



WATER PNG

TRADE WASTEWATER POLICY

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Water PNG
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Water PNG, TRADE WASTE POLICY

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Water PNG does not guarantee that all hazard identified and control measures outlined herein will be implemented. It also does not guarantee that all relevant laws and regulations associated with the administration of the Trade Waste Policy have been interpreted accordingly. If any content(s) of this document contradicts the relevant laws and regulations, or that the Plan deviates from established practises, the laws and regulation and such practises will take precedence over the content outlined here.

TRADWASTE POLICY

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Summary

Water PNG (formerly PNG Waterboard) is established under *National Water Supply and Sanitation Act 2016*. The *Act* provides Water PNG with key objectives of being a successful business, improve public health and protect environment. The *Trade Wastewater Policy* is developed as part of environment management system to protect the environment. The *Trade Wastewater Policy* has nationwide coverage.

The *Part III of National Water Supply and Sanitation Regulation* have provisions for *prohibited discharges* and *trade waste discharges* into the sewers. The trade waste is defined as liquid refuse from a business, trade, or manufacturing property other than domestic sewage, storm water or unpolluted water. The objectives of the Policy are to protect sewerage infrastructure, operators' safety, protect environment and protect public health. The Policy sets guidelines and limits of trade waste to be discharged into the sewerage system. The trade waste dischargers are categorised based on volume they discharge and pollutant concentration of the discharge.

The Policy provides control mechanism which includes issuing of Permits, signing Agreements and imposition of penalty for breaches. The Policy provides administrative process and procedures for lodgement of application for Permit or Agreement depending on category of trade waste generator. The Policy provides for inspection and monitoring of dischargers' pre-treatment facilities. It includes determination of discharge quantity and quality depending on the category of discharger. The Policy provides for commercial and industrial dischargers to install arrestors as pre-treatment of their trade wastes. The discharge of infectious wastes and waste water from medical, clinical, veterinary areas together with the toxic and hazardous wastes are covered in the Policy.

The Trade Wastewater Policy provides for charges and fees for discharge of trade waste into WPNG sewerage system. There are fees for breaches of Permit conditions and Agreement. There is also fee for lodging applications for discharge of trade wastewater.

The Appendices at the end of the document provide details and additional information on matters described in the Policy.

1. INTRODUCTION

1.1 Water PNG

The Water PNG (formerly PNG Waterboard) is a state – owned enterprise responsible for provision of water supply and sewerage services in the urban centres except in the National Capital District. It was established by an Act of Parliament under *National Water Supply and Sanitation Act 2016 (NWSS Act 2016)* and commenced commercial operation on the 1st of January 1987.

The charter of Water PNG is to coordinate planning, design, construction, management of and charging for water supply and sewerage services throughout the country except in the National Capital District. The powers, functions and objectives are stipulated in the *Act*.

Vision Statement:

‘To enhance quality of life of the people of Papua New Guinea by ensuring the provision of quality water and safe sanitation services’

Mission Statement:

“To be the benchmark provider of sustainable water and sanitation services”

Corporate Values

The Water PNG’s Corporate Values are:

- (a) Ensure provision of reliable, quality and safe water and sanitation services*
- (b) Excellence in customer services and affordable pricing*
- (c) Environmentally friendly operations*
- (d) Maintain mutually beneficial relationships with all stakeholders*
- (e) Exemplary employer committed to staff welfare and development*
- (f) Workplace environment conducive to committed performance and sense of ownership*

1.2 Trade Wastewater Policy

The Trade Wastewater Policy is developed with the objective of protecting the sewerage infrastructure, operation personnel, public health and environment. The Policy regulates the discharge of trade wastewater into the public sewerage system. The development and growth in manufacturing and commercial activities result in increased generation of trade wastes and has placed increased demands on WPNG to ensure protection of its operators, infrastructure and environment.

Trade wastewater is the liquid waste generated by industries, manufacturing businesses and commercial enterprises. Trade wastes contain chemicals, metals, grease, fat and oil and have an organic strength many times that of domestic sewage. These wastes produce substances that may pose a serious risk to the safety and health of sewerage workers; damage the infrastructure of the sewerage system; inhibit biological processes at the treatment plant; accumulate in bio solids, making their reuse difficult or impracticable; or pass through the plant untreated resulting in environmental contamination, degradation and damage. The *Water Supply and Sanitation Regulations 2016* prohibits discharge of untreated trade wastes into the sewerage system. The producers of trade wastes are required to obtain a Permit or an Agreement from WPNG to enable them to discharge into the public sewerage system.

2. EXISTING SEWERAGE CONDITIONS

2.1 Sewerage System

The WPNG currently provides and operates conventional sewerage systems in some of its Business Centres. The sewerage systems in Lae and Mt. Hagen offer wider coverage of sewerage services. Limited sewerage coverage is available in Alotau, Kimbe, Kundiawa, Madang and, Popondetta. The systems consist of reticulated collection pipe network, wastewater treatment systems and final effluent disposal. The wastewater treatment systems employed are wastewater stabilisation lagoons, septic tanks and fine screening for marine outfall. The existing sewerage infrastructures are quite old and have shown deterioration from impacts of substances from trade wastewater discharged into the sewers. The sewerage systems were designed purposely for domestic waste water. While no casualty has been reported on sewerage operation personnel, there are inherent risks on the wastewater system operations.

The growth of industries and commerce has resulted in increased volume of trade wastewater discharged into the sewerage systems. The risks to infrastructure and operators necessitate requirements to regulate trade waste discharges. The composition and concentration of pollutants of trade wastewater consists of substances and pollutants that pose great risks to infrastructure, operation personnel and environment.

2.2 Legislation and Regulation

The *National Water Supply and Sanitation Act 2016* and *Water Supply and Sewerage Regulation* have provisions for discharges into the sewerage system. The Part III of the Regulation has provisions for *Prohibited Discharges into Sewers* and *Discharge of Trade Wastes* into the sewer. The Water PNG is responsible for operation of sewerage systems in the urban areas of the country.

The *Environment Act 2000* and *Environment Regulation 2002* govern the quality of wastewater to be discharged into the environment. The *Act and Regulation* are administered by the Conservation and Environment Protection Authority (CEPA), formerly Department of Environment and Conservation. The Authority is responsible for issue of *Environment Permit* for activities that may result in harm to the environment.

2.3 Wastewater Quality

The wastewater quality entering the sewerage systems have high concentrations of pollutants. The effluent from wastewater treatment plants are required to comply with *Environment (Water Quality Criteria) Regulation* prior to discharge into the environment.

The WPNG undertakes monthly monitoring of its treated effluent by collection of samples and delivering them to accredited laboratories for analysis. Monitoring of minor sewerage systems in small centres are done on quarterly basis.

The CEPA is responsible for the regulation of effluent quality and their disposal into the environment. The *Environment (Water Quality Criteria) Regulation* provides effluent standard of wastewater to be discharged into the environment.

3. TRADE WASTEWATER POLICY

3.1 Scope

The Trade Wastewater Policy is for nation-wide coverage and covers all non-residential property such as commercial, industrial and trade activities within declared WPNG's area of operation and any trade wastewater that may originate and be discharged for treatment within this defined area. Transport by road tanker of liquid wastewater is also covered by this Policy. In order to discharge trade wastewater to sewer either directly, indirectly or from mobile vehicles (tankers) the following must be met:

- a) The type of liquid waste being discharged must be allowable by Water PNG.
- b) The liquid waste must originate from within Water PNG's area of operation.
- c) The person or company wishing to discharge must have written approval from WPNG in the form of a current Permit or Agreement.
- d) The liquid waste must comply with the limits set in the Permit or Agreement.
- e) Tankered Wastewater to WPNG Wastewater Treatment Lagoons must conform to the conditions of Water PNG's requirements.

