APPENDIX N

PWC's Trade Waste Guidelines

PowerWater

Customer Information

Trade Waste

Handout Number 8
November 2009

Trade waste is defined as:
"Liquid or liquid borne waste generated from any industry, business, trade, manufacturing process or similar that is approved for discharge to sewer but does not include wastewater from a toilet, shower, hand-basin or similar fixture"

Power and Water Corporation is licensed by the Utilities Commission under the *Water Supply and Sewerage Services Act* (The Act) to provide sewerage services in the Northern Territory. The Act prohibits the discharge of trade waste to sewer without the written approval of the licensee.

Power and Water recognises there is a requirement for business and industry to manage their liquid waste streams. To assist, Power and Water will accept approved trade waste to sewer to minimise the cost to business and to protect the environment.

To manage the discharge of trade waste to sewer, Power and Water has developed and implemented the Trade Waste Management System (TWMS). The two key documents of the TWMS are the "Trade Waste Code" and the "Guidelines for On-site Pre-treatment".

Trade Waste Code

The Act requires the licensee to publish a code setting out conditions for the acceptance of trade waste to sewer. The Trade Waste Code includes the following conditions:

Compliance requirements	Acceptance guidelines	Prohibited substances
Discharge category	Discharge approval	Pre-treatment equipment
Measurement of quantities	Sampling requirements	Monitoring
Calculation of fees and charges	Regulation	Reporting
Non compliance procedures	Termination of approval	Dispute resolution
Title, risk and indemnity	Assignment of rights	

The Trade Waste Code is available on the Power and Water website at www.powerwater.com.au.

Guidelines for On-site Pre-treatment

The Guidelines for On-site Pre-treatment has been developed as a supporting document to the Trade Waste Code. The Guidelines have been developed to assist business and industry understand Power and Water's minimum pre-treatment equipment requirements. The Guidelines include the following sections:

Introduction	Definitions and Terminology
Pre-treatment Processes and Equipment	Abbreviations
On-site Pre-treatment Requirements	Guide for Sizing Grease Arrestors
Waste Management	Wash Bays – Vehicles, Plant and Equipment
Commercial Swimming Pools and Ornamental Ponds	Oil Water Separation Units
Photographic Industry	Summary

Business and industry pre-treatment requirements are specified in detail in Section 5 of the Guidelines.

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The following table summarises general industry requirements and is to be used as a guide only.

Business type	Processes and discharge characteristics	Pre-treatment equipment required
auto dismantlers; car detailers; mechanical workshops; small engine repair; vehicle washing	grease, oil, suspended solids, metals, petroleum hydrocarbons, kerosene, detergents	corrugated plate interceptor; vertical gravity separator; hydro-cyclone; settling pit;
bakery; cafeteria; canteen; caterer; commercial kitchen; club; child care centre; fast food outlet; fish and chip shop; hospital kitchen; hotel kitchen; motel kitchen; restaurant; school home science; take away; etc	hot food cooked on site; generally involves frying; deep frying; wok cooking; etc. BOD; grease; suspended solids; detergents	dry basket arrester in floor waste; basket trap in sink drains; grease arrester minimum capacity of 1000 litres Large sites will require a site visit from a Trade Waste Officer.
bakery; butcher shop; chicken shop; canteen; club; child care centre; coffee shop; sandwich shop; school home science;	in general no hot food cooked on site; small hot plate or grill; pie warmer; etc	dry basket arrester in floor waste; basket trap in sink drains;
Health related industries; dental surgery; dental technician; Doctor's surgery; etc	amalgam; mercury; silver; plaster casts; suspended solids; x-rays	amalgam separator plaster arrestor Industry Code of Practice; Photographic Uniform Regulations for the Environment (PURE)
commercial laundry; coin operated laundry; dry cleaners	lint; high temperature; pH; dry cleaning fluids and solvents	lint screens, cooling pit, pH correction. Fluids and solvents are prohibited discharges.
photographic processing and developing; x-ray; graphic arts	silver; ammonia;	PURE Industry Code of Practice

Where a business has a complex or non standard waste stream, a Trade Waste Officer will need to undertake a site assessment to determine if the waste stream is acceptable for discharge to sewer and to determine the type of pre-treatment equipment that is to be installed.

Application process

All businesses wishing to discharge trade waste to sewer must complete a Trade Waste Application; a Trade Waste Discharge Permit cannot be issued unless an application has been received. In general, small business discharging acceptable trade waste will only be required to complete Schedule 1, larger businesses discharging more complex trade waste must complete the six schedules listed.

Schedule 1	Trade Waste Application Form
Schedule 2	Site Plan of Property
Schedule 3	Hydraulic Service Plan
Schedule 4	Processes Generating Trade Waste
Schedule 5	Pre-treatment Equipment
Schedule 6	Final Discharge Characteristics

For more information

For more information contact Services Development Northern Region on (08) 8995 5801, Services Development Southern Region on (08) 8951 7312 or the Manager Trade Waste on (08) 8995 5807.

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TRADE WASTE MANAGEMENT SYSTEM

TRADE WASTE CODE

Foreword

This code is the original Trade Waste Code developed by the Power and Water Corporation (Power and Water) and approved by the Utilities Commission.

The Code is a key document of the Trade Waste Management System (TWMS) and establishes the criteria under which an Approval will be granted to allow the discharge of Trade Waste to Power and Water's Sewerage System.

Sections of the Code may be amended from time to time following a specific request from a customer, the Utilities Commission, or as deemed appropriate by Power and Water. The Utilities Commission must approve all amendments to the Code.

The TWMS is to be implemented with an emphasis on self-regulation by industry and embraces the `user pays' principle in line with the Council of Australian Government Water Reform initiatives.

Power and Water intends to work with all Dischargers during the implementation phase and will issue Trade Waste Interim Discharge Permits to existing Dischargers who are unable to immediately comply with the Acceptance Guidelines. Dischargers will be required to develop an effluent improvement program that will allow conformance with the Acceptance Guidelines within an established time frame.

The TWMS will benefit Power and Water through the reduction of damage to its sewerage infrastructure and will ensure safer working conditions for its personnel working in or on its Sewerage System. The benefits of the TWMS will flow to the community through the implementation of waste minimisation practices, the use of less harmful products and an improvement in the quality of effluent discharged to the environment.

Defined terms used in this Code are included at Appendix C. Abbreviations used in this Code are included at Appendix D.

Table of Contents

1 Introduction

The Power and Water Corporation (Power and Water) Sewerage System is generally designed and operated to provide for the conveyance and treatment of domestic waste.

