

Trade Waste Management System

TRADE WASTE CODE 2017



VERSION 1



Foreword

This Trade Waste Code (the Code) has been developed by the Power and Water Corporation (Power and Water) under Section 83(1) of the *Water Supply and Sewerage Services Act* and approved by the Utilities Commission in 2017.

The Code is a key document of the Trade Waste Management System. It establishes the criteria under which approval will be granted to allow a trade waste customer to discharge trade waste to Power and Water's sewerage system under Section 82(2) of the *Water Supply and Sewerage Services Act*.

Power and Water works with all trade waste customers and potential customers in a positive, collaborative and proactive manner to manage accepted trade waste within the sewerage system and Power and Water's acceptance guidelines.

The Trade Waste Management System has an emphasis on self-regulation by industry. It embraces the 'user pays' principle in line with the Council of Australian Government National Water Initiative. This Code has been developed to ensure, where applicable, consistency with trade waste management practices from other jurisdictions.

The Trade Waste Management System benefits customers through the reduction of damage to sewerage infrastructure. It ensures safer working conditions for Power and Water personnel working in or on its sewerage system. The Trade Waste Management System benefits the community through minimising waste, using less harmful treatment products, improving the quality of effluent discharged to the environment and supporting water conservation initiatives.

Terms in this Code have the same meaning as the *Water Supply and Sewerage Services Act*, unless otherwise defined in this Code.



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Definitions

Unless defined in this Code, definitions in this code have the same meaning as the *Water Supply and Sewerage Services Act*.

Approval – a written approval issued by Power and Water to customers approving the discharge of trade waste to the sewer for conveyance, treatment and disposal. Approval includes Trade Waste Discharge Permits and Trade Waste Agreements

Authorised – as authorised by Power and Water

Biochemical Oxygen Demand (BOD5) – 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

Code – Trade Waste Code

Domestic sewage – the liquid or liquid borne waste discharged to a sewer from a toilet, shower, hand basin, sink or similar fixture

Effluent - the water discharged following wastewater treatment processes

g – grams

Guidelines - the quantitative and qualitative standards of performance in this Code against which trade waste is assessed and the basis for which a trade waste customer must comply with to receive Approval

Heavy metals – metals of high atomic weight, which in excess concentrations can exert a toxic effect. The main heavy metals include cadmium, chromium, copper, lead, mercury, nickel and zinc

Intractable waste – waste which by virtue of its toxicity or chemical or physical characteristics, is difficult to dispose of or treat safely

kg - kilogram

kL – kilolitre

L – litres

mg - milligrams

Power and Water - Power and Water Corporation

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

Risk Rank - the assessment categories used by Power and Water to determine the potential risk each customer represents when factors such as discharge volume, site business activities, substances discharged from the site, compliance history and location are taken into consideration

Sewerage system – Power and Water’s network of sewage collection, conveyance, pumping, treatment and disposal facilities

Suspended Solids - the insoluble matter suspended in wastewater under conditions normally found in sewers.

Total Dissolved Solids – the total amount of salts dissolved in sewage or effluent as per National Association of Testing Laboratories testing

Total Nitrogen - the sum of nitrate (NO₃), nitrite (NO₂), organic nitrogen and ammonia (all expressed as N)



Trade waste characteristic - a measurable component of the trade waste discharge

Trade Waste Code - this Code published pursuant to Section 83 of the *Water Supply and Sewerage Services Act*

Trade waste customer – any person, company, organisation or entity who discharges trade waste to Power and Water’s sewerage system

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



1. Introduction

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

The *Water Supply and Sewerage Services Act* creates a framework that enables Power and Water to manage, by its choice, industrial and commercial waste streams. Power and Water in some instances accepts Trade Waste, subject to compliance with this Code, to minimise the cost to business and to protect the environment. The *Water Supply and Sewerage Services Act* defines Trade Waste under Section 4 as follows:

Trade Waste means liquid or liquid-born 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 has developed a Trade Waste Management System that provides the framework for managing guidelines, standards and characteristics that we accept into our sewerage system.