The Policy is to ensure protection of operation personnel, protection of sewerage infrastructure and protection of environment. The trade wastes comprise of substances such as chemicals, acids, oils and fat. The toxic gas in the sewer manholes produced by trade waste is great risk to operation crew. The problems which commonly afflict the integrity of a sewer are corrosion, blockages and less commonly, sudden temperature changes. The problems likely to be encountered at a treatment plant, other than simple overloading, generally stem from the disruption of the rather fragile biological processes, due to the imposition of a sudden large oxygen demand or the introduction of chemicals which are toxic to the biomass responsible for the treatment processes, or due to the inability of the biological processes to cope with certain materials without the addition of other nutrients.

3.2 Aims and Objectives

Water PNG's Trade Wastewater Policy is primarily concerned with restricting or prohibiting discharge of substances that may be harmful to the sewerage system, the operation personnel in the sewerage system, public health and the environment. In addition Water PNG wishes to encourage minimisation of waste production.

The aims of the policy are summarised as follows:

- a) Exclusion of substances other than those which can be safely transported and treated by Water PNG to an environmentally acceptable standard; and
- b) Recovery of costs associated with the acceptance of trade wastewater by Water PNG from the dischargers of those wastes; and
- c) Encouragement of the minimisation of waste production.

The objectives of the Trade Wastewater Policy are to:

- a) Protect the health and safety of all people working in the sewerage system by applying strict standards for discharge of harmful substances;
- b) Protect receiving waters from toxic substances originating from trade wastewater discharges;
- c) Protect the sewerage system and sewage treatment plants from damage due to harmful substances discharged from trade wastewater sources;
- d) Assist Water PNG in meeting community expectations regarding the protection of the environment;
- e) Assist Water PNG to meet relevant environmental and other legislation;

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- f) Encourage waste minimisation and cleaner production in the commercial and industrial sectors; and
- g) Encourage and where possible enable further water conservation.

To achieve these aims and objectives it will be necessary for the discharger to pre-treat trade wastewater prior to discharging to Water PNG's wastewater assets. Pre-treatment activities must meet the nominated acceptance limits defined in this Policy. Under the user-pays principle, commercial establishments and industry must pay realistic costs for the acceptance and treatment of their trade wastewater. Costs will therefore be linked to the additional load created by the concentration (strength) of the substances discharged and their total weight (load). Water PNG will apply trade wastewater charges to recover the costs of this additional loading for each customer according to their wastewater discharge characteristics.

4. CONTROL OF TRADE WASTEWATER

4.1 Pre-treatment

It is mandatory that the trade wastewater to be discharged into the public sewerage system is pre-treated to **WPNG Guideline Sewer Admission Limits shown in Appendix A**. All industries, manufacturing and commercial enterprises generating trade waste are required to ensure pre-treatment of their trade waste to comply with WPNG Guidelines. Water PNG reserves the right to refuse acceptance of a trade wastewater not complying with the Limits.

4.2 Penalty, Suspension or Cancellation of Approval

The approval given by issue of a Permit or an Agreement to discharge trade wastewater into the public sewers includes set of conditions. Warnings will be issued for non-compliance. Penalties will be imposed for consistent non-compliance. Cost recovery actions may be instigated against companies or individuals for repairs to the damaged sewerage system resulting from discharging their non-complying trade wastewater causing the damages. The approval may be suspended for disregard of warnings for non-compliance with set conditions.

The Permit or an Agreement may be cancelled for consistent disregard of warning for non-compliance.

4.3 Sewer Admission Limits

The quality of trade wastewater discharged in to the sewerage system must comply with the wastewater quality of **Sewer Admission Limits shown in Schedule I of Appendix A**. The sewer admission limits specified in the trade wastewater approval are absolute maximums and are subject to periodic review. There are trade wastewater that are prohibited from been discharged into the sewers. The **Schedule II of Appendix A** provides list of prohibited discharges.

The trade wastewater stream and domestic wastewater stream should, wherever practicable, discharge separately to the sewer. The dilution of trade waste with water to achieve compliance with the sewer admission limits is prohibited.

4.4 Prohibited Discharges

The *National Water Supply and Sewerage Regulations* under *Part III Clause 31* provides for “Prohibited Discharges” into the sewers.

4.5. Effluent Improvement Programs

For Category 1 and 2 wastewater, the installation of a properly sized, approved pre-treatment device, together with an acceptable maintenance program in accordance with the trade waste approval conditions will be deemed to provide a satisfactory effluent with respect to the General Limit Parameters(s)

For Category 3 wastewater, in addition to installation of properly sized approved pre-treatment device, WPNG may, by agreement accept trade waste that exceeds the Sewer Admission Limit(s) in General Limit Parameter(s) shown in Appendix A. Where such an agreement is made, WPNG may require the trade waste generator to undertake an effluent improvement program.

This program will include:

- A description of the effluent quantity and quality;
- Provision of pre-treatment device to improve effluent

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- Provision for monitoring and reporting waste quantity and quality;
- An examination of waste prevention and recycling options;
- An examination of options for the conservation of water;
- A program involving the development of waste reduction aimed at reducing contaminant levels over a period of not more than two years to the prescribed admission limits. An action program must be provided, including expected outcomes, timelines and milestones;
- A report for WPNG, including a summary of achievements and options.

5. DISCHARGER CATEGORISATION

5.1 Discharger Category

The dischargers of trade wastewater are categorised based on volume they generate and strength of trade wastewater they discharge into the sewer. The increased in volume of trade wastewater discharged or higher strength of concentration of trade wastewater will require the discharger to be re-classified. The Table 1 shows Discharger Category.

Table 1 Discharger Category

| Parameter | Category 1 low strength/low volume | Category 2 low strength/high volume | Category 3 high strength/high volume |
|---|--|---|--|
| Biochemical Oxygen Demand (BOD ₅), mg/L | < 100 | < 250 | >250 |
| Chemical Oxygen Demand (COD), mg/L | < 350 | < 550 | >550 |
| Suspended Solids, mg/L | < 100 | < 200 | > 200 |
| Total Kjeldahl Nitrogen, mg/L N | < 50 | < 80 | >80 |
| Total Phosphorus, mg/L P | < 10 | < 10 | >10 |
| Fat, Oil and Grease (FOG) mg/l | 0 | 0 | 0 |
| Volume, kL/month | < 500 | <1000 | > 1000 |
| Permit or Agreement | <i>Permit</i> | <i>Permit</i> | <i>Agreement</i> |

5.2 Category 1 Discharger

The *Category 1 Dischargers* are those discharging trade wastewater volume not exceeding 500 KL/month with low risk trade wastewater requiring no pre-treatment. Any increase in discharge of wastewater volume above minimum requirement with high concentration will be re-categorised to a Category 2 or 3 Discharger.

Category 1 Dischargers will be issued with a Permit and charged for discharge volume only.

5.3 Category 2 Discharger

The *Category 2 Dischargers* are those discharging trade waste above 500 KL/Month and below 1000 Kl/month with low risk trade wastes requiring minimal pre-treatment. A Category 2 Discharger discharging volume exceeding 1000 KL/month with higher concentration becomes a Category 3 Discharger.

Category 2 Dischargers will be issued with a Permit and charged for discharge volume only.

5.4 Category 3 Dischargers

The *Category 3 Dischargers* are those discharging large volumes of trade wastewater exceeding 1000 KL/month with high risk pollutant concentration that can cause environment damage or injury to operation personnel or damage to the sewerage system. Pre-treatment is required for all Category 3 Dischargers. The Category 3 Dischargers are shown in Table 2.

Table 2 Category 3 Dischargers

| Discharger | Control Measure |
|---|------------------------|
| Abattoir | Pre-treatment |
| Abrasives(mining/processing/handling | Pre-treatment |
| Brewery | Pre-treatment |
| Caustic degreasing | Pre-treatment |
| Chemical manufacture | Pre-treatment |
| Dairy processing(milk/ice cream etc) | Pre-treatment |
| Detergent processing | Pre-treatment |
| Electroplating | Pre-treatment |
| Fibreglass manufacture | Pre-treatment |
| Food processing | Pre-treatment |
| Galvanising | Pre-treatment |
| Liquid wastewater treatment plant facility (grease trap receival depot etc.) | Pre-treatment |
| Metal processing | Pre-treatment |
| Paint manufacture | Pre-treatment |
| Seafood processing | Pre-treatment |
| Soft drink/cordial manufacture | Pre-treatment |
| Sugar distillery/refinery | Pre-treatment |

The **Category 3 Dischargers** will be charged for volume and strength of wastewater discharged.