As there is a requirement to manage industrial and commercial waste streams, Power and Water accepts approved Trade Waste to minimise the cost to business and to protect the environment. The Water Supply and Sewerage Services Act 2000 (the "Act") defines Trade Waste as:

"liquid or liquid borne waste generated from any industry, business, trade, manufacturing process or similar that is approved for discharge to sewer but does not include wastewater from a toilet, shower, hand basin or similar fixture."

In accepting Trade Waste, the primary considerations for Power and Water are to:
- prevent injury to, and to maintain the health and safety of Power and Water personnel;
- minimise impact on the environment from treated effluent discharge;
- protect its Sewerage System conveyance and treatment infrastructure;
- promote waste minimisation practices;
- comply with Legislative requirements; and
- ensure that the quality of Trade Waste accepted will not adversely affect the opportunity for the reuse of bio-solids and treated effluent.

To continue to accept Trade Waste, Power and Water has developed a Trade Waste Management System (TWMS) that will provide the framework for administering, accepting and regulating the disposal of Trade Waste to Power and Water's Sewerage System. While such a system places regulatory and compliance demands on both Power and Water and Trade Waste Dischargers, the TWMS is necessary to allow Power and Water to accept and treat trade waste within Acceptance Guidelines that are consistent with nationally accepted standards.

The TWMS embraces the 'user pays' philosophy and encourages industry to implement effluent improvement and waste minimisation strategies. While reducing cost to industry, these practices will improve the quality of effluent discharged to the environment, this in turn will benefit the lifestyle of all Territorians.

2 Legal Basis

Power and Water is licensed by the Utilities Commission under the Act, to provide sewerage services in the Northern Territory. It is an offence under the Act to discharge, without the written approval of Power and Water, any object or substance that is not domestic sewage to Power and Water's sewer.

Power and Water may give a person written approval to discharge Trade Waste to the sewer if it is satisfied that:
- the discharge will not harm the sewerage services infrastructure, treatment processes, the environment or the health or safety of Power and Water's personnel, or the public at large;
- accepting the discharge will not adversely affect opportunities for the reasonable re-use of bio-solids or treated effluent from treatment processes; and
- sewerage services infrastructure and treatment processes have sufficient capacity to collect, convey and treat the Trade Waste.

3 Scope

This Code sets out the conditions under which Power and Water will approve the discharge of Trade Waste to its Sewerage System. The Code provides the framework for the acceptance and regulation of Trade Waste for conveyance, treatment and disposal via Power and Water's Sewerage System. It includes the:

- Acceptance Guidelines limiting the concentration of characteristics of Trade Waste that may be discharged
- form and content of standard Approvals;
- period for which Approvals will remain in force;
- pre-treatment controls that may be required for specified Trade Waste discharges;
- monitoring and regulation of the conditions of an Approval;
- methodology for determining disposal charge calculation;
- dispute resolution procedures;
- title and liability for discharged Trade Waste; and
- circumstances leading to suspension of Approval to discharge Trade Waste or disconnection from sewer.

Sections of the Code may be amended from time to time following a specific request from a customer, the Utilities Commission, or as deemed appropriate by Power and Water. The Utilities Commission must approve all amendments to the Code.

4 Compliance

A Discharger may comply with this Code by:

- discharging Trade Waste within the Performance Standards;
- treating Trade Waste in an approved manner prior to discharge such that the discharge is deemed to satisfy regulatory requirements; or
- operating to a recognised industry code of practice acknowledged as being the best practical and economically viable process by Power and Water.

4.1 Discharge Within Performance Standards

Trade Waste discharged to Power and Water's Sewerage System must comply with the Acceptance Guidelines stated in the Trade Waste Discharge Permit, Trade Waste Interim Discharge Permit or Trade Waste Agreement.

4.2 Deemed to Satisfy Regulatory Requirements

Where a Discharger holding a Trade Waste Discharge Permit:

- installs authorised pre-treatment equipment; and
- supplies evidence of the maintenance of that pre-treatment equipment in line with the Trade Waste Discharge Permit;

or

where a Discharger holding a Trade Waste Interim Discharge Permit:

- discharges Trade Waste of a concentration that exceeds the Acceptance Guidelines; and
- an approved effluent improvement program to remedy such discharges is being undertaken;

that discharge may be deemed to satisfy regulatory requirements and comply with the Approval.

4.3 Recognised Industry Code of Practice

Where a Discharger holding an Approval:

- discharges Trade Waste of a concentration that exceeds the Acceptance Guidelines; and
- operates to a recognised industry code of practice approved by Power and Water as being the best practical and economically viable process available;

that discharge may be deemed to satisfy regulatory requirements and comply with the Approval.

5 Acceptance Guidelines

Trade Waste offered for discharge to Power and Water's Sewerage System for conveyance, treatment and disposal will be assessed against the Acceptance Guidelines. These guidelines are published for the purpose of information and remain as guidelines until formally adopted in Approvals as Performance Standards for compliance purposes.

Tables 1 to 4 detail the Acceptance Guidelines for Trade Waste discharged to Power and Water's sewer. The omission of any substance from the Acceptance Guidelines does not imply the acceptance of any such substance. Approval to discharge any substance not listed must be sought from Power and Water prior to its discharge to sewer.

Dischargers will NOT use water from any non-process source to dilute Trade Waste prior to discharge to sewer in order to produce a discharge that is within the Performance Guidelines.

TABLE 1: GENERAL TRADE WASTE ACCEPTANCE GUIDELINES

CHARACTERISTIC	ACCEPTANCE GUIDELINE
Volume and flow rate	Dependent on sewer capacity
Colour	No colour visible after 100 dilutions Colour must be biodegradable
Temperature	Must not exceed 40°C
Gross solids	Maximum linear dimension 20 mm Must pass 13 mm bar screen Quiescent settling velocity < 3 m/hour Must not contain material likely to block sewer
Odour	No discernible odour after 10 dilutions
Biochemical oxygen demand (BOD5)	600 mg/L
Chemical oxygen demand (COD)	1200 mg/L
Total organic carbon (TOC)	1200 mg/L
Total dissolved solids (TDS)	2000 mg/L
Suspended solids (SS)	600 mg/L
PH	6 - 10
Fat, oil and grease (FOG)	200 mg/L (Total including beach grease)
Beach grease (C=16 C=18)	100 mg/L
Methylene blue active substances	500 mg/L
Ammonia (NH3-N)	100 mg/L
Total Kjeldahl nitrogen (TKN)	150 mg/L
Total phosphorus (P)	50 mg/L
Sulphate (SO4)	100 mg/L
Sulphite (SO2)	15 mg/L
Chlorine (Cl2)	10 mg/L

