seal off the drain conveying such effluent to the sewer for such period as it may deem expedient so as to prevent such effluent from entering the sewer.
- (b) The Council shall not be liable for any damage occasioned by any action taken in terms of subparagraph (a).
- (c) No person shall without the written permission of the Council open or break the seal of a drain closed and sealed off in terms of subparagraph (a) or cause or permit this to be done.

CHAPTER 3 POWERS OF OFFICIALS AND SERVICE OF DOCUMENT

6. Delegation of Powers

The Council may, subject to the conditions that he may impose, delegate any power conferred on the Council by these by-laws, and may in like manner amend or withdraw such delegation.

7. Entering of Premises

An authorized official or employee of the council, shall be entitled at all reasonable times and in case of emergency at any time, after properly identifying himself to enter premises or a building in order to determine whether the provisions of these by-laws are complied with.

8. Obstruction of Officials and Employees in the performance of duties

No person shall hinder or obstruct an official or employee of the Council in the performance of his duties in consequence of these by-laws.

9. Service of Notice, Order or Other Document

- (1) Whenever any notice, order or other document is under these by-laws required or authorised to be served -
 - (a) on any person, it shall be deemed to be duly and sufficiently served if it is sent by registered or certified post to that person at his last-known address, or if it is left thereat with him personally or with some adult inmate thereof;
 - (b) on an owner or occupier of any land or premises and the address of such owner or occupier is unknown, it shall be deemed to be duly and sufficiently served if it is posted up in some conspicuous place on such land or premises.
- (2) It shall not be necessary in any notice, order or other document given under these by-laws to an owner or occupier of land or premises to name him, if the notice, order or document describes him as the owner or occupier of the land or premises in question.

**CHAPTER 4
MISCELLANEOUS**

10. Offences and penalties

- (1) A person who has committed an offence in terms of these by-laws is, on conviction, liable to a fine or in default of payment, to imprisonment, or to such imprisonment without the option of a fine, or to both such fine and such imprisonment, as determined in terms of the stipulations of the Magistrate's Court's Act, (Act No. 32 of 1944) and in the case of a successive or continuing offence, to a fine for every day such offence continues, or in default of payment thereof, to imprisonment.
- (2) Any expense incurred by the Council as a result of a contravention of these by-laws or in the doing of anything which a person was directed to do under these by-laws and which he or she failed to do, may be recovered by the Council from the person who committed the contravention or who failed to do such thing.

11. Repeal

The following regulations are hereby repealed:

- (1) The Bloemfontein sewerage regulations regarding industrial effluent and other matter as published by Local Government Notice No 1 of January 5, 1990 as amended .

12. Short title and commencement

These by-laws are called the By-laws relating to the Discharge of Industrial Effluent and shall come into operation on the date of promulgation in the *Provincial Gazette* .

ANNEXURE 1

Limits of Permanganate Value (PV), pH and Electrical
Conductivity and Maximum Concentration of Certain
Substances

Subject to the provisions of section 5(1)(a) of these by-laws the following are

- (a) the limits of the PV, pH and electrical conductivity; and
- (b) the substances and the maximum permissible concentrations thereof, expressed in milligrams per litre (mg/l):
- (i) GENERAL:

PV - not exceeding	1000 mg/l
pH - within the range	6,0 - 10,0
Electrical conductivity - not greater than	500 mS/m

	at 20°C
Caustic alkalinity (expressed as CaCO ₃)	1000 mg/l
Vegetable oils, fats, grease or wax	400 mg/l
Oil, grease or wax of mineral origin	50 mg/l
Sulphides, hydrosulphides and polysulphides (expressed as S).....	5 mg/l
Substances from which hydrogen cyanide can be liberated in the drainage installation sewer or sewerage treatment plant (expressed as HCN).....	20 mg/l
Formaldehyde (expressed as HCHO)	50 mg/l
Non-organic matter in suspension	100 mg/l
Chemical oxygen demand (COD)	5000 mg/l
All sugars and/or starch (expressed as glucose)	1000mg/l
Available chlorine (expressed as CL ₂)	100 mg/l
Sulphate (expressed as SO ₃)	1500 mg/l
Fluorine containing compounds (expressed as F)	5 mg/l
Suspended solids SS	1000 mg/l
Phosphate and phosphatecontaining compounds (expressed as P)	100 mg/l