5.5 Wastewater Discharge Factor

The approval of Trade Waste Discharge Application based on acceptable discharge factor. WPNG will carry out occasional random checks for this purpose. The volume of wastewater discharged is estimated on the basis of 75-80% of metered water supplied to occupier. The volume of monthly metered water or onsite private bore production must be submitted by the occupier in his Trade Waste Discharge Application.

The discharge factor ‘D’ is equal to the water supplied minus the wastewater generated divided by the water supplied as follows:

$$D = \frac{(Q - Q1)}{Q}$$

- Where: Q = Water Supplied to Occupier in Kl
- Q1 = Wastewater generated (75-80% of Q) in Kl
- D = Wastewater discharge factor

6. PERMITS AND AGREEMENTS.

Upon approval, a Trade Waste Discharge Permit or Agreement to discharge trade wastewater into the sewer is issued to a Discharger based on volume and concentration of trade wastewater they generate in their business operation.

6.1 General Terms and Conditions

a) **Transfer of Permit or Agreements**

The holder is not permitted to transfer a Permit or an Agreement to any other person or company nor is it transferable between premises. In this instance a new application must be made to obtain a new Permit or an Agreement from WPNG.

b) **Refusal to Issue Permit or Agreement**

WPNG reserve the right to refuse to issue a Permit or an Agreement for the following reasons:

- i) The applicant has not provided adequate information to enable WPNG to establish an Agreement; or
- ii) The applicant is unable to demonstrate to WPNG that they are able to meet the conditions contained in the Agreement; or
- iii) Where WPNG has determined that the proposed discharge poses an unacceptable risk to WPNG's employees, assets and environment.

c) **Cancellation of Agreement**

WPNG may cancel or suspend a Permit or an Agreement if the holder is out of business or has contravened any conditions of the Agreement.

e) **Change of Ownership**

All holders of Permit or Agreement are required to notify WPNG when there is change of ownership. The owner or occupier is required to make a new application to discharge trade wastewater.

f) **Maintenance of Apparatus**

All apparatus or equipment used for the treatment or monitoring of trade wastewater are to be maintained to WPNG's satisfaction at all times.

6.2 Permits

A Permit with set of conditions is issued to *Category 1 or Category 2 Discharger* for trade waste discharge upon approval of **Application to Discharge Trade Waste**. The approval shall remain in force for the specified period unless cancelled. **Trade Waste Permits** are not transferable.

The Permit issued includes terms and conditions the holder must observe. The terms and conditions include but are not limited to:

- a) expiry/renewal date;
- b) the location of the premises and nature of the occupancy;
- c) the type and composition of trade waste that may be discharged
- d) a statement that the quality of waste shall comply with the WPNG's sewer admission limits as specified in Appendix A.
- e) the quantity of trade waste that may be discharged;
- f) the rate of discharge, including maximum rate of discharge;
- g) the time when trade waste may be discharged;
- h) the period for which trade waste may be discharged;
- i) the method for estimating or measuring discharge volume;
- j) provisions for measuring and sampling discharge prior to entry to sewer;
- k) details of any pre-treatment required;
- l) conditions for maintenance of, and removal of waste from, pre-treatment equipment including the frequency of cleaning and waste transporter to be used;

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- m) records to be kept concerning the cleaning and maintenance of pre-treatment equipment;
- n) a statement that trade waste charges and fees apply and shall be paid in accordance with Section 10 of the Trade Waste Policy; and
- o) any other conditions considered by the Board to be appropriate.

6.3 Agreements

A Trade Waste Discharge Agreement with set of conditions is issued to the *Category 3 Discharger* upon approval of **Application to Discharge Trade Waste**. The Agreement shall remain in force for a specified period unless cancelled. The Trade Waste Disposal Agreements are not transferable.

The Trade Wastewater Discharge Agreement sets terms and conditions the holder of the Agreement must observe. These include but are not limited to:

- a) expiry/renewal date;
- b) the location of the premises and nature of the occupancy;
- c) quality of waste that may be discharged;
- d) a statement that the quality of waste shall comply with WPNG's sewer admission limits as specified in Appendix A ;
- e) quantity of waste that may be discharged;
- f) rate of discharge - maximum instantaneous, maximum daily;
- g) hours of day, days of week discharge is allowed;
- h) requirements for/details of effluent improvement program;
- i) details of self-regulation monitoring program including
 - a) sampling point
 - b) frequency of sampling
 - c) method of sample collection and type of sample to be collected
 - d) analyses required
 - e) methods of analyses
 - f) laboratory to be used
 - g) data transfer and availability to the WPNG
- j) type, design and location of flow measuring equipment and requirements for calibration;
- k) methods to be used for estimation of data lost due to failure of sampling program or flow measurement instrumentation;
- l) provision for measurement and sampling of discharge prior to entry to sewer;
- m) pre-treatment processes to be used;
- n) conditions for maintenance of, and removal of waste from, pre-treatment equipment including the frequency of cleaning, waste transporter to be used ;
- o) records to be kept concerning the cleaning and maintenance of pre-treatment equipment and disposal of waste;
- p) the obligation of the trade waste generator concerning any variations to operation or treatment processes that may affect discharge quantity or quality including change of business type;
- q) a statement that trade waste charges and fees apply and shall be paid in accordance with Section 10 of the Trade Waste Policy; and any other conditions relevant to the particular discharge as agreed.

7. INSPECTION AND MONITORING

7.1 Inspection

WPNG will carry out inspections of the premises of all liquid waste dischargers and their treatment facilities, as specified in the approval as follows:

- Category 1, and 2 type dischargers – at least once per annum, plus re-inspections as required. Inspections of commercial premises preparing hot food may be subject to a higher frequency of inspections.
- Category 3 type Dischargers – at least twice per annum, plus re-inspections as required.

WPNG may inspect premises upon complaint or if it has reasonable grounds to believe the waste generator is in breach of the Trade Waste Discharge Permit or an Agreement.

Inspections may include, but not be limited to the following:

- (i) Check of all chemical storage areas to ensure that they are properly bounded and are not improperly connected to sewer.
- (ii) Checks to ensure that there are no illegal storm water connections to the trade waste system or sewerage.
- (iii) Checks to ensure that there are no illegal trade waste connections to storm water or sewer and that there is no potential for trade waste to overflow improperly to sewer, storm water or waterways.
- (iv) Checks to ensure that pre-treatment facilities are regularly and properly serviced and standby equipment is available where necessary.
- (v) Monitoring of strength and flow is undertaken as required under the trade waste approval.
- (vi) Assessment of work practices to ensure that they do not result in a breach of the trade waste approval or legislation

7.2 Monitoring

The owner/occupier shall install monitoring apparatus and equipment for regular monitoring of trade wastewater generated. The owner or occupier is responsible for regular (daily or monthly) monitoring and maintaining of records of quantity and quality waste water generated. A copy of monitoring record shall be delivered to WPNG at three (3) monthly intervals or as required by Water PNG.

The WPNG at its discretion may carry out its own monitoring or sampling of all or selected parameter as it deems appropriate

Testing of samples is to be undertaken in an accredited laboratory recognised by WPNG. Where the discharger is sampling the effluent, WPNG may randomly take duplicates to conform the waste characteristics.

8. DISCHARGE QUANTITY AND QUALITY

8.1 Quantity

(a) Category 1 & 2

The holder of a Permit or an Agreement may be required to install a suitable method of flow measurement as a condition of a Permit or an Agreement.

- Install a permanent flow measurement device (such as flow meter) to measure the volume and flow rate; or
- Install a temporary flow measurement device to obtain data on flow rate and volume.

In the absence of an approved trade waste flow meter, the volume of trade waste discharged shall be estimated from total metered water consumption of water consumed on the property based on Wastewater Discharge Factor in Section 5.5.