TABLE 2: INORGANIC TRADE WASTE ACCEPTANCE GUIDELINES

CHARACTERISTIC	ACCEPTANCE GUIDELINE
Boron (B)	25 mg/L
Bromine (Br2)	5 mg/L
Fluoride (F-)	30 mg/L
Cyanide (Cn-)	5 mg/L
Sulphide total (S2-)	1 mg/L

TABLE 3: ORGANIC TRADE WASTE ACCEPTANCE GUIDELINES

CHARACTERISTIC	ACCEPTANCE GUIDELINE	
Formaldehyde (as HCHO)	50	mg/L
Phenolic compounds (as phenols)	100	mg/L
Pentachlorophenol	5	mg/L
Petroleum hydrocarbons	30	mg/L
Halogenated aliphatic compounds	1.0	mg/L
Halogenated aromatic hydrocarbons	0.002	mg/L
Polychlorinated biphenyls	0.002	mg/L
Polybrominated biphenyls	0.002	mg/L
Polynuclear aromatic hydrocarbons	5.0	mg/L
Pesticides - general	1.0	mg/L
Organophosphate pesticides	0.1	mg/L
Organochlorine pesticides	not accepted	

Note: Organic compounds not included in Table 3 are prohibited from disposal to sewer until specific Approval has been obtained from Power and Water.

TABLE 4: METAL TRADE WASTE ACCEPTANCE GUIDELINES

CHARACTERISTIC	ACCEPTANCE lower daily mass limit (g/day)		GUIDELINE maximum concentration (mg / L)	
Aluminium (Al)	75	g/day	100	mg/L
Arsenic (As)	0.75	g/day	1	mg/L
Cadmium (Cd)	0.75	g/day	1	mg/L
Chromium (Cr) Total	2.25	g/day	3	mg/L
Cobalt (Co)	3.75	g/day	5	mg/L
Copper (Cu)	3.75	g/day	5	mg/L
Iron (Fe)	22.5	g/day	30	mg/L
Lead (Pb)	1.5	g/day	2	mg/L
Manganese (Mn)	7.5	g/day	10	mg/L
Mercury (Hg)	0.02	g/day	0.03	mg/L
Molybdenum (Mo)	7.5	g/day	10	mg/L
Nickel (Ni)	2.25	g/day	3	mg/L
Selenium (Se)	1.90	g/day	2.5	mg/L
Silver (Ag)	0.75	g/day	1	mg/L
Tin (Sn)	3.75	g/day	5	mg/L
Zinc (Zn)	3.75	g/day	5	mg/L

Note 1 Where the discharge of any metal does NOT exceed the lower daily mass limit for that metal, no concentration limit applies.

Note 2 Where the discharge of any metal exceeds the lower daily mass limit for that metal, the discharge concentration must not exceed the specified concentration.

Note 3 For high volume discharges or high concentration discharges, Power and Water may impose an upper daily mass limit for the discharge of some metals (ie a maximum daily discharge quantity). This limit may require Dischargers to treat wastewater to produce a lower concentration than indicated above before disposal to sewer.

6 Prohibited Substances

Trade Waste substances that are, or potentially are, inhibitory or toxic to treatment processes, will damage the Sewerage System, endanger Power and Water personnel, the public or adversely affect the environment, are prohibited from discharge to Power and Water's Sewerage System.

Prohibited Substances include but are not limited to:

- Intractable Wastes;
- solid or viscous substances in a quantity that could obstruct or interfere with Power and Water's Sewerage System, such as:
  - ash, cinders, sand, mud, straw and grass clippings
  - paper, metal, glass and plastics
  - rags, feathers, tar and wood
  - oil and grease;
- flammable / explosive substances unless the Discharger can demonstrate that there is no potential of explosion or fires occurring in Power and Water's Sewerage System;
- radio active substances above background levels;
- pathological, infectious or cytotoxic wastes except as allowed for under the National Guidelines for Waste Management in the Health Industry published by the NHMRC 1999;
- solid wastes from any hospital, clinic, surgery, laboratory or any other medical or veterinary facility including: hypodermic needles, syringes, instruments, utensils, swabs, dressings, bandages, paper and plastic items of a disposable nature and any noticeable portion of human or animal anatomy;
- genetically modified organisms unless approved by the Genetic Manipulation Advisory Committee (GMAC) and Power and Water.
- cooling wastewater unless no other method of disposal is available and the cooling wastewater meets Power and Water's Acceptance Guidelines;
- solvents, enzymes, bacteria and odour control agents including those used in grease arrestors, unless authorised by Power and Water;
- rainwater, stormwater and uncontaminated water, and water with such low levels of contamination that the sewage treatment processes are unlikely to improve the discharge quality at the sewage treatment plant;
- substances that:
  - are persistent and/or toxic;
  - pass through the treatment plant untreated or partially treated and affect the receiving environment;
  - adversely affect Power and Water's Sewerage System (including the facility), employees of Power and Water and/or the public;
  - inhibit process efficiency or increase the cost of collection and treatment of wastewater; and
  - could lead to contamination of the wastewater treatment site.

7 Discharge Category

The discharge category of a Discharger will be determined from the quantity and type of Trade Waste discharged as specified below.

7.1 Category A

Category A discharges are separated into two classes, dependent on the discharged quantity of Trade Waste.

The Trade Waste discharge will be determined to be a Category A, Class 1 discharge (Category A1) where the discharge is predominantly comprised of the characteristics listed in Table 1 of the Acceptance Guidelines and the total Trade Waste discharge quantity is equal to or less than a:

- volume of 300 kL per annum; and
- BOD_5 load of 60 kg per annum; and
- suspended solids load of 50 kg per annum;

The Trade Waste discharge will be determined to be a Category A, Class 2 discharge (Category A2) where the discharge is predominantly comprised of the characteristics listed in Table 1 of the Acceptance Guidelines and the total Trade Waste discharge quantity is greater than a:

- volume of 300 kL per annum; or
- BOD_5 load of 60 kg per annum; or
- suspended solids load of 50 kg per annum

but is equal to or less than a:

- volume of 600 kL per annum; and
- BOD_5 load of 120 kg per annum; and
- suspended solids load of 100 kg per annum;

Where the Trade Waste discharge is predominantly comprised of discharge characteristics:

- other than those listed in Table 1;
- is of a small quantity; and
- the Discharger operates to a recognised industry code of practice,

this discharge may also be determined to be a Category A discharge.

7.2 Category B

The Trade Waste discharge will be determined to be a Category B discharge where the discharge is predominantly comprised of the characteristics listed in Table 1 of the Acceptance Guidelines and the total Trade Waste discharge quantity is greater than a:

- volume of 600 kL per annum; or
- BOD_5 load of 120 kg per annum; or
- suspended solids load of 100 kg per annum.