(Amended by Notice dated July 6, 1990)

(ii) METALS:

Group 1

- Iron (expressed as Fe)
- Chromium (expressed CrO₃)
- Copper (expressed as Cu)
- Nickel (expressed as Ni)
- Zinc (expressed as Zn)
- Silver (expressed as Ag)
- Cobalt (expressed as Co)
- Tungsten (expressed as W)
- Titanium (expressed as Ti)
- Cadmium (expressed as Cd)

The total collective concentration of all metals in Group 1 (expressed as indicated above) in any sample of the effluent, shall not exceed 20 mg/l, nor shall the concentration of any individual metal exceed 5 mg/l.

Group 2

Lead (expressed as Pb)
Selenium (expressed as Se)
Mercury (expressed as Hg)

The total collective concentration of all metals in Group 2 (expressed as indicated above) in any sample of the effluent shall not exceed 20 mg/l, nor shall the concentration of any individual metal in any sample exceed 5 mg/l.

(iii) OTHER ELEMENTS :

Arsenic (expressed as As)
Boron (expressed as B)

The total collective concentration of all elements (expressed as indicated above) in any sample of the effluent shall not exceed 5 mg/l.

(iv) RADIO-ACTIVE WASTES :

Radio-active wastes or isotopes : Such concentration as may be laid down by the atomic energy Board or any State Department :

NOTE : The method of testing in order to ascertain the concentration of any substance mentioned here shall be the test normally used by the Council for the purpose. Any person discharging any substance referred to in this Annexure shall ascertain the details of the appropriate test from the Council.

ANNEXURE 2

Industrial Effluent Charges

1. The owner or occupier of any premises from where industrial effluent is discharged shall, irrespective of the Council's permission for the discharge as mentioned in Section 2(2) additional to any other charges which are provided for in these by-laws or any other by-laws, pay an amount to the Council which is subject to the following stipulations of this annexure and is calculated according to the following formula:

$$\text{TARIFF} = B \times V \times T$$

Where : B is the fixed as well as the running costs per unit of the treatment of sewerage at the treatment works in cents per cubic metre as determined by the Council from time to time.

V is the measured volume of sewerage which enters the sewer from whatever source, where the strength is determined and is not less than 100 cubic metres per month.

T is the strength of the effluent where:

$$T = 1 + \frac{PV - 80}{240} + \frac{COD - 680}{2040} + \frac{SS - 230}{690}$$

PV, COD and SS are respectively the oxygen absorbed or the permanganate value, the chemical oxygen demand and the suspended solids, expressed in milligram per litre with respect to samples collected by any duly appointed official of the council, and as required by the Council.

The Council bases the amount payable on the value of the criteria in such samples. When the value of T is equal to or less than 1, the owner or occupier shall not pay industrial effluent charges according to the strength of the effluent.

All costs involved in the sampling and testing of samples required by the Council, will be borne by the council. The cost of any other sampling or testing of samples, is borne by the owner or occupier.

2. The Council determines the total amount of industrial effluent which is discharged from the premises during every period, and for the purpose of such determination the Council shall -
 - (a) in a case where industrial effluent and other sewerage are measured together, consider the total discharge as industrial effluent;
 - (b) in a case where the amount of sewerage or industrial effluent which is discharged from the premises, is not measured directly
 - (i) base such determination on the amount of water which is consumed on the premises during the applicable period, after an amount of water, which the council considers reasonable, has been taken into account for irrigation purposes or evaporation or which is present in articles produced on the premises, and
 - (ii) if industrial effluent is discharged from more than one point on the premises, allocate such amount of water as accurately as possible to the different points of discharge.
 - (c) in any case where it is proved that a metering appliance is defective, take such defect properly into account.
3. The Council may determine that the formulae mentioned in this annexure, are not applicable in any case where the method of determining the strength of industrial effluent as specified in such formula does not reflect the true strength of the said effluent in the opinion of the Council.

ANNEXURE 3

MANGAUNG LOCAL MUNICIPALITY

Application for a permit to Discharge Trade- or Industrial Effluent into the Sewage System

(To be completed in block letters)

1. GENERAL INFORMATION

LOCATION OF BUSINESS			
Street Name	Street No.	Erf No.	Tel. No.