(b) Category 3

WPNG will install an approved trade wastewater flow measurement device as specified in the Agreement to measure the volume of trade waste discharged to the sewer. This should be located on the trade waste discharge stream, which should be separated from the domestic waste discharge stream.

In the absence of an approved trade waste flow meter, the volume of trade waste discharged shall be estimated from total metered water consumption of water consumed on the property based on Wastewater Discharge Factor in Section 5.5.

8.2 Quality

(a) Category 1 & 2

Quality measurements for Category 1 and 2 discharges are required for compliance checks only. WPNG may do this as part of an inspection and monitoring program. There will be no charge except where additional inspection and testing is required because of non-compliance, when the WPNG shall charge the holder of the approval as prescribed.

(b) Category 3

Quality measurements are required for both charging and compliance purposes. It is necessary to identify and segregate trade waste discharges from domestic effluent discharges.

For charging purposes, a system of self-monitoring by the trade waste generator shall be used to collect sufficient data to enable the mass load for the designated charging period to be calculated. Where pre-treatment is required to meet sewer admission limits for specified parameters, self-monitoring will be required for those parameters, or a suitable surrogate, to confirm satisfactory pre-treatment.

Requirements for self-monitoring and auditing by the WPNG shall be specified in the Agreement. The holder of the Agreement shall meet all costs of self-monitoring.

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WPNG may inspect the premises and collect and analyse samples for overall assessment of compliance with sewer admission limits and Agreement conditions as part of its inspection and monitoring program.

Where additional inspection and testing is required to be done by WPNG as a result of non-compliance, WPNG shall charge the holder of the Agreement as prescribed

9. SPECIFIC REQUIREMENTS FOR COMMERCIAL AND INDUSTRIAL WASTES

9.1 Removing and Disposing Regulated Waste from Premises

No person shall discharge or cause to be discharged directly or indirectly to sewerage system, wastes from any waste transport vehicle without a trade waste approval.

Removing and disposing of septic tank waste, portable toilet waste and holding tank waste shall only be done by a licensed waste transporter. Such waste may be disposed of to a sewerage system in accordance with approval conditions.

Waste from grease and oil arrestors, other than treated effluent from approved installations (Section 9.2), shall not be disposed of to the sewerage system. Such wastes shall be disposed of in a safe manner at an approved site by the Local Level Government.

9.2 Arrestor Installations

The WPNG shall approve design and capacity of arrestor installations required to pre-treat trade wastewater before discharge to sewer.

9.2.1 Grease Arrestors

The maximum capacity of an individual grease arrestor shall be 2000 litres. Where the capacity requirement for a premise is greater than 2000 litres, additional arrestors shall be used, with each arrestor to be a discrete installation separately treating a defined waste stream.

Where it is intended that several trade waste generators share the use of a grease arrestor, the following information is required to be clearly tabled on the plan submitted with the application for approval:

- a) the size of the arrestor;
- b) details of the loading to be discharged by each trade waste generator;
- c) the names of the businesses and shop number(s) sharing the arrestor.

Grease arrestors must be located so as to allow appropriate access for inspection, pump out and cleaning. Where practicable, a hose cock with suitable backflow prevention is to be provided for cleaning. WPNG's prior approval is to be obtained before installation.

All grease arrestors shall be fitted with full length and width opening, gas tight covers and frames.

The use of solvents, enzymes, mutant or natural bacterial cultures, odour control agents or pesticides in grease arrestors is prohibited unless specifically approved by WPNG. WPNG's Conditional approval may be given to allow the trade waste generator to demonstrate to WPNG that the product to be used does not adversely impact on the sewerage system or the environment.

Maintenance cleaning of grease arrestors shall be carried out on a regular basis in accordance with conditions of the trade waste approval, issued by WPNG.

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In a situation where a grease arrestor is required for pre-treatment but cannot be installed because of specific site constraints, the waste generator shall seek an alternative method for pre-treatment (such as a grease converter), to be approved by WPNG.

9.2.2 Mineral Oil Arrestors

Appropriately sized mineral (petroleum) oil arrestors for the treatment of oily wastewater will be approved in most circumstances. Acceptable methods include:

- a) Coalescing plate separators;
- b) Membrane technology;
- c) Dissolved air flotation (DAF);
- d) Chemical precipitation;
- e) Hydro- cyclones;
- f) Triple stage interceptors; and
- g) Other apparatus /methods.

Each application will be assessed on the nature of the oily waste to be treated, the proposed treatment method and site location.

Subject to recommendations by the manufacturers of plate separators, “Quick Break Detergents” may be used with plate separation units.

Maintenance cleaning of mineral oil arrestors shall be carried out on a regular basis in accordance with conditions of the trade waste approval.

9.2.3 Other Arrestor Applications

Arrestor installations may be used for other trade waste treatment applications such as:

- a) Silt separation;
- b) Oil and grease (non petroleum);
- c) Cooling;
- d) Neutralisation; and
- e) Other specific applications approved by the Board.

Each application will be assessed on the nature of the waste to be treated, the proposed treatment method and site location.

Maintenance cleaning of arrestors shall be carried out on a regular basis in accordance with conditions of the trade waste approval.

9.3 Enzymes and Biological Additives

9.3.1 Enzyme and Bacterial Cultures

Enzyme and mutant or natural bacterial cultures may be permitted for use in certain biological pre-treatment systems by way of specific application to the WPNG.

Applicants will need to demonstrate to the Board, that the product to be used does not adversely impact on the sewerage system or the environment.

9.3.2 Genetically Modified Organisms (GMOs)

Any person wishing to discharge commercial products containing genetically modified organisms to sewerage *system* must first obtain approval for discharge to coastal and inland waters from Conservation and Environment Protection Authority. WPNG may then grant approval for discharge to sewerage system, only after approval and advice is sought from CEPA regarding the nature and quantity of discharge.

Laboratories and other facilities which culture, package or transport GMO should have in place sufficient procedures and pre-treatment equipment to ensure that no live GMO are discharged to the sewer.

9.4 Food Waste Disposal Units

Food waste disposal units (garbage grinders / sink-to-sewer disposal units) may be approved for non-domestic use by specific application to WPNG.

9.5 Commercial Swimming Pools and Ornamental Pond

The back wash water and water from commercial and public swimming pools and ornamental ponds may not be discharged to sewer without approval through the issue of a trade waste approval. Trade waste charges in accordance with the Discharge Category will apply.

9.6 Medical, Clinical, Veterinary and Infectious Wastes

Solid wastes from any hospital, clinic, office or surgery of a medical or veterinary facility or laboratory, convalescent or health transport facility including, but not limited to, hypodermic needles, syringes, instruments, utensils, swabs, dressings, bandages, or any paper or plastic item of a disposable nature, or any portions of human or animal anatomy, SHALL NOT be discharged to the sewer.

Discharging of such wastes, as mentioned above must first referred to the National Department of Health and CEPA, thereafter in consultation with WPNG, may be permitted in accordance with advices provided both by the National Department of Health and CEPA, based on the *National Guidelines for Waste Management in the Health Act*.

No pathological, infectious or hazardous liquid wastes, and radioactive substance deemed to pose a threat to public health and safety be discharged to the sewer without prior approval from the WPNG. Such wastes shall require pre-treatment to render them non-infectious or non-hazardous prior to discharge. When approved for discharge, trade waste charges will apply.

9.7 Containment of Toxic/Hazardous Substances

Any potentially toxic or hazardous substances shall be stored in bounded areas where leaks, spillage, or overflows cannot be drained by gravity or by any automated mechanical means to sewerage or the storm water drainage system.

Bounding of toxic or hazardous substances shall meet recommendations of applicable best practice guidelines, standards.

9.8 Landfill Leachate and Disposal Facility Wastewater

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Leachate from landfill sites and wastewater from waste treatment/disposal facilities constitutes a trade waste and may not be discharged to sewer without approval through the issue of a trade waste approval.

9.9 Discharges from Open Areas

The discharge of rainwater and storm water to sewer is prohibited.