7.3 Category C

Where the Trade Waste discharge is predominantly comprised of discharge characteristics other than those listed in Table 1 then the discharge may be determined to be a Category C discharge.

8 Discharge Approval

Power and Water will only accept Trade Waste for disposal to sewer from Dischargers holding a written Approval.

Approvals will be held for all Trade Waste discharges. Where a Discharger, discharges Trade Waste from more than one premises then an Approval must be held for the discharge from each premises.

Where more than one Trade Waste generator discharges Trade Waste via a private sewer system to Power and Water's Sewerage System, then Power and Water may enter into an Approval with an owner, managing agent, body corporate or similar. Should Power and Water enter into an Approval with a managing agent or body corporate, it does not preclude Power and Water from also entering into an individual Approval with a Discharger who discharges to Power and Water's Sewerage System via a private sewer system.

8.1 Form of Approval

An Approval may be in the form of either a:
- Trade Waste Discharge Permit;
- Trade Waste Agreement; or
- Trade Waste Interim Discharge Permit.

Approvals may include the following details:
- Discharger details;
- premises discharging Trade Waste;
- sewer receiving Trade Waste;
- a list of the processes generating Trade Waste;
- pre-treatment equipment requirements;
- Performance Standards detailing the maximum concentration, limit, rate or quantity of any Trade Waste characteristic approved to be discharged;
- method of measurement of the discharge quantity and quality;
- monitoring and sampling requirements; and
- the charge calculation method for charges payable under the Approval.

8.2 Trade Waste Discharge Permit

Category A Dischargers must apply for and be issued with a Trade Waste Discharge Permit. A Trade Waste Discharge Permit allows Category A Dischargers to discharge Trade Waste to sewer subject to the terms and conditions of this Code and the Trade Waste Discharge Permit.

8.3 Trade Waste Agreement

Category B and Category C Dischargers must apply to enter into a Trade Waste Agreement with Power and Water. A Trade Waste Agreement allows Category B or Category C Dischargers to discharge Trade Waste to sewer subject to the terms and conditions of this Code and the Trade Waste Agreement.

8.4 Trade Waste Interim Discharge Permit

A Trade Waste Interim Discharge Permit may be issued where it is necessary for the Discharger to negotiate and implement an effluent improvement program with Power and Water. Interim Discharge Permits will be issued for a period of twelve months, after which the Discharger must enter into and comply with an Approval. The effluent improvement program will include:

- identification of source contaminants and processes;
- means of reducing source contaminants;
- treatment options to decrease the contaminant load;
- options for the reuse or recycling of Trade Waste;
- time frame for implementing the program; and
- expected out-comes from the program.

8.5 Term of Approval

The term of an Approval will be three years unless sooner determined in accordance with the Approval, this Code or the Act.

8.6 Approval Application

An application to discharge Trade Waste to Power and Water's sewer must be made by the Discharger or their authorised agent and must be made on Power and Water's standard Trade Waste application form.

8.7 Amendment of Approval

All variations, waivers or consents to depart from a provision of the Approval or Code must be in writing and must be signed by both parties. The variation, waiver or consent is only effective to the extent for which it was made or given.

8.8 Waiver of Term, Condition, Power or Right

A failure, delay, relaxation or indulgence by either party to exercise a power or right under the Approval or Code does not waive the future use of that power or right. The exercising of any single power or right does not preclude the further exercising of any other power or right under the Approval or Code.

9 Pre-treatment Equipment

Where the concentration of a Trade Waste characteristic is found to, or is reasonably likely to exceed the Acceptance Guidelines, on site treatment equipment, in-general, must be installed to pre-treat the Trade Waste prior to it being discharged to the sewer.

9.1 Dischargers Likely to Require Pre-treatment Equipment

Dischargers involved with the:

- manufacture, processing, wholesaling, preparation and retail of food or food products;
- motor vehicle, transport and marine industry; and
- Trade Waste discharge from any other source that does not meet the Acceptance Guidelines;

will generally be required to install pre-treatment equipment. Business types that may be required to install pre-treatment equipment include but are not limited to:

- bakeries
- cafes
- seafood outlets
- restaurants
- butchers
- coffee shops
- hotels
- small goods
- take-away's
- abattoirs
- service stations
- fuel suppliers and outlets
- mechanical workshops
- wrecking / dismantling yards
- smash repairers
- spray painters
- coach builders
- tyre manufacturers, wholesalers, retailers
- depots ie. trucks, bus, etc
- vehicle/machinery rental and hire facilities.

Other Dischargers such as commercial laundries, photographic processors and laboratories may be required to install pre-treatment equipment to ensure that the Trade Waste generated is within Acceptance Guidelines before being able to be discharged to sewer under an Approval.

9.2 Installation of Pre-treatment Equipment

Only authorised pre-treatment equipment may be installed and subsequently be connected to Power and Water's sewer. Dischargers wishing to install equipment that has not been authorised by Power and Water must apply to have the equipment authorised before it is installed.

9.3 Maintenance of Pre-treatment Equipment

The frequency of pre-treatment equipment maintenance is dependent on the type of equipment and the usage rate. Pre-treatment equipment should be inspected regularly by the Discharger between scheduled services and maintained to ensure compliance with the Performance Standards.

The maintenance of pre-treatment equipment must be carried out by a waste contractor, or other approved person, on a regular basis in accordance with the Approval and the requirements of the Department of Infrastructure, Planning & Environment (DIPE).

Pre-treatment equipment will be completely cleaned/serviced by a waste contractor, or other approved person, at least once every three months unless otherwise approved by Power and Water.

9.4 Use of Solvents, Enzymes, Bacteria and Odour Control Agents

The addition of solvents, enzymes, mutant or natural bacteria and odour control agents to pre-treatment systems such as grease arrestors, must be authorised by Power and Water. Authorisation will only be given after assessment of the substance/organism by a suitably qualified, independent third party. All costs of such assessment are to be borne by the Discharger.
A list of authorised solvents, enzymes, mutant or natural bacteria and odour control agents may be published by Power and Water from time to time.

10 Measurement of Trade Waste Discharge Quantities

10.1 Flow Volume

10.1.1 Annual Trade Waste Discharge Less Than 1000kL

Where the annual discharge of Trade Waste is expected to be less than 1000kL per annum the Discharger will not be required to fit a meter to the waste discharge line. The volume of flow will be estimated using a method agreed between the Discharger and Power and Water.

Water Supply Meter Method: Where a dedicated water supply meter is fitted to the premises and the Trade Waste discharge is wholly generated from the metered water supply, the volume of Trade Waste discharged will be estimated from the total metered water consumption. Where water or any other liquid is sourced from a separate supply (eg bore) this additional volume will be added to the total metered water consumption.

