

**ANNEXURE C: FORM OF APPLICATION FOR PERMISSION
TO DISCHARGE TRADE/INDUSTRIAL EFFLUENT INTO MOGALE
CITY LOCAL MUNICIPALITY'S WASTEWATER DISPOSAL SYSTEM**

Date

Permit number

Issued By:
Name & Designation

Issued To:
Name & Designation

**MOGALE CITY LOCAL MUNICIPALITY
DIRECTORATE INFRASTRUCTURE SERVICES**

PERMIT

**TO DISCHARGE TRADE / INDUSTRIAL EFFLUENT
INTO THE WASTEWATER DISPOSAL SYSTEM**

Manager: Water and Sanitation
P O Box 94
KRUGERSDORP
1740

MOGALE CITY LOCAL MUNICIPALITY

FORM OF APPLICATION FOR PERMISSION TO DISCHARGE TRADE/INDUSTRIAL EFFLUENT INTO THE MUNICIPALITY'S WASTEWATER DISPOSAL SYSTEM

Application for a Permit to Discharge Trade/Industrial Effluent into the Wastewater Disposal System (To be completed in block letters, in duplicate and to be renewed on a yearly basis)

I,duly authorised to act on behalf ofand hereinafter referred to as the applicant, hereby apply in terms of the provisions of the Mogale City Water Services By-laws, for permission to discharge trade/industrial effluent into the Municipality's wastewater disposal system on the basis of the information set out herein.

1. GENERAL INFORMATION

LOCATION OF BUSINESS			
Street Name	Street Number	Erf Number	Contact Number
			Tel no: Fax no: E - Mail
Postal Address		Physical Address	
Contact Person		Account No.	
OWNERSHIP OF THE PREMISES			
Name of Owner		Address of Owner	
NATURE OF PROCESSES OR TRADE PERFORMED ON THE PREMISES			
Name of Applicant		Designation of Applicant	
REGISTERED NAME OF THE BUSINESS TO WHICH THE PERMIT WILL APPLY			

2. INFORMATION RELATING TO EMPLOYEES:

	Office	Trade/industry
(1) Total number of daily employees (not incl. In (4)):		
(2) Number of shifts worked per day:		
(3) Number of days worked per week:		
(4) Number of persons resident on the premises:		
(5) Is a canteen provided?:		

3. QUANTITY OF EFFLUENT AND DISCHARGE CONDITIONS

CONNECTION POSITION GPS Reading/ Connection Position	MAXIMUM DISCHARGE RATE IN kℓ		
	Per Month	Per Day	Per Hour
Discharge periods (hours)	Monday to Friday	Saturday	Sunday

4. FACTS RELATING TO THE CONSUMPTION OF WATER

Total number of litres of water consumed in six months:

	Meter No.	Meter No.	Meter No.	Total
Water purchased from the Municipality				
Water from borehole or other source				
Water entering with raw materials				
Section of plant served by meter				
Total A				

5. WATER CONSUMPTION

(1) Trade/industrial purposes	kℓ/month
Quantity of water in product	
Quantity of water lost by evaporation	
Quantity of water used as boiler make-up	
Quantity of water for other uses (e.g. cooling, gardening, etc.)	
Total B	
(2) Domestic purposes	
Total number of employees (Allow 1 kilolitre/person/month)	
Total number of employees permanently resident on the premises e.g. Hostels (allow 1 kilolitre/person/month)	
Total C	

EFFLUENT DISCHARGED			
Water entering premises	%	Water consumed on premises (not entering the wastewater disposal 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 (e.g. recycling, cooling, gardening, domestic purposes)	
Effluent discharged		Total consumed on premises	

NOTE: A recent flow diagram must be supplied, as well as any other information as requested by the Municipality or its authorised agent.

6. PRE-TREATMENT OF EFFLUENT BEFORE DISCHARGE

(Insert sizes, capacities, etc. where pre-treatment is present. Place a cross where a particular unit does not exist.)

TYPE OF TREATMENT	UNIT	DISCHARGE POINTS			
		1	2	3	4
Screens (hand raked)	Area (m ²)				
Screens (mechanical)	Area (m ²)				
Comminutors					
Grit Tanks					
Grease/fat traps					
Sedimentation tanks	Area (m ²) Volume (m ³)				
Balancing/equalization tanks	Area (m ²) Volume (m ³)				
Biological processes Type:					
Chemical Processes Type:					

7. PHYSICAL AND CHEMICAL CHARACTERISTICS OF EFFLUENT

(Insert value or place a cross where absent)

	pH	Temp in °C	Conductivity in mS/m at 20 °C	Suspended Solids in mg/l	COD in mg/l	NH ₃ as N in mg/l	O-PO ₄ as P in mg/l
Maximum							
Minimum							
Average							

Concentration in mg/l of the following:
(Insert maximum value or place a cross where absent)