The ingress of surface water from a potentially contaminated open area to sewerage can cause severe operational problems for WPNG. However, there may be circumstances when it is environmentally beneficial to accept these wastes to the sewer under strict controls.

The discharge to sewer from any potentially contaminated open area that is raised or bounded may be considered, provided the quality and quantity requirements of this plan are met.

Applicants should note that an open area approval is not an alternative to the appropriate management of polluted areas such as roofing or other methods to keep water away from the open area. Applicants must demonstrate to WPNG that all appropriate measures to keep runoff water away from the potentially contaminated open area have been taken. A trade waste approval is required to discharge such waste.

All applications for sewer discharge from open areas must have controls incorporated in the design that will, in the opinion of WPNG ensure that:

- a) all contaminated liquid waste is pumped to sewer at a rate acceptable to WPNG;
- b) all discharge to sewer ceases automatically after a predetermined level of rainfall volume (mm) and/or intensity (mm/hr) may be set by the WPNG;
- c) the "first flush" volume is collected and segregated during wet weather with additional runoff directed to the storm water system. Applicants should seek advice from the WPNG on the required "first flush" volume to be collected;
- d) the "first flush" volume collected is pumped to sewer, after any necessary pre-treatment, no sooner than one (1) hour after the rain stops;
- e) a suitable device for the determination of sewer discharge flow and volume to be installed.

Charges in accordance with the discharge category classification will apply.

10. CHARGES AND FEES

10.1 Trade Waste Charges

The fees and charges for trade wastes are regulated by the Independent Consumer and Competition Commission (ICCC). In determining the fees and charges WPNG aims to recover the costs directly attributable to the acceptance and processing of trade waste. Trade waste charges are levied against the waste generator on Monthly Basis. The Charges are invoiced monthly.

In the case of multiple waste generators operating from one premise and sharing an arrestor installation, Charges/Fees will be apportioned based on volume discharged.

The trade waste discharged into the public sewer system is charged based on volume and strength of wastewater.

Table 3 Unit Charges

| Component/Parameter | Unit | Rate K/Unit |
|----------------------------|-------------|--------------------|
| Volume | Kl | 2.70 |
| BOD | mg/l | 0.353 |
| Suspended Solids | mg/l | 0.296 |
| Oil & Grease | mg/l | 0.513 |

The Monthly Charge for trade wastewater is calculated based on the following formula:

$$C = Q \times D \times 2.70 + \{0.353 \times (\text{BOD})\} + \{0.296 \times (\text{SS})\} + \{0.513 \times (\text{OG})\}$$

Where:

C=Monthly Trade Waste Charge

BOD=BOD concentration, mg/L

SS=Suspended solids concentration, mg/L

OG=Oil and grease concentration, mg/L

Q=Volume of Water Supplied, KL/month

D=Wastewater Discharge Factor

Trade waste is divided into three categories for charging purposes. Charges are based on actual quality and quantity of discharge for the period, where this information is available; if this information is not available, charges will be based on figures described in the Permit or Agreement. Charges will be levied as follows:

10.1.1 Category 1:

A flat fee shall apply to cover costs of administration, inspection and compliance testing.

10.1.2 Category 2:

A quantity charge on total monthly volume of trade waste discharged to the sewer to be calculated as follows:

$$C = Qk$$

Where:

C is the monthly charge in kina,

Q is the monthly volume (KL), and

k is the unit charge rate (K/KL).

TRADWASTE POLICY

The unit charge, k, is based on the cost of providing and maintaining the sewerage system for the total annual wastewater flow to the sewerage plant(s) including administration, inspection and compliance testing for trade waste control;

A minimum fee shall apply where the charges calculated by the above formula are less than the minimum fee.

10.1.3 Category 3:

The total monthly charge of discharge trade wastewater into the sewer is calculated as follows:

$$C = Q \times D \times W + [X(\text{BOD}) + Y(\text{SS}) + Z(\text{OG})]$$

Where:

C = Monthly Charge for Trade Wastewater, kina

Q = Monthly Volume of water consumed, kL

D = Discharge factor based on pre-treatment system

W = Unit charge for discharge volume, kina/kL

X = Unit charge for BOD, kina/mg/l

Y = Unit charge Suspended Solids, kina/mg/l

Z = Unit charge for Oil and Grease, kina/mg/l

BOD = BOD concentration, mg/L

SS = Suspended solids concentration, mg/L

O&G = Oil and grease concentration, mg/L

Charges shall be made for BOD₅ (or COD), suspended solids, (oil/grease), special provisions as set out in an Agreement, or parameters deemed to be equivalent to BOD₅ or COD by an Agreement.

A minimum fee to cover administration, inspection and compliance testing shall apply when the charges calculated by the above formula are less than the minimum fee.

10.2 Inspection and Analysis Fees

The cost of inspection shall be based on the charge out rate for the relevant WPNG Staff involved and include time spent on site and travel to and from the site. Inspection fees shall be based on the time spent on site.

The full cost of laboratory analyses shall be charged to the discharger

Where additional inspections and laboratory analyses are required because of non-compliance with trade waste approval conditions, full costs will be recovered from the holder of the Agreement.

10.3 Application Fees

Applicants for an Agreement to discharge under Category 3 shall be charged an application fee to cover the cost of processing the application and drawing up the Agreement.

This fee must accompany the application.

A standard Application Fee is applicable for Permit applications for Category 1 and 2 Dischargers.

10.4 Septage and Other Liquid Waste Fees

Private licensed waste transporters disposing of septage, portable toilet or other approved liquid waste to the sewer or sewage treatment plant under approved conditions shall be charged as per WPNG's determined schedule of fees. Licensed waste transporters and other persons disposing of septic tank effluent, portable toilet or other approved liquid waste to the sewer or sewage treatment plant under approved conditions shall be charged as per schedule of fees.

10.5 Additional Charges

Where WPNG agrees to accept to the sewer waste which has properties in excess of those defined in the General Limits (Schedule 1, Appendix A) of the Sewer Admission Limits, an additional charge will apply for each agreed noncompliant parameter. The formula for calculation shall be:

Charge = (actual/approved) d x r (K/mg/l) x w (mg/l) pollutant

where d is a constant to be determined by WPNG; - the minimum ratio for (actual/approved) is 1.0; and approved means the sewer admission limit value or other negotiated value defined in the Permit or Agreement, r is rate set by ICCC and w weight of pollutant in kilogram.

The period of the charge will be the time period, based on the sampling frequency, over which the limits are considered by WPNG to have been exceeded.

Trade waste charges and fees are listed in Appendix C.

10.6 Refunds on Cessation of Discharge

The fees and discharges paid by dischargers to WPNG are for generation and discharge of trade wastewater. There will be no refunds on cessation of discharges for any reason.

11. APPLICATION PROCEDURES

A person or a company intending to discharge trade waste to sewer must make written application for an approval to discharge. Applicants should contact the WPNG Head Office or WPNG Offices in the Provinces for advice on the application required and the procedures for obtaining approval.

Applications should be lodged for all existing business premises and for new businesses prior to commencement of trading.

11.1 The Application Process.

The following process is provided to be followed:

Step 1: Collect and Complete the Application Form

The form entitled “**Application to Discharge Trade Waste to Sewer**” may be obtained from WPNG Head Office, Petromin Building, 2 Mile or can be downloaded from WPNG web site: www.wpng.com.pg

All details in the Applications must be provided to in full to prevent delays in processing.

Step 2: Submission of Application Form

The completed Application form can be posted to WPNG at the following address:

The Chief Executive & Managing Director
Water PNG
PO Box 2779
BOROKO
National Capital District

Or hand delivered to:

Water PNG
Level 1& 2 Petromin Building
2 MILE
National Capital District

Step 3: Approval of Application

WPNG will review the **Application to Discharge Trade Waste to Sewer** for details and completeness and subject to satisfying the requirements of categorisation of the discharger and other requirements of this Policy, a decision will be made for approval or refusal.

A letter will be sent advising the applicant of the approval or refusal of the Application.