Postal Address	Address for Accounts

OWNERSHIP OF THE PREMISES	
Name of Owner	Address of Owner

NATURE OF PROCESSES OR TRADE PERFORMED ON THE PREMISES

NAME OF SIGNATORY	POSITION HELD IN BUSINESS

REGISTERED NAME OF THE BUSINESS TO WHOM THE PERMIT WILL APPLY

2. QUANTITY OF EFFLUENT AND DISCHARGE CONDITIONS

CONNECTION POSITION	MAXIMUM DISCHARGE RATE PER		
	Month in Kilolitres	Day in Kilolitres	Hour in Kilolitres

NORMAL PLANT OPERATING PERIODS	
Days in Week	Time in Day

EFFLUENT DISCHARGE FACTOR			
Water entering premises	%	Water consumed on premises (not entering the sewage system)	%
From municipal sources		In Boiler use	
From other sources		In Evaporation	
Total entering premises	100	Leaving in product	
Total consumed on premises		In other use	
Effluent discharge factor (K)		Total consumed on premises	

3. PRETREATMENT OF EFFLUENT BEFORE DISCHARGE
 (Insert sizes, capacities, etc, where pretreatment is present. Cross where a particular unit does not exist.)

TYPE OF TREATMENT		DISCHARGE POINTS			
		1	2	3	4
Screens (hand raked)	Area m ²				
Screens (mechanical)	Area m ²				
Comminutors					
Grit Tanks					
Grease Traps					
Sedimentation Tanks	Area m ² Vol m ³				
Biological processes					
Type :					

4. PHYSICAL AND CHEMICAL CHARACTERISTICS OF EFFLUENT
(Insert maximum values or cross where absent)

p.H.	Temp °C	Electro conductivity ms/m at 20°C	PW 4 Hour KMnO ₄
Maximum			
Minimum			
		Settable solids (ml/l)	

Concentration in mg/l of the following

Suspended solids		Sugars/Strach as Glucose
Caustic Alkalinity as CaCO ₃		Tar Products and Distillates
Acidity as CaCO ₃		Substances not in solution

Sulphides etc. as S		Fat, vegetable oil, etc.
Sulphates as SO ₃		Hydrogen Cyanide as HCN
Chlorides as Cl		Mineral Oils and Grease
Fluoride Compounds as F		Dyes
Available chlorine as Cl ₂		Formaldehyde as HCHO

Concentration in mg/l of the following :

GROUP 1 METALS		GROUP 2 METALS		TOTAL CONCENTRATION	
Iron as Fe		Lead as Pb		Group 1 Metals	
Chromium as CrO ₂		Selenium as Se			
Copper as Cu		Mercury as Hg		Group 2 Metals	
Nickel as Ni					
Zinc as Zn				Other Elements	
Cadmium as Cd		OTHER ELEMENTS			

GROUP 1 METALS		GROUP 2 METALS		TOTAL CONCENTRATION	
Silver as Ag					
Cobalt as Co		Arsenic as As			
Tungston as W		Boron as B			
Titanium as Ti					

Are Radioactive Wastes or Isotopes Present In the Effluent?	YES	NO
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FOR OFFICIAL USE :

Permit No.		Issued by		Date	
Water allocation factor		Treasury Notified		Date	

MANGAUNG LOCAL MUNICIPALITY

Special Conditions :

Conditions of acceptance of a discharge of a trade or industrial effluent into the sewage plant.

1. A valid permit of the discharge is held and the conditions stated in the permit are observed.
2. Any special conditions requiring the pretreatment of the effluent before discharge are observed and the work is carried out to the satisfaction of the Executive Director: Infrastructural Service.
3. The applicant shall notify the Executive Director: Infrastructural Service immediately in writing of any change in the nature, quantity or rate of discharge of effluent which occurs or is proposed and which would exceed any of the limits in the permit.
5. The applicant shall within 30 days from the date of signature of this application, procure an accurately representative sample of not less than 5 litres of the effluent to be discharged. One half of this sample shall be submitted to the City Chemist for analysis and a report submitted to the City Chemist of an analysis of the other half by an analyst appointed by the applicant at his expense.
6. I, (full name)

the undersigned, duly authorised to act on behalf of

.....
to be known as the Applicant, declare that the information given on this form is to the best of my knowledge accurate and accept that the said information may be used for the basis of the issue of a permit to discharge a Trade or Industrial Effluent into the Sewage System.