Acidity (as CaCO ₃)		Mineral oils and grease	
Alkalinity (Total) (as CaCO ₃)		Ortho-Phosphate (O-PO ₄)	
Ammonia (NH ₃ -N)		Phenolic compounds	
Chemical Oxygen Demand (COD)		Sodium (Na)	
Chlorides (as Cl)		Sugars / Starch as glucose	
Dyes		Sulphates (as SO ₄)	
Fat, vegetable oil, etc.		Sulphides (as S)	
Fluoride compounds (as F)		Tar products and distillates	
Formaldehyde (as HCHO)		Total dissolved solids (TDS)	
Hydrogen cyanide (as HCN)		Volatile Solvents	

Concentration in mg/l of the following:
(Insert maximum value or place a cross where absent)

Group 1 Metals		Group 2 Metals		Total Concentration	
Cadmium (as Cd)					
Chromium (as CrO ₃)		Lead (as Pb)		Group 1 Metals	
Cobalt (as Co)		Mercury (as Hg)		Group 2 Metals	
Copper (as Cu)					
Iron (as Fe)		Selenium (as Se)		Other Elements	
Manganese (as Mn)					
Nickel (as Ni)		Other elements			
Titanium (as Ti)		Arsenic (as As)			
Tungsten (as W)		Boron (as B)			
Zinc (as Zn)					

(Cross out which is not applicable)

Are Radioactive Wastes or Isotopes present in the effluent?	Yes	No
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8. FOR OFFICIAL USE

Permit Number		Issued by		Date	
Water allocation factor		Directorate Financial Services notified		Date	

MOGALE CITY LOCAL MUNICIPALITY**Conditions of Acceptance of Trade/Industrial Effluent**

This application shall only be granted on the applicant's undertaking, as he or she is by virtue of his signature hereto appended deemed to do, to observe the following terms and conditions and any further special conditions, which the Municipality or its authorised agent may deem fit to impose in any particular case:

- i) a valid permit for discharge is held, and the conditions stated in the permit are obeyed;
- j) any special conditions requiring the pre-treatment of the effluent before discharge is obeyed, and the work is carried out to the satisfaction of the Municipality or its authorised agent;
- k) the conditions of the Drainage Regulations as noted in the National Building Regulations are obeyed;
- l) the applicant shall annex hereto descriptions and a statement of the dimensions of grease and oil traps, screens, dilution and neutralizing tanks and any other provisions made by him or her for the treatment of the trade/industrial effluent before it is discharged to the sewer;
- m) the applicant shall submit to the Municipality or its authorised agent if requested, plans showing the reticulation systems on the premises for water and trade effluent or industrial effluent;
- n) the applicant shall, in addition to complying with the provision of the Mogale City Water Services By-laws concerned with the protection of its employees, sewers and treatment plant from injury or damage, comply with any direction concerned with such protection given to him or her by the Municipality or its authorised agent verbally or in writing for the purpose of ensuring the applicant's compliance with the said By-laws;
- o) the applicant must provide a separate drainage installation from the domestic drainage installation for trade effluent or conveying industrial effluent and to discharge same into a sewer via a separate connection as directed by the Municipality or its authorised agent;
- p) the applicant shall notify the Municipality or its authorised agent, in writing, as soon as possible after he or she becomes aware of, or at least 14 days before anything is done to cause, any material alteration in the nature or quantity or discharge of the trade effluent or industrial effluent specified in this application or in any of the facts stated by him or her therein;
- q) similarly, the applicant shall immediately notify the Municipality or its authorised agent, in writing, if any change in the nature, quantity or rate of discharge of effluent occurs, or is proposed, and which would exceed any limits in the permit;
- r) the applicant agrees to provide a suitable sample point for his or her trade effluent or industrial effluent and manage the effluent in such a manner that at all times the samples taken thereof are an accurate representation of the strength and composition of the trade or industrial effluent; and
- s) 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, which shall be free of domestic sewage. One half of this sample shall be submitted to the Municipality or its authorised agent for analysis. In addition, a report must be submitted to the Municipality or its authorised agent of analysis of the other half of the same sample by an analyst appointed by the applicant at the owner's or occupier's expense: provided that in the case of a newly established industry the period specified in this rule may be extended by the Municipality or its authorised agent for a period not exceeding six months or such further extended periods as the Municipality or its authorised agent in its discretion may from time to time in writing permit.

The applicant hereby declares and warrants that the information given by him or her on this form or otherwise in connection with this application is to the best of his or her knowledge and belief in all respects correct; and the applicant agrees that the said information, being in all respects correct, shall form the basis on which the Municipality or its authorised agent grants this application.

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 accurate to the best of my knowledge and accept that the said information may be used as basis for the issuing of a permit to discharge Trade/Industrial effluent into the Wastewater Disposal System.