The approval of Application to discharge for:

- i. Category 1 & 2 a Permit will be issued with conditions
- ii. Category 3 Agreement will be entered into with set of conditions.

APPENDICES

TRADWASTE POLICY

APPENDIX A

GUIDELINE SEWER ADMISSION LIMITS

The upper limits for the quality of trade waste discharged to the sewer for all categories are set out below. These admission limits shall apply from the date approval given by the Board of Directors. They are subject to periodic review as required.

Schedule I. Guideline Limits

| Parameter | Maximum Concentration | Guideline |
|---|--------------------------|-------------------------|
| Ammonia plus ammonium ion (as N) | 50 mg/l | <50 mg/l |
| Aluminium (as Al) | 100 mg/l | <100 mg/l |
| Arsenic (As) | 0.05 mg/l | <0.05 mg/l |
| Biochemical Oxygen Demand (BOD ₅) | 300 mg/l | <300mg/l |
| Boron (B) | 1 mg/l | <1 mg/l |
| Bromine (Br ₂) | 1 mg/l | <1 mg/l |
| Cadmium (Cd) | 0.01 mg/l | <0.01 mg/l |
| Chemical Oxygen Demand (COD) | 650 mg/l | <650 mg/l |
| Chlorine (as Cl ₂) | 0.5 mg/l | <0.5 mg/l |
| Chromium (Cr) | 0.1 mg/l | <0.1 mg/l |
| Cobalt (Co) | 5mg/l | <5mg/l |
| Colour | No any visible presences | No any visible presence |
| Copper (Cu) | 1 mg/l | <1 mg/l |
| Cyanide (Cn ⁻) | 0.005 mg/l | <0.005 mg/l |
| Fluoride (F ⁻) | 1.5 mg/l | <1.5 mg/l |
| Formaldehyde (as HCHO) | 50 mg/l | <50 mg/l |
| Iron (Fe) | 1 mg/l | <1 mg/l |
| Lead (Pb) | 0.005 mg/l | <0.005 mg/l |
| Manganese (Mn) | 0.5 mg/l | <0.5 mg/l |
| Mercury (Hg) | 0.0002 mg/l | <0.0002 mg/l |
| Molybdenum (Mo) | 10 mg/l | <10 mg/l |
| Nickel (Ni) | 1 mg/l | <1 mg/l |
| Odour | Not detectable | Not Detectable |
| Pesticides – general | Not accepted | Not accepted |
| Petroleum hydrocarbons | 30 mg/l | <30 mg/l |
| pH | 6.5 – 9.0 | 6.8 – 10.0 |
| Phenolic compounds (as phenols) | 100 mg/l | <100 mg/l |
| Selenium (Se) | 0.01 mg/l | <0.01 mg/l |
| Silver (Ag) | 0.05 mg/l | <0.05 mg/l |
| Sulphate (as SO ₄) | 100 mg/l | <100 mg/l |
| Sulphite (as SO ₂) | 15 mg/l | <15 mg/l |
| Sulphide total (S ₂ ⁻) | 10 mg/l | <10 mg/l |
| Surfactants – Anionic (MBAS) | 10 mg/l | <10 mg/l |
| Temperature | 40° C | <38° C |
| Total Organic Compound (TOC) | 500 mg/l | <500 mg/l |
| Total Suspended Solids (TSS) | 500 mg/l | <500 mg/l |
| Total Dissolved Solids (TDS) | 500 mg/l | <500 mg/l |
| Total Oil and Grease | 0 mg/l | 0 mg/l |
| Total Kjeldhl Nitrogen (as N) | 100 mg/l | <100 mg/l |
| Total Phosphorus (as P) | 20 mg/l | <20 mg/l |
| Zinc (Zn) | 5 mg/l | <5 mg/l |

TRADWASTE POLICY

+ The total mass load and the capacity of the sewerage system to accept the load shall be considered for each application.

The Board may in some circumstances accept waste containing higher concentrations of these substances.

++ specify analytical method

Schedule II PROHIBITED DISCHARGES

- Prohibited substances as defined in *National Water Supply Sewerage Regulations 1984*
- Flammable/explosive substances.
- Radioactive substances.
- Pathological and infectious waste and cytotoxic waste except as allowed for under the *National Health Act*.
- Genetically modified (engineered) organisms.
- Stormwater and uncontaminated water.

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APPENDIX B

CATERGORY OF TRADE WASTE

The Category of Trade Waste determines the form of Trade Waste agreement and also the pricing structure. The categories are described below:

| CATERGORY | DESCRIPTION | TYPICAL TYPES OF CUSTOMERS | FORM OF AGREEMENT | FEES AND CHARGES |
|--------------------|--|---|---------------------------------|--|
| CATERGORY 1 | Discharge volume of less than 500KI per year | Very small Trade Waste Customers, i.e. small commercial businesses (e.g. home catering florist, pharmacy) | Trade Waste Discharge Permit | Standard Monthly Charge + Application fee |
| CATERGORY 2 | Discharge volume less than 1000KI per year | Commercial businesses (e.g. restaurant, hotels, takeaways, Laundromat, car wash | Trade Waste Discharge Permit | Fixed Monthly Quantity charge + Application fee |
| CATERGORY 3 | Discharge volume greater than 1000 kilolitres per year | Industrial factories and large commercial business, (e.g. chemical processing, food manufacturing etc) | Trade Waste Discharge Agreement | Variable Annual charges dependent on quality and quantity of discharge + Application fee |

APPENDIX C

CHARGES and FEES

The proposed fees and charges listed below are subject to approval by WET and Board or ICCC prior to implementation.

1. APPLICATION FEE: FLAT RATE: K75.00

2. TRADE WASTE CHARGES

Category 1 Flat Rate: K250.00 /annum

Category 2 Volume: K2.50 / KL
Minimum fee: K350 / annum

Category 3 Volume: K2.50 / KL
BOD₅ K0.353 / mg/l
Suspended solids: K0.296/ mg/l
Oil & Grease K0.513/mg/l

Minimum fee: K400.00/annum

3. INSPECTION FEES

These apply to additional inspections required as result of non-compliance with permit or agreement.

All categories: K150.00 per hour or part thereof on site.

4. TESTING FEES

These apply to additional analytical tests required as a result of non-compliance.

All categories: Full cost of laboratory charges.

5. SEPTAGE AND OTHER APPROVED LIQUID WASTE

Volume charge all loads: K25.00 per kilolitre

6. ADDITIONAL CHARGE

For all parameters the factor d = 1.2
Rate for Additional Charge K0.50/mg/l
Approved, means Sewer Admission Limit unless otherwise specified in Permit/Agreement.

APPENDIX D

BUSINESSES AND INDUSTRIES GENERATING TRADE WASTEWATER

Listed below are some of the general businesses and industries that generate trade waste:

GENERAL INDUSTRY LIST

| | |
|-------------------------------------|--|
| . Abattoirs | . Hire Equipment |
| . Abrasive Blasting | . Hotels |
| . Aerial Spraying | . Industrial Cleaners |
| . Agricultural Machinery | . Laundrettes |
| . Air Conditioning | . Medical Practitioners |
| . Auto Mechanics | . Motor Radiator Service |
| . Bakers | . Motor Service Stations/Oil Companies |
| . Beauty Salons | . Paint and Paint Manufacturers |
| . Bitumen Spraying | . Panel Beaters and/or Smash Repairs |
| . Building Contractors | . Pest Control |
| . Butchers | . Photographic Processing |
| . Cabinet Makers (French Polishers) | . Poultry |
| . Carpet and Lounge Cleaners | . Printers |
| . Carriers/Transport Services | . Restaurants |
| . Catering | . Screen Printers |
| . Clubs | . Take Away Food |
| . Commercial Cleaners | . Tyres Services |
| . Concrete Suppliers and Products | . Veterinary |
| . Dairies | . Waste Reduction & Disposal Services |
| . Delicatessens/Small Goods | |
| . Dentists | |
| . Drycleaners | |
| . Engine Reconditioning | |
| . Fishmongers | |
| . Hair Dressers | |

APPENDIX E

DEFINITIONS

The glossary is provided to assist in their interpretation of the Trade Wastewater Management Policy.