The discharge volume will be the total water consumption less the applicable sanitary allowance (Appendix A) determined from the number of sanitary fixtures connected to the discharge line and less an amount for other water consumed on the premises (Typical discharge factors - Appendix B). Where the discharge volume is determined to be a negative discharge volume, then the discharge volume will be deemed to be zero for the measurement period in question.

Estimation of Flow Method: Where a dedicated water supply meter or approved discharge meter is not fitted to the premises, Power and Water will estimate the volume of Trade Waste discharged. The estimation will be based on the likely water use from the number of outlets contributing to the waste volume, the processes generating Trade Waste and the frequency of use.

Dischargers that have specific information that would indicate that these methods are inequitable or that a more accurate estimation may be made based on the specific information, should request Power and Water to assess the discharge quantity based on the specific information.

10.1.2 Annual Trade Waste Discharge Exceeds 1000kL

Where the annual discharge of Trade Waste is expected to exceed 1000kL per annum the Discharger may be required to fit a calibrated measuring device to the waste discharge line. The measuring device must be capable of measuring and recording the instantaneous flow rate and the total daily flow. The discharge volume will be the total measured discharge less the applicable sanitary allowance (Appendix A) determined from the number of toilets (or similar) connected to the discharge line. Where the fitting of such a measuring device is impractical, the volume of flow may be estimated using a method agreed between the Discharger and Power and Water.

10.2 Trade Waste Characteristic Concentration

The concentration of any characteristic of the Trade Waste discharge will be determined from representative samples analysed by a laboratory. Laboratories must be either NATA registered or approved by Power and Water to analyse the sample of the type / substance submitted.

10.3 Chargeable Concentration

The Chargeable Concentration of any characteristic of the Trade Waste discharge will be determined from representative samples collected for the purpose of determining the Trade Waste discharge profile from time to time and analysed by an approved or NATA registered laboratory.

10.4 Discharged Mass

The discharged mass quantity will be determined from the measured discharged Trade Waste volume for the corresponding discharge period and the average discharged concentration determined by laboratory analysis using equation 1 below:

$$MQ = DV \times DC / 10^6 \quad (1)$$

where:
MQ is the mass quantity in kg;
DV is the discharged volume in litres; and
DC is the discharged concentration in milligrams/litre.

10.5 Perceived Risk of Trade Waste Discharge

The perceived risk of a Trade Waste discharge is based on the quantity of Trade Waste discharged, the type of activity generating the Trade Waste, the complexity of any pre-treatment equipment, the substances being discharged and the compliance history of the Discharger.

Table 5 shows risk factors assigned to the discharge quantity, generating activity, discharged substances and the Discharger's compliance history.

The risk score is then determined by the addition of the four risk factors using equation 2 below:

$$\text{Risk Score} = RFQ + RFA + RFS + RFH \qquad 2$$

where:
RFQ is the risk factor associated with the discharge quantity;
RFA is the risk factor associated with the discharge activity;
RFS is the risk factor associated with the discharged substances; and
RFH is the risk factor associated with the Discharger compliance history.
(compliance history = 100 % for new Dischargers)
The perceived risk of the Trade Waste discharge is then determined from Table 6.

Table 5: RISK FACTORS

Risk Factor	Quantity (L / day)	Activity	Substance	Compliance (history)
1	0 - 1000	Category A	Domestic strength	100%
2	1000 - 2500	Category A + pre-treatment equipment	General parameters As per table 1 of the Acceptance Guidelines	-
3	2500 - 5000	Category B	General chemicals As per table 2 of the Acceptance Guidelines	80 - 100%
4	5000 - 10 000	Category B + pre-treatment equipment	Heavy Metals	-
5	> 10 000	Category C	Persistent chemicals As per table 3 of the Acceptance Guidelines.	< 80%

Table 6: PERCEIVED DISCHARGE RISK

Risk Score	Discharge Risk
17 - 20	Very High
13 - 16	High
9 - 12	Moderate
5 - 8	Low
4	Very Low

11 Sampling

Two types of sample may be collected for monitoring purposes, a grab sample and / or a composite sample. A grab sample is a single sample collected from the Trade Waste discharge at a particular point in time. It provides a snapshot of what the discharge characteristics were at the time of sampling. A composite sample is a sample made up from a series of grab samples collected from the Trade Waste discharge over a period of time. The composite sample average may be weighted to account for variations in discharge flow rate.

Samples must be collected from the actual Trade Waste that is being discharged to Power and Water's Sewerage System, that is, before the connection to the sewer but downstream of any pre-treatment equipment.

Samples required for compliance or charge calculation purposes are to be collected in triplicate and appropriately labelled. One sample must be forwarded to the laboratory for analysis while the remaining two samples are to be stored under appropriate conditions until such time that laboratory results are accepted as correct.

Appropriate sample handling techniques must be used both during and after sample collection. Trade Waste sampling may be conducted by a third party.

11.1 Frequency of Sampling

Some Trade Waste characteristics may need to be sampled on a continuous basis by the Discharger. These characteristics are generally sampled by electronic devices and may include:

- flow rate;
- temperature;
- pH; and
- electrical conductivity,

and will depend on the Trade Waste being discharged. The requirement for any continuous sampling of the Trade Waste discharge will be determined by Power and Water.

The frequency of other sampling is dependent on the perceived risk of the Trade Waste discharge. The required frequency and type of risk based sampling is shown in Table 7.

Table 7: FREQUENCY AND TYPE OF SAMPLING

Risk Score	Risk	Self	Power and Water	Power and Water
		(composite)	(grab)	(composite)
17 - 20	Very High	Weekly	Weekly	Monthly
13 - 16	High	Monthly	Monthly	Quarterly
9 - 12	Moderate	Quarterly	Quarterly	Six Monthly
5 - 8	Low	Annually	Nil	Annually
4	Very Low	Nil	Annually	Nil

Note 1 Some characteristics such as temperature and pH may be required to be sampled on a continuous basis by the Discharger.
Note 2 Power and Water sampling frequency is indicative only.
Note 3 Sampling of Trade Waste concentrations for the determination of charges may require additional sampling to be undertaken.

11.2 Number of Samples to be Collected

The number of samples required to be collected and analysed by the Discharger may be determined from the following statistical formula or as designated by Power and Water from time to time:

$$N = (ks / p)^2 \quad (3)$$

where:
N is the required number of samples;
p is the required precision (usually P=20%);
s is the standard deviation of the set of values about the mean; and
k is a coefficient dependent on the confidence level (k=1.64 for CL=90%).

Source: Dart 1977 (in Qld Model Trade Waste Policy 1995)

11.3 Compliance Samples

Power and Water may undertake the collection of random compliance samples at its discretion by taking samples of the Trade Waste discharge.