.....
DATE

.....
SIGNATURE

.....
Authority or Capacity of Signatory

ANNEXURE 4

Date
//

Permit No.
//

MANGAUNG LOCAL MUNICIPALITY
DIRECTORATE: INFRASTRUCTURE

PERMIT

TO DISCHARGE TRADE OR INDUSTRIAL EFFLUENT
INTO THE SEWAGE SYSTEM

Executive Director: Infrastructure
PO Box 3704
BLOEMFONTEIN

MANGAUNG LOCAL MUNICIPALITY
DIRECTORATE: INFRASTRUCTURE
PERMIT TO DISCHARGE TRADE OR INDUSTRIAL EFFLUENT
INTO THE SEWAGE SYSTEM

1.

Registered Name of the Business to which the Permit applies			
Street Name	Street No.	Erf No	Tel. No
Authorised Processes for the Premises			Effluent Discharge Factor
			K=

2.

EFFLUENT DISCHARGE CONDITIONS			
Connection Position	Maximum Discharge rate in K1		
	Per Month	Per Day	Per Hour
Authorises Discharge periods	Monday to Friday	Saturday	Sunday

3.

PRETREATMENT REQUIRED BEFORE ACCEPTANCE		

4.

PHYSICAL AND CHEMICAL CONDITIONS REQUIRED BEFORE EFFLUENT ACCEPTANCE	
Substances acceptable in limited concentrations only	Substances to be totally excluded from an effluent

SPECIAL CONDITIONS	

.....
DATE

.....
EXECUTIVE DIRECTOR

ACCOUNT NO.	Address for Accounts	Previous Permit Number

SUBSTANCES ACCEPTED WITHIN THE FOLLOWING LIMITS

A schedule of normal acceptable standards is given below for guidance.

(a)	GENERAL	MAXIMUM	MINIMUM
	Temperature at point of entry	44°C	
	Electrical conductivity	500 (ms/m by 20°C)	
	p.H.	10.0	6.0
	PV strength 4 hr	1 000 mg per litre	
(b)	CHEMICAL SUBSTANCES OTHER THAN METALS (Maximum Concentrations)		
	Caustic Alkalinity as CaCO ₃		1 000 mg/l
	Fats, vegetable oil and lik substances		400 mg/l
	Substances soluble in petroleum ether		50 mg/l
	Sulphides, hydrosulphides and polysulphides (expressed as S)		5 mg/l
	Substances from which hydrogen cyanide can be liberated in the drainage installation, sewer or sewerage purification works (expressed as HCN)		20 mg/l
	Formaldehyde (expressed as HCHO)		50 mg/l
	All sugars and/or starch (expressed as glucose)		1 000 mg/l
	Available chlorine (expressed as Cl ₂).....		100 mg/l
	Sulphate (expressed as SO ₄)		1 500 mg/l
	Fluorine containing compounds(expressed as F)		5 mg/l
	Tar products and distillates		50 mg/l
	Chlorides as Cl		1 000 mg/l
(c)	METALS		
	Group 1	Group 2	Not exceed
			Not exceed
	Iron (expressed as Fe)	Lead (expressed as Pb)	5 mg/l

Chromium (expressed as CrO ₂)	5 mg/l	Selenium (expressed as Se)	5 mg/l
Copper (expressed as Cu)	5 mg/l	Mercury (expressed as Hg)	5 mg/l
Nickel (expressed as Ni)	5 mg/l		
Zinc (expressed as Zn)	5 mg/l	Total collective concentration of all metals in Group 2	20 mg/l
Silver (expressed as Ag)	5 mg/l		
Titanium (expressed as Ti)	5 mg/l	Other Elements	
Cadmium (expressed as Cd)	5 mg/l		
Total collective concentration of all metals in Group 1	20 mg/l	Arsenic (expressed as As)	5 mg/l
		Boron (expressed as B)	5 mg/l

(d) RADIO-ACTIVE WASTES

Any radio-active wastes or isotopes : Such concentration as may be laid down by the atomic energy board or any State Department.