Authority In examples described herein, an organisation or its employees which operates and manages a sewerage system.

BOD Standard parameter of organic pollution – a measurement of the (BOD) dissolved oxygen required by the micro-organisms in the biochemical oxidation of organic matter over a five day incubation period, correctly known as 5-day BOD and written as BOD₅

Discharger/Occupier The occupant of the property or premises from which wastewater is discharged into the sewerage system.

CEPA The Conservation Environment and Protection Authority, who is responsible for the protection and monitoring of the environment

WPNG Water PNG (formerly PNG Waterboard) established under ‘*National Water Supply and Sewerage Act 1986*’ became effective on the 01st of January 1987. It is responsible for all declared water districts throughout PNG except NCD.

Sewage / Wastewater The total borne waste generated on a property or by a community intractable waste. That waste of which no environmentally sound treatment process is presently available (in the region in question, i.e. a process may exist elsewhere).

Oils and Grease Fats, oily and greasy materials of animal, vegetable or mineral origin

Occupier The authorised occupier of any property or premises

Trade Waste Liquid trade or factory wastes or chemicals or other impurities from any business, trade or manufacturing premises other than domestic waste, storm water or unpolluted water.

Agreement See trade waste agreement

Arrestor An apparatus designed to intercept and retain silt, sand, oil, grease, sludge and other substances in a waste discharge.

Board In this plan a reference to Board means the WPNG or any person appointed or authorised by the Water PNG to act on behalf of the Board as the case may require.

Bio-solids The treated solids (sludge) mainly organic, produced by sewage treatment. Domestic sewage. Faecal matter and urine of human origin and liquid household wastes from water closet pans, sinks, baths, basins and similar fixtures designed for use in private dwellings.

Effluent The liquid discharged following a wastewater treatment process.

Generator See trade waste generator

Human wastes Human faecal substances and urine.

Permit See trade waste permit

Prohibited substances A substance prescribed in Appendix D this Draft

Regulated waste Non-domestic waste (whether or not it has been treated or immobilised) and includes for an element – any chemical compound containing the element; and anything that has contained the waste.

Sewage The wastewater from the community including all faecal matter, urine, household and commercial wastewater that contain human waste.

Sewerage or Sewerage System A sewer, access chamber, vent, engine, pump, structure, machinery, outfall or other work used to receive, store, transport or treat sewage.

Storm-water Drainage A drain, channel, pipe, chamber, structure, outfall or other work used to receive, store, transport or treat storm water

Trade waste The water-borne waste from business, trade or manufacturing premises, other than: waste that is a prohibited substance; or human waste; or storm water.

Trade Waste Agreement Trade waste approval for the discharge of liquid waste classified as Category 3. It states the terms and conditions to be met by the trade waste generator and the owner with respect to the discharge of trade waste into Board's sewerage system.

Trade waste approval Written approval by Board for a person to discharge trade waste to the sewerage system. See Trade waste agreement and Trade waste permit.

Trade Waste generator Any person, owner, occupier, company or body whose activity produces or has the potential to produce trade waste.

Trade Waste Permit Trade waste approval for the discharge of liquid waste classified as Category 1 or 2. It states the terms and conditions to be met by the trade waste generator and the owner with respect to the discharge of trade waste into Board's sewerage system.

Mg/l Milligram per litre (1kg/1000kl)

KL/d Kilotres per day (1,000 L/d)

L/d Litres per day

ML/d Million Litres per day (1,000,000 L/d)

SS Suspended solids are the solids in a liquid which can be removed through sedimentation or filtration; excludes the larger contents removed by screens and the colloidal or dissolved solids.

APPENDIX F



WATER PNG TRADE WASTE WATER APPLICATION FORM AND TERMS AND CONDITIONS

APPLICATION FOR PERMIT/AGREEMENT TO DISCHARGE TRADE WASTEWATER TO SEWER

I/We being the Owners or Authorised Agent and the waste generator of the premise described in Section C of this application hereby make application to discharge trade wastewater from that premise into Water PNG's reticulated sewerage system for collection, treatment and discharge thru its Sewerage Treatment Plant

Trade Waste Discharge Permit No:

A. Property Owner/Ratepayer Details

| | |
|----------------------------------|--|
| Name: | |
| Street Name: | |
| Postal Address: | |
| Contact Name: | |
| Contact Number - Business Hours: | |
| Contact Number – Mobile: | |
| Facsimile/ Email Address | |

| |
|--|
| |
|--|

B. Business Operator/Leaseholder

| | |
|---|--|
| Business Name | |
| Business Street Address Street No. Street Suburb Postcode | |
| Postal Address | |
| Contact Name Contact Number – Business Hours Contact Number - Mobile | |
| Facsimile Email Address | |

C. Property from which Trade Waste will be discharged

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| | |
|-----------------------|--|
| Business Name | |
| Business Address: | |
| Shopping Centre Name: | |
| Street Name: | |
| Sect & Lot #: | |

| |
|--|
| Application for Permit/Legal Agreement to Discharge Trade Waste to Sewer |
|--|

D. Discharge Category (Refer to Policy Document for Explanation)

(V) Please tick appropriate category

| | |
|--|--|
| Category 1 (Permit) Less than 500kl p/m | |
| Category 2 (Permit) (More than 500kL p/m but less than 1000kl) | |
| Category 3 (Agreement) (Above standard admissions strength) (More than 1000kl p/m) | |

Permits are issued for Category 1 and Category 2 waste dischargers. A Legal Agreement is negotiated for Category 3 waste dischargers

| |
|---|
| Nature of Trade/Business/Industry conducted (e.g. Restaurant, Dry Cleaner, Electro-platers, and Dentist ... etc.) |
|---|

| |
|---|
| Details of processes and activities from which trade waste is generated |
|---|

| |
|--|
| Maximum Rate of discharge to sewer Litres per hour Equivalent to size of Grease Trap |
|--|

| |
|--|
| Days of week discharge occurs: All Mon Tues Wed Thurs Fri Sat Sun and Hours of discharge |
|--|

| |
|--|
| Basis for estimation of volume of discharge to sewer |
|--|

| | | | | |
|---|-----|--|----|--|
| Is water supply to premises metered.....? | Yes | | No | |
|---|-----|--|----|--|

| | | | | |
|---|-----|--|----|--|
| Is a Trade Waste discharge to sewer metered.....? | Yes | | No | |
|---|-----|--|----|--|

| |
|--|
| (If Yes, details to be provided separately.) |
| |

| | |
|--|--|
| Estimated volume of water NOT discharged to sewer Litres per day | |
|--|--|

| |
|--|
| Describe proposed/present method of pre-treatment of trade waste before discharge to sewer (E.g. pH correction, grease trap, silt trap, balance tank, biological process etc.) |
|--|

TRADWASTE POLICY

| |
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|--|

| |
|---|
| Name of present/proposed contractor to be used to clean Trade Waste pre-treatment equipment |
|---|

| |
|--|
| |
|--|

| |
|--|
| Present/proposed frequency of cleaning pre-treatment equipment |
|--|

| |
|--|
| |
|--|

| |
|---|
| For Category 1 & 2 Permits, list provisions made to allow for measurement and sampling by WPNG of Trade Waste prior to entry to sewer |
|---|

| |
|--|
| |
|--|

| |
|---|
| Application for Permit/Legal Agreement to Discharge Trade Waste to Sewer |
|---|

Nature of Trade Waste (i.e. Physical/chemical parameters. Category 3 MUST complete. Category 1 & 2 complete if known.)

| | | |
|------------------------|-----|-----------|
| BOD | |mg/l |
| Temperature | |C |
| COD | |mg/l |
| pH | |mg/l |
| Non filterable residue | |mg/l |
| Oil/Grease | |mg/l |
| Total dissolved solids | |mg/l |
| Sulphur compounds | |mg/l |
| Metals | Yes | No |
| Other Chemicals | Yes | No |

Details of 'Other chemicals'

Attach relevant Material Safety Data Sheets for chemicals of significant quantity.)

| |
|--|
| |
|--|

Signatures

Owner/Authorized Agent

| | |
|--|-----------------|
| | Date: / /20.... |
|--|-----------------|

| | | |
|-----------------|----------|-----------------|
| Waste Generator | Position | Date: / /20.... |
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APPENDIX G

12. TERMS AND CONDITIONS OF APPROVAL

1. IN CONSIDERATION of the premises and of the covenants hereinafter contained the parties hereto agree as follows:

- a. No changes shall be made in the point or points at or through which trade waste is to be discharged to WPNG sewer after the date hereof except with the consent in writing of WPNG
- b. If required by WPNG, sampling or testing points shall be provided by the Occupier through which all trade waste and nothing else shall pass.
- c. The waste shall in all respects comply with the discharge standards stated in WPNG Trade waste Policy.
- d. Except to the extent set out in the discharge standards the waste shall not include substances of a nature and quantity likely to injure the sewers into which it is discharged or the machinery installed at any sewage pumping station or to interfere with the free flow of the contents of the sewers.