DATE

SIGNATURE OF APPLICANT

Authority or Capacity of the applicant

Permission is hereby granted by me on behalf of the Municipality, I being duly thereunto authorised, for the discharge into the Municipality's wastewater disposal system in accordance with the Mogale City Water Services By-laws of trade effluent or industrial effluent as described in this form and in the circumstances therein set forth: provided that this permission shall be revocable by the Municipality or its authorised agent at any time at its absolute discretion on the expiry of reasonable notice in writing given by it to the applicant.

The said permission is given subject also to the following special conditions:

SIGNED By or on behalf of the
Manager: Water and Sanitation

SIGNATORY (full name)

SIGNATURE OF SIGNATORY

CAPACITY

DATE

ANNEXURE D: LIMITS AND MAXIMUM CONCENTRATION OF CERTAIN SUBSTANCES

Subject to the provisions of **Clause 81.1** the following limits will apply:

- a) the maximum concentration limits of substances contained in any sewage, trade effluent, industrial effluent or other liquid discharged to the sewer:

Parameters	Units	Max Standards
Alkalinity (TALK)***	mg/l CaCO ₃	2000
Cadmium (Cd)	mg/l Cd	5
Chemical Oxygen Demand (COD)	mg/l	5000
Chloride (Cl)	mg/l Cl	600
Chromium – total (Cr)	mg/l Cr	5
Cobalt (Co)	mg/l Co	5
Copper (Cu)	mg/l Cu	5
Cyanide – total (CN)	mg/l CN	20
Electrical Conductivity (EC)	mS/m	500
Iron (Fe)	mg/l Fe	5
Lead (Pb)	mg/l Pb	5
Magnesium (Mg)	mg/l Mg	5
Nickel (Ni)	mg/l Ni	5
Nitrogen – Ammonia (NH ₃ -N)	mg/l N	50
Oil & Grease	mg/l	2000
pH	-	6-10
Phenol	mg/l	1
Phosphate – Ortho (O-PO ₄)	mg/l P	10
Sodium (Na)	mg/l Na	400
Solids – Suspended (SS)	mg/l	1000
Solids – Total Dissolved (TDS)	mg/l	3250
Sulphate (SO ₄)	mg/l SO ₄	1800
Sulphates, hydro-sulphates and polysulphates (expressed as S)	mg/l	50
Total Metal (excluding sodium)	mg/l	20
Zinc (Zn)	mg/l Zn	5

b) Metals:

Group 1:

Metal	Expressed as
Cadmium	Cd
Chromium	Cr
Cobalt	Co
Copper	Cu
Iron	Fe
Manganese	Mn
Nickel	Ni
Silver	Ag
Tungsten	W
Titanium	Ti
Zinc	Zn

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 in a sample exceed 5 mg/l;

Group 2:

Metal	Expressed as
Lead	Pb
Mercury	Hg
Selenium	Se

The total collective concentration of all metals in group 2 (expressed as indicated above) in any sample of the effluent, shall not exceed 10 mg/l, nor shall the concentration of any individual metal in a sample exceed 5 mg/l;

c) Other elements:

Metal	Expressed as
Arsenic	As
Boron	B

the total collective concentration of all elements (expressed as indicated above) in any sample of the effluent, shall not exceed 20 mg/l; and

d) Radio active wastes or isotopes

such concentration as may be laid down by the Atomic Energy Board or any State Department provided that, notwithstanding the requirements set out in this **Clause d)**, the Municipality reserves the right to limit the total mass of any substance or impurity discharged per 24 hours into the sewers from any premises.

NOTE: The method of testing in order to ascertain the concentration of any substance here mentioned, shall be the test normally used by the Municipality or its authorised agent for these purposes. Any person discharging any substance referred to in this section shall ascertain the details of the appropriate test from the Municipality or its authorised agent.

ANNEXURE E: TARIFF STRUCTURE FOR TRADE / INDUSTRIAL EFFLUENT

Industrial Effluent Charge

According to Mogale City Water Services By-laws any charges payable in respect of a trade/industrial effluent shall be based on the following formula:

$$\frac{(R \times a)}{\Sigma a} + \frac{(S \times b)}{\Sigma b} + \frac{(T \times b)}{\Sigma b} + \frac{(X \times b)}{\Sigma b} + \frac{(Z \times b)}{\Sigma b} \times \frac{(\text{COD} - 600)}{\text{CODs}}$$

Where:

- R = capital cost of wastewater reticulation system
- S = capital cost of outfall sewers
- T = capital cost of wastewater treatment works
- X = overhead costs of the wastewater reticulation including 40% of the overhead costs of the wastewater treatment works and laboratory
- Z = overhead costs of the wastewater reticulation system including 60% of the overhead costs of wastewater treatment works and laboratory
- a = area (m²) of the specific premises
- Σa = total area served by the wastewater reticulation system
- b = effluent flow from premises
- Σb = total annual wastewater flow to the wastewater treatment works
- COD = the monthly arithmetical average of the Chemical Oxygen Demand of the effluent discharged from the specific premises measured in mg/ℓ
- CODs = average Chemical Oxygen Demand of the wastewater entering the wastewater treatment works measured in mg/ℓ