A cooperative and close working relationship between customers and Power and Water will deliver the best outcomes to manage trade waste in a way that:

- minimises environmental impacts
- meets community expectations
- achieves efficiency
- supports water conservation and re-use opportunities
- allows Power and Water to manage its treatment plants, sewerage system assets and maintains the health and safety of staff
- educates, assists and provides customers with a sustainable trade waste service
- complies with legislative, regulatory and licence requirements.

The Trade Waste Management System embraces the ‘user pays’ philosophy. We strongly encourage all existing and potential trade waste customers to implement effluent improvement and waste minimisation strategies thereby reducing costs for industry and minimising environmental impacts.

This Code has been developed to provide practical guidance and understanding for trade waste customers by proactively pursuing the benefits associated with managing best practice.

The following diagram (Diagram 1) illustrates Power and Water’s management of Trade Waste customers.



Power and Water Trade Waste Customer Management

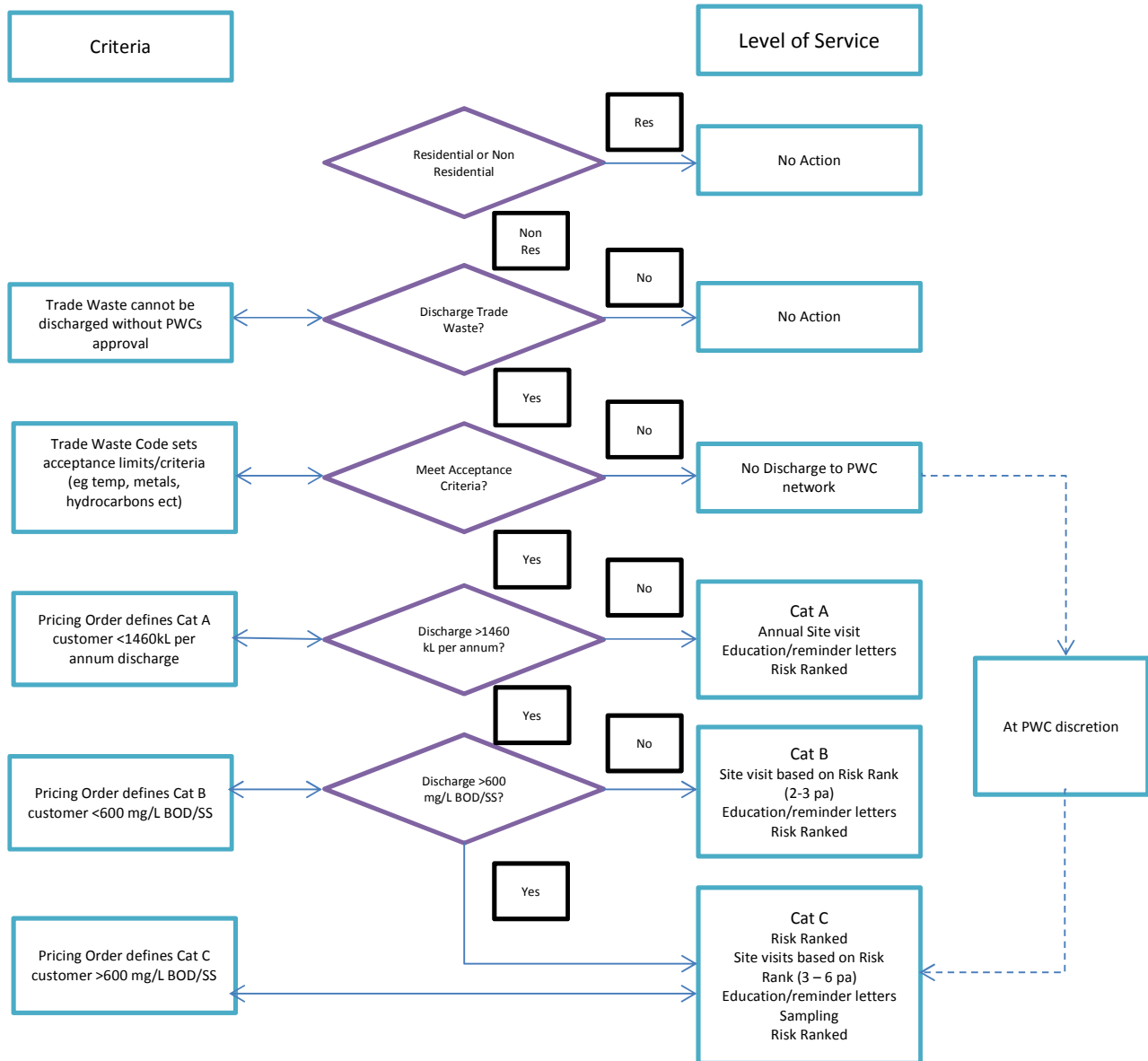


Diagram 1 - Trade Waste Customer Management Diagram

The Code should be read in conjunction with the terms and conditions contained in Power and Water’s Customer Contract.



2. Legal basis

Power and Water is licensed by the Utilities Commission under the *Water Supply and Sewerage Services Act*, to provide sewerage services, including trade waste services, within defined geographic areas of the Northern Territory. It is an offence under Section 82(1) of the *Water Supply and Sewerage Services Act* to discharge trade waste into Power and Water's sewerage system without the written approval of Power and Water.

Power and Water may give a person or company (a trade waste customer) written approval to discharge trade waste to the sewerage system if it is satisfied that:

- the discharge will not harm the environment, sewerage service infrastructure, treatment processes, the health or safety of Power and Water 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
- sewerage service infrastructure and treatment processes have sufficient capacity to collect, convey and treat the trade waste.