12 Monitoring

Monitoring is a checking process that compares the characteristics of the Trade Waste discharge with the Performance Standards set in the Approval. Compliance monitoring is a checking process that assesses the characteristics of the Trade Waste discharge against the Performance Standards set in the Approval, to determine whether the discharge complies with the Approval. Compliance monitoring may be conducted by the Discharger as part of self-regulation and/or by Power and Water.

13 Calculation of Fees and Charges

Fees and charges for the disposal of Trade Waste to sewer are determined from those rates of fees and charges prescribed from time to time under a pricing order.

13.1 Fees

Trade Waste Application	as prescribed in a pricing order
Scheduled Compliance Inspection	as prescribed in a pricing order
Other applicable fees	as prescribed in a pricing order

13.2 Disposal Charges

Fixed Charges

Disposal charge A1	as prescribed in a pricing order
Disposal charge A2	as prescribed in a pricing order

Quantity Charges

Where the Trade Waste discharge quantity is greater than a:
- volume of 600 kL per annum; or
- BOD_5 load of 120 kg per annum; or
- suspended solids load of 100 kg per annum,

the Trade Waste disposal charge will be the cost associated with conveying the Trade Waste plus the cost associated with treating the Trade Waste:

$$TWDC = CC_{CON} + TC \quad (4)$$

where

TWDC	is the Trade Waste disposal charge
CC_{CON}	is the conveyance charge for conveying the Trade Waste
TC	is the treatment charge for treating the Trade Waste

Trade Waste conveyance charge:

$$CC_{CON} = DV / 1000 \times RATE_{CON} \quad (5)$$

where

DV is the discharged volume (L) discharged in the charging period
$RATE_{CON}$ is the Trade Waste conveyance charge per kilolitre volume prescribed in a pricing order ($/kL)

Trade Waste treatment charge is the greater charge calculated from equations 6 - 8:

$$TC_{VOL} = DV / 1\,000 \times RATE_{VOL} \quad (6)$$
$$TC_{BOD} = MQ_{BOD} \times RATE_{BOD} \quad (7)$$
$$TC_{SS} = MQ_{SS} \times RATE_{SS} \quad (8)$$

where
TC_{VOL} is the treatment charge for volume
TC_{BOD} is the treatment charge for BOD
TC_{SS} is the treatment charge for SS
DV is the discharged volume (L) discharged in the charging period
MQ_{BOD} is the discharged BOD mass quantity (kg) discharged in the charging period based on the BOD chargeable concentration
MQ_{SS} is the discharged suspended solid mass quantity (kg) discharged in the charging period based on the SS chargeable concentration
$RATE_{VOL}$ is the Trade Waste treatment charge per kilolitre volume prescribed in a pricing order($/kL)
$RATE_{BOD}$ is the Trade Waste treatment charge per kilogram BOD prescribed in a pricing order ($/kg)
$RATE_{SS}$ is the Trade Waste treatment charge per kilogram SS prescribed in a pricing order ($/kg).

Where for any reason, the Trade Waste disposal charge for Trade Waste discharged in the charging period is less than the A2 fixed charge for the corresponding period, then the Trade Waste disposal charge shall be the fixed charge as calculated from equation 9:

$$TWDC_{FIXED} = A2_{FIXED} \times D / 365 \quad (9)$$

where

$TWDC_{FIXED}$ is the Trade Waste disposal charge for the charging period
$A2_{FIXED}$ is the annual fixed Trade Waste disposal charge for Category A2
D is the number of days in the charging period

In addition to the Trade Waste disposal charges calculated above, a further treatment charge may apply for any other Trade Waste characteristic prescribed in a pricing order and calculated from equation 10 below:

$$TC_{CHAR} = MQ_{CHAR} \times RATE_{CHAR} \quad (10)$$

where:

TC_{CHAR} is the Trade Waste treatment charge for the characteristic in question;
MQ_{CHAR} is the discharged mass quantity (kg) for that characteristic discharged in the charging period based on the characteristic Chargeable Concentration;
$RATE_{CHAR}$ is the Trade Waste disposal charge per kilogram of the characteristic in question prescribed in a pricing order ($/kg).

13.3 Calculation of Damages

Trade Waste characteristic exceeds Performance Standard

Where the concentration of any Trade Waste characteristic prescribed in a pricing order is found to exceed the Performance Standard for that characteristic the damage amount for excess disposal costs will be calculated from equation 11 below:

$$TWDC_{DAM} = CC_{CON} + (MQ_{DIS} \times RATE_{CHAR}) \quad 11$$

where:

$TWDC_{DAM}$	is the calculated damage amount
MQ_{DIS}	is the discharged mass quantity (kg) for that characteristic discharged in the charging period based on the characteristic's actual discharged concentration

Unscheduled Compliance Inspection

$$UCIC = \text{vehicle} + \text{labour} + \text{analysis} + \text{GST} \quad 12$$

where:

UCIC	is the unscheduled compliance inspection charge
vehicle	is the distance x vehicle rate
labour	is the time x hour rate
analysis	is the cost of laboratory analysis or similar
GST	is the goods and service tax amount

Repair, Maintenance or other Works

$$RMW_{DAM} = \text{vehicle} + \text{labour} + \text{equipment} + \text{material} + \text{contractor} + \text{GST} \quad 13$$

where

RMW_{DAM}	is the damage charge
equipment	is the time x equipment rate
material	is the cost of materials
contractor	is the cost of services supplied by contractor

Other Incident of Breach

The Discharger will be responsible for all reasonable costs associated with the rectification of any incident arising from a Trade Waste discharge that breaches the Act, Code or Approval.

13.4 Invoices

Power and Water will issue invoices for the discharge of Trade Waste in accordance with the established fees and charges. The Discharger will pay the fees and charges contained in the invoice in full without deduction or set off including any disputed amount within 14 days of the date of the invoice. If the Discharger does not pay any invoice within 14 days or fails to pay any other amount due under this Code or Approval, the Discharger must pay to Power and Water interest calculated at the Interest Rate for each day which such amounts remain unpaid. Interest will be compounded at the end of each month on any outstanding amount.

14 Regulation

14.1 Self Regulation

Dischargers are responsible for monitoring their own Trade Waste discharge and supplying Power and Water with the required details within the reporting time frame. The Trade Waste characteristics to be sampled, the required sampling frequency and the number of samples will be determined by Power and Water and detailed in the Approval.

Where Power and Water adopts a deemed to satisfy approach with a Discharger:

(a) who has installed authorised pre treatment equipment;

the Discharger must provide Power and Water with a copy of the invoice or docket from the contractor confirming that the equipment has been managed in accordance with the manufacturer's instructions, the Trade Waste approval and this Code to maintain discharge quality;

and / or

(b) who operates to a recognised industry code of practice;

the Discharger must provide Power and Water with copies of appropriate documentation as detailed in the Approval or as requested by Power and Water from time to time, and provide sufficient evidence to satisfy Power and Water that the Discharger is operating within that industry code of practice.