2. **The Occupier HEREBY COVENANTS with WPNG as follows:**

- a. To comply with the terms, conditions and provisions of the Regulation and of all other relevant legislation.
- b. To fulfil, observe and perform all the terms, conditions and provisions of the approval.
- c. To bear the cost of all works, pipes and connections including the connections to WPNGs sewer necessary to effect discharge of the said trade waste from the premises of the Occupier into such sewer.
- d. Not to discharge any trade waste or, where there is a common discharge of such waste, at a rate or in a volume in excess of the capacity of any apparatus, machinery or drain used for the purpose of conveying such waste from the said premises to WPNG sewer system.
In the event of any discharge in excess of the rates stated in the Policy, priority written approval should be obtained from WPNG.
- e. That the Occupier shall pay to WPNG upon demand the standard charge determined from time to time, for the receipt of the waste into its sewer where, in opinion of WPNG, the waste is discharged at such a flow and is of such a composition as to be considered to comply with the requirements of the Approval.
- f. That, in addition to all rate fees or other charges payable to WPNG under WPNG's Trade Waste Policy, the Occupier also agrees to pay to WPNG on demand a surcharge determined by WPNG in its sole discretion and without affecting its other rights under the Trade Waste Regulation for receipt of the waste into its sewers where, in opinion of WPNG, the waste is discharged at such a flow or is of such a composition as the to be considered to not comply with any requirement of this Approval.
- g. That, in addition to all rate fees or other charges payable to WPNG under WPNG's Trade Waste Policy, the Occupier also agrees to pay to WPNG on demand a surcharge determined by WPNG in its sole discretion and without affecting its other rights under the Trade Waste Regulation for receipt of the waste into its sewers where, in opinion of WPNG, the waste is discharged at such a flow or is of such a composition as the to be considered to not comply with any requirement of this Approval.
- h. That, in addition to all rate fees or other charges payable to WPNG under WPNG's Trade Waste Policy, WPNG reserves the right in its sole discretion and without affecting its other rights under the Trade Waste Regulation that where, in the opinion of the Engineer, waste is continuously or repeatedly discharged into its sewers at such a flow or is of such a composition as to be considered to not comply with any requirement of this Approval, WPNG may disconnect the Occupiers premises from the sewer system at the expense of the Occupier.

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- i. To remain liable for all charges and all other moneys payable to WPNG under this Approval and the Regulation as a result of the discharge of trade waste from the premises while he continues to occupy the premises and it is further agreed that in the event of the occupier ceasing to occupy the premises and not giving at least fourteen days' notice in writing prior to so ceasing the Occupier shall also be liable in respect of the discharge of all trade waste discharged until expiration of fourteen days after the date upon which the Occupier notifies WPNG in writing of the date from which he ceases to be the Occupier of such premises.
- j. To permit the Engineer or any other authorised officer, servant, agent or workman of WPNG, at any time and from time to time to enter upon the premises and every part thereof of the purpose of ascertaining whether the quality, quantity or rate of discharge of waste complies with the conditions of this approval and for the purpose of inspecting the treatment apparatus and machinery or for any other reasonable purpose relating to the administration of the Regulation or of this Approval
- k. To keep all apparatus and machinery used for the purpose of the treatment or discharge of waste, in accordance with the Regulation, and to maintain in a proper and efficient condition at all times. If and where directed by the Engineer to install at his own cost all or any of the following:
 - (i) Approved meters or devices for measuring the volume or rate of discharge.
 - (ii) Approved flow control or restriction device for regulating volume or rate of discharge.
 - (iii) Approved chambers for sampling and measurement of the trade waste discharged.
 - (iv) Approved equipment for pre-treatment of trade waste discharges.

3. Subject to the terms and conditions of this Approval the parties HERETO AGREE as follows:

- a. WPNG will accept the trade waste discharged from the premises of the Occupier but nothing herein shall render WPNG liable for any damages at the suit of the Occupier by reason of its refusal or failure to accept any trade waste where such failure or refusal has resulted from a determination of the Engineer, made by him by the purpose of preventing any overload of WPNG sewers or works or of any pipes or drains for overload of WPNG's sewers or works or of any pipes or drains for carrying waste or for the purpose of enabling WPNG more readily to comply with the terms of any licence for it to discharge into the environment under the provisions of the Environment Protection Act or other such like legislation.
- b. The Occupier will indemnify and keep indemnified WPNG:
 - (i) Against all claims, actions and demands for or in respect of any accident, damage, loss or injury directly or indirectly arising out of, or resulting from, the discharge of trade waste from the said property.
 - (ii) In respect of all damage occasioned or done to any sewer of WPNG or any property belonging to WPNG, by reason of such discharge failing to comply with the terms, conditions and provisions of this or Regulation, WPNG shall be at liberty, at the expense of the Occupier, to repair, remedy and make good all such damage as aforesaid and WPNG shall certify the cost and expense thereof and such certificate shall be final and conclusive as to such amount which shall be paid forthwith to WPNG.
- c. All meters or devices installed by or for the Occupier for the purpose of this clause shall at all times be readily accessible to the Officers of WPNG and shall be maintained in correct adjustment and working condition by the Occupier, who shall keep and on demand make available to WPNG all charts and records of discharge as may be required by the Engineer and shall preserve for this purpose such charts and records for a period of twelve months from the date of their compilation.
- d. If in the opinion of the WPNG any approved meter or other approve measuring device installed in any property shall at any time be found to be on of repair or in and inefficient state or condition or to have registered incorrect or to have ceased to register, then WPNG may adjust the charge in respect of the period from the last preceding reading as follows:

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(i) If a reading was recorded for the corresponding period of the previous year, the charge may be calculated upon the basis of the daily discharge equal to the average daily discharge during such corresponding period of the previous year or:

(ii) If no reading was recorded for the corresponding period of the previous year, the charge may be calculated upon the basis of the daily discharge equal to the average daily discharge during the period covered by the first reading after the meter or measuring device as aforesaid has been put into good repair and in an efficient state and condition, or another metre or measuring device has been fixed in place.

4. **Subject to the terms and conditions of this Approval the parties HERETO AGREE as follows:**

- (a) WPNG may at any time give notice in writing under the hand of its General Manager of not less than three months of the termination of this approval and immediately upon the expiration of the period given in the notice the right of the Occupier to discharge waste into the sewer of WPNG shall cease and be at an end.
- (b) The Occupier may at any time give notice in writing of not less than fourteen days of the termination of this approval and immediately upon expiration of the period given in the said notice to the right of the occupier to discharge waste into the sewer of WPNG shall cease and be at an end.
- (c) That wherefore any reason this approval has come to an end or has been terminated then the Occupier shall forthwith if requested and at his own expense in all things and to the satisfaction of the Engineer of WPNG disconnect the pipes and equipment used to discharge such waste into the sewer or drain and in the event of his failure to do so WPNG may by its officers or agents or workmen enter upon such property and carry out such works as may be necessary to prevent the discharge of waste into the sewer or drain and claim such expenses from the Occupier.