This Code is approved by the Utilities Commission under Section 83(4) of the *Water Supply and Sewerage Services Act*. Amendments to the Code from time to time are approved by the Utilities Commission.

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



3. Scope

The Code sets out the conditions under which Power and Water may approve trade waste discharge 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. This includes:

- 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
- circumstances leading to suspension of approval to discharge trade waste or disconnection from sewerage system.



4. Compliance

A trade waste customer must comply with this Code by:

- discharging trade waste within the acceptance guidelines (See Section 5)
- or
- 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 with 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 or Trade Waste Agreement.

4.2 Satisfying regulatory requirements

A customer holding a Trade Waste Discharge Permit may be deemed to satisfy regulatory requirements and comply with the code if they:

- install authorised pre-treatment equipment
- and
- supply evidence of pre-treatment equipment maintenance in line with the Trade Waste Discharge Permit.

4.3 Recognised industry code of practice

A trade waste customer holding an Approval is deemed to satisfy regulatory requirements and comply with the Approval if they:

- discharge trade waste of a concentration that exceeds the acceptance guidelines
- and
- operate to a recognised industry code of practice approved by Power and Water as being the best practical and economically viable process available.



5. Acceptance guidelines

Trade waste offered for discharge to Power and Water’s sewerage system for conveyance, treatment and disposal will be assessed against acceptance guidelines (detailed in Tables 1 - 5).

The omission of any substance from the acceptance guidelines does not imply the acceptance of such a substance. Approval to discharge any substance not listed, or at greater concentration than listed, must be sought in writing from Power and Water prior to its discharge to the sewerage system. Approval to discharge substances not listed or at greater concentration than that listed in Tables 1 - 5 is solely at the discretion of Power and Water.

Trade waste customers must not use water from any non-process source to dilute trade waste prior to discharge to the sewerage system in order to produce a discharge that is within the acceptance guidelines.