14.2 Scheduled Site Inspections / Compliance Audits

Power and Water may conduct scheduled site inspections and / or compliance audits of the Trade Waste discharge on a periodic basis as determined from Table 7 or as deemed necessary.

14.3 Unscheduled Site Inspections / Compliance Audits

Unscheduled site inspections and / or compliance audits may be conducted by Power and Water where self regulated reports indicate a non-compliance event, where scheduled compliance audits indicate a non-compliance event, or on an as required basis to confirm the correct operation of the self regulating system.

14.4 Investigation of Reported Incidents

Reports of possible breaches of Approvals and illegal discharges will be investigated. Where a breach of Approval or an illegal discharge is found, appropriate action will be taken under non-compliance procedures.

15 Reporting

15.1 Sampling and Compliance Monitoring

15.1.1 Laboratory Analysis

The Discharger will provide to Power and Water a statement of the results from all laboratory analysis conducted within fourteen days of the receipt of the results from the analysing laboratory.

15.1.2 Continuous Sampling

The Discharger will provide to Power and Water a statement of the results from all continuous sampling conducted within 14 days of the end of the month.

15.1.3 Non-compliance

Where results indicate that the Trade Waste discharge does not comply with the Approval, the Discharger must inform Power and Water of the result at the earliest opportunity.

15.2 Flow Measurement

Where a discharge-metering device is fitted, the Discharger will:

- record the cumulative volume reading at the end of each day;
- record the day and date on which each reading was recorded;
- determine and record the total volume discharged during the daily period to the nearest kilolitre;
- determine and record the average discharge rate during the daily period (based on the actual period of time during which discharge occurs);
- where possible, record the maximum discharge rate recorded during the day to the nearest + 0.1 L/s; and
- provide to Power and Water a statement of the volumetric discharge results for the month, within fourteen days of the end of the month.

15.3 Pre-treatment Equipment Maintenance

The Discharger must provide Power and Water with a copy of the invoice / docket or similar from the contractor showing the date the pre-treatment equipment was cleaned. Power and Water must receive the documentation within fourteen days of the equipment being cleaned.

15.4 Monitoring Equipment Maintenance and Calibration

Where monitoring equipment has been installed, it must be maintained and calibrated on a regular basis in accordance with the Approval. The Discharger must provide Power and Water with a copy of the details of any such maintenance or calibration within fourteen days of the end of the month in which the maintenance or calibration was undertaken.

16 Non-Compliance Procedures

16.1 Discharge Exceeds Performance Standards

16.1.1 Minor Non Compliance Event

Where a Trade Waste characteristic exceeds the performance limit set out for that characteristic in the Approval and there is no significant risk to personnel, Power and Water's Sewerage System or the environment, the non-complying discharge may be determined to be a minor non-compliance event.

Where a minor non-compliance event has occurred:

- the party to the Trade Waste approval discovering the non-compliance event must notify the other party of such an event as soon as is practical, but no later than twenty four hours after the event;
- upon discovering or notification of a minor non-compliance event, the Discharger must take immediate action to investigate the non-compliance and return the Trade Waste discharge to within the Performance Standards; and
- sampling and analysis of the Trade Waste discharge must confirm compliance with the Performance Standards.

Where a minor non-compliance event has occurred Power and Water may:

- make a claim for damages against the Discharger; and
- suspend or cancel the Approval where the Discharger fails to correct the non-complying discharge within a timeframe specified by Power and Water.

16.1.2 Major Non Compliance Event

Where a Trade Waste characteristic exceeds, or is expected to exceed the performance limit set out for that characteristic in the Approval and the discharge is assessed as a significant risk to personnel, Power and Water's Sewerage System or the environment, the non-complying discharge may be determined to be a major non-compliance event.

Where a major non-compliance event has occurred or is expected to occur:

- the party discovering the non-compliance event must notify the other party of such an event as soon as is practicable;
- upon discovering or notification of a major non-compliance event, the Discharger must immediately cease the discharge of Trade Waste;
- where the Discharger fails to cease discharge, Power and Water may without further notice disconnect the Discharger from the sewer and / or restrict the water supplied to the premises;
- the Discharger must investigate the non-compliance event and confirm by sampling and analysis that any further Trade Waste discharge is within the Performance Standards before requesting from Power and Water permission to resume discharging Trade Waste. Once the Discharger has demonstrated that the discharge is within the Performance Standards, that the Discharger's management system is adequate, and the Discharger has paid damage charges, Power and Water may grant permission to resume discharging Trade Waste.

Where a major non-compliance event has occurred Power and Water may:

- make a claim for damages against the Discharger;
- suspend or cancel the Approval.

16.2 Failure to Maintain Equipment

Where a Discharger fails to service, maintain, calibrate or clean any equipment, including pre-treatment equipment as set out in an Approval, Power and Water will notify the Discharger of such a breach of the Approval and may specify a time in which to rectify the breach.

Where the Discharger fails to undertake works to rectify the breach of the Approval within the specified time, Power and Water may suspend or cancel the Approval, and may disconnect the point of discharge from sewer.

Charges for excess quantities discharged and/or a claim for damages may be made by Power and Water against the Discharger.

16.3 Failure to Pay Fees or Charges

Where a Discharger fails to pay all applicable fees and charges as set out in this Code or Approval, Power and Water will notify the Discharger of an outstanding debt.

Where the Discharger fails to rectify the breach within the specified time, Power and Water may suspend or cancel the Approval and initiate debt recovery procedures.

16.4 Other Breach of Code or Approval

Without lessening the effect of clauses 16.1 to 16.3 above, where a breach of this Code or Approval occurs, the party discovering the breach must notify the other party of such a breach. Power and Water may specify a time in which to rectify the breach. Where the Discharger fails to rectify the breach within the specified time, Power and Water may suspend or cancel the Approval.

17 Termination of Approval

17.1 Suspension or Termination of Approval

Power and Water may suspend or terminate an Approval by notice in writing to the Discharger if:

- the Discharger has breached any of its obligations under this Code;
- the Discharger has failed to comply with the Approval or the Act;
- the Discharger has failed to remedy or rectify a notified breach within the time required;
- the Discharger has failed to comply with a notice to cease discharge or a notice of defective equipment;
- a new Approval which supersedes the existing Approval comes into force;
- it is necessary in Power and Water's opinion to protect public health or safety, to prevent environmental harm or to prevent damage to Power and Water's sewerage services infrastructure; or
- the Discharger has failed to pay the appropriate fees and charges within the specified time.

17.2 Disconnection of Sewer

Without limitation to any other rights Power and Water may have in respect of any breach by the Discharger of this Code or an Approval, Power and Water may upon such breach disconnect the point of discharge from the sewer until such breach has been remedied or rectified.

18 Dispute Resolution

18.1 Court Proceedings

A party must not start court proceedings in respect of a dispute arising out of this Code or an Approval unless it has complied with this clause.

18.2 Notification of Dispute

A party claiming a dispute has arisen must notify the other party to the dispute giving details of the dispute.

18.3 Reasonable Effort to Resolve Dispute

During the ten working day period after a notice of dispute is given, the parties must use reasonable efforts to resolve the dispute.

18.4 Dispute Resolution Process

If the dispute is not resolved within ten working days from provision of a notice of dispute, it shall be referred to the Utilities Commission for arbitration. The arbitration shall be final and binding upon the parties.

18.5 Continued Performance of Obligations

The parties will continue to perform their respective obligations under this Code or Agreement pending the resolution of the dispute. The continued performance of an obligation does not provide for the acceptance of discharges of prohibited substances or to a major non-compliance event.

19 Title Risk and Indemnity

Title to, and risk in respect of Trade Waste which meets the requirements of and conforms to the characteristics set out in the Approval, shall pass from the Discharger to Power and Water at the point of connection to the sewer.

The Discharger shall indemnify and forever keep indemnified Power and Water against all claims, demands, actions and proceedings made by any person against Power and Water in respect of any damages, injury, loss (including economic loss), costs or expenses of whatsoever kind arising out of the discharge or release of Trade Waste from the premises of the Discharger which does not meet the requirements and conform with the characteristics / Performance Standards set out in the Approval.

20 Assignment of Rights

A Party cannot assign any of its rights under this Code or an Approval without the consent of both parties.

APPENDIX A

SANITARY FIXTURE ALLOWANCE
As at 1/1/2001

NUMBER OF SANITARY FITTINGS (Registered at Premises by Power and Water)	DISCHARGE ALLOWANCE (L per day per fitting)
0	0
1	820
2	410
3 - 24	560
25 - 49	525
50 - 99	485
100 - 149	450
> 149	435

APPENDIX B

TYPICAL DISCHARGE FACTORS FOR VARIOUS BUSINESS TYPES
To be used as a Reference Guide Only.

BUSINESS TYPE	DISCHARGE FACTOR (% total supplied water)
Bakery	33-90
Butcher	95
Car Wash	97-100
Carpet Cleaner	90
Cold Store	60-100
Concrete Batching Plant	2
Dry Cleaner	75
Dye House	85
Film Processor	95
Fish Shop	95-100
Fruiterer	100
Iceworks	40-70
Laundromat	92
Hamburger Franchise	95
Panel Beater	100
Pastry Manufacture	49
Pottery	31
Restaurant	90-100
Service Station	70
Take away outlet	95

Source: Sydney Water - Wastewater Volumes & Discharge Factors. (2001)

APPENDIX C

DEFINITIONS

Acceptance Guidelines:
Acceptance Guidelines are the guidelines in clause 5 of this Code against which Trade Waste will be assessed and will be the basis for the development of Trade Waste Approval Performance Standards.

Act:
Act means the Water Supply and Sewerage Services Act NT.

Approval:
A written Approval issued by Power and Water to Dischargers approving the discharge of Trade Waste to sewer for conveyance, treatment and disposal. Approval includes Trade Waste Discharge Permits, Trade Waste Interim Discharge Permits and Trade Waste Agreements.

Authorised:
Authorised means duly authorised by PPower and Water.

Biochemical Oxygen Demand (BOD_5):
A measure of the amount of oxygen consumed by bacteria during the breakdown of organic matter over a five day period as measured by standard laboratory methods.

Chargeable Concentration:
The concentration of a Trade Waste characteristic determined from periodic Trade Waste discharge profiles, used for calculating Trade Waste disposal charges.

Discharger:
Any person, company, organisation or entity who discharges Trade Waste to sewer.

Domestic Sewage:
The liquid or liquid borne waste discharged to a sewer from a toilet, shower, hand basin, sink or similar fixture.

Heavy Metals:
Metals of high atomic weight, which in excess concentrations can exert a toxic effect.

Interest Rate:
Means the rate for the time being or, if that rate is not published by the Westpac Banking Corporation, the rate which it does publish as its base rate by reference to which interest on overdraft accounts of $100,000 is calculated;

Intractable Waste:
Waste which creates a management problem by virtue of its toxicity or chemical or physical characteristics, which make it difficult to dispose of or treat safely.

Performance Standards:
The quantitative and qualitative standards of performance that the Trade Waste discharge must meet in order to comply with the Approval.

Prohibited Substance:
Any object or substance that is not approved in writing by Power and Water, and that is thrown deposited or discharged into the sewer or an opening, pipe or receptacle connected to the sewer, other than domestic sewage.

Sewerage System:
The network of sewage collection, conveyance, pumping, treatment and disposal facilities.

Suspended Solids:
The insoluble matter suspended in wastewater under conditions normally found in sewers. Suspended solids are able to be separated by standard laboratory filtration methods.

Trade Waste:
The liquid or liquid borne waste generated from any industry, business, trade, manufacturing process or similar that is approved for discharge to sewer but does not include wastewater from a toilet, shower, hand basin or similar fixture.

Trade Waste Code:
Trade Waste Code means this Code published pursuant to Section 83 of the Water Supply and Sewerage Services Act.

Trade Waste Characteristic:
A measurable component of the Trade Waste discharge.

Trade Waste Discharge Profile:
A statistically valid suite of Trade Waste discharge characteristics measured periodically for the purpose of determining average discharge quantities, chargeable concentrations and / or any other assessment of the Trade Waste discharge as required.

APPENDIX D

ABBREVIATIONS

A1	category A class 1
A2	category A class 2
BOD	biochemical oxygen demand
COD	chemical oxygen demand
DLPE	Department of Infrastructure, Planning & Environment
eg	for example
EIP	effluent improvement program
EP	equivalent person
FOG	fats, oils and grease
GMAC	Genetic Manipulation Advisory Committee
kg	kilogram
kL	kilolitre
L	litre
L/s	litres per second
MBAS	methylene blue active substances
mg/L	milligrams per litre
NATA	National Association of Testing Laboratories
NHMRC	National Health and Medical Research Council
POWER AND WATER	Power and Water Corporation
pH	hydrogen ion concentration
TOC	total organic carbon
TDS	total dissolved solids
TKN	total Kjeldahl nitrogen
TWMS	Trade Waste Management System
SS	suspended solids