Table 1 – General Trade Waste Acceptance Guidelines

Substance	Maximum Concentration
Volume and flow rate	Dependent on sewer capacity
Colour	No colour visible after 100 dilutions Colour must be biodegradable
Temperature	Must not exceed 40°
Gross solids	Must not discharge waste containing fibrous material that is likely to cause obstructions in a drain or sewer. (i) must be able to pass through a bar screen with 13mm spaces between bars, and (ii) have a quiescent settling velocity of not more than 3m/hour
Odour	No discernible odour
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 (NH ₃ -N)	100 mg/L
Total nitrogen (TN)	150 mg/L
Total phosphorus (P)	50 mg/L
Sulphate (SO ₄)	100 mg/L
Sulphite (SO ₂)	15 mg/L
Chlorine (Cl ₂)	10 mg/L



Table 2 – Inorganic Trade Waste Acceptance Guidelines

Substance	Maximum Concentration (mg/L)
Boron (B)	25 mg/L
Bromine (Br ₂)	5.0 mg/L
Fluoride (F ⁻)	30 mg/L
Cyanide (Cn ⁻)	5.0 mg/L
Sulphide total (S ₂)	1.0 mg/L

Table 3 – Organic Trade Waste Acceptance Guidelines

Substance	Maximum Concentration (mg/L)
Phenolic compounds (as phenols)	100 mg/L
Formaldehyde (as HCHO)	50 mg/L
Pentachlorophenol	5.0 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
Polynuclear aromatic hydrocarbons	5.0 mg/L
Pesticides – general	1.0 mg/L
Organophosphate pesticides	0.1 mg/L



Table 4 – Metal Trade Waste Acceptance Guidelines

Substance	Acceptance Lower daily mass limit (g/day)	Maximum Concentrations (mg/L)
Aluminium (Al)	75 g/day	100 mg/L
Arsenic (As)	0.75 g/day	1.0 mg/L
Cadmium (Cd)	0.75 g/day	1.0 mg/L
Chromium (Cr) Total	2.25 g/day	3.0 mg/L
Cobalt (Co)	3.75 g/day	5.0 mg/L
Copper (Cu)	3.75 g/day	5.0 mg/L
Iron (Fe)	22.5 g/day	30 mg/L
Lead (Pb)	1.5 g/day	2.0 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	3.0 mg/L
Selenium (Se)	1.9 g/day	2.5 mg/L
Silver (Ag)	0.75 g/day	1.0 mg/L
Tin (Sn)	3.75 g/day	5.0 mg/L
Zinc (Zn)	3.75 g/day	5.0 mg/L

Notes:

1. Where the discharge of any metal does not exceed the lower daily mass limit for that metal, no concentration limit applies.
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.
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 (for example a maximum daily discharge quantity). This limit may require trade waste customers to pre-treat wastewater to produce a lower concentration than indicated above before disposal to the sewer.

Table 5 – Mononuclear Aromatic Hydrocarbons and Aliphatic Hydrocarbons

Substance	Maximum Concentration
Ethylbenzene	2.0 mg/L
Toluene	2.0 mg/L
Total Xylene	2.0 mg/L
Benzene	1.0 mg/L
Aliphatic hydrocarbons (C ₆ – C ₉)	1.0 mg/L

The addition of various 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 Trade Waste customer.



6. Prohibited substances

Trade Waste substances that are toxic, or potentially are, or inhibit 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
 - organochlorine pesticides
- flammable/explosive substances, unless the trade waste customer can demonstrate that there is no potential of explosion or fires occurring in the sewerage system
- radioactive substances above background levels. Such waste must comply with standards specified under any relevant act or regulations for control of radioactive substances
- pathological, infectious or cytotoxic wastes except as allowed for under the National Guidelines for Waste Management in the Health Industry published by the National Health and Medical Research Council 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
 - any noticeable portion of human or animal anatomy
- genetically modified organisms unless approved by the Genetic Manipulation Advisory Committee 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, 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. Where such water is unavoidably mixed with process waters or no other method of disposal is feasible, Power and Water may need to place flow rate restrictions or direct wastewater to be stored for subsequent discharge to sewer as such time as hydraulic capacity in the sewerage system is available



- substances that:
 - are persistent and/or toxic
 - pass through the treatment plant untreated or partially treated and affect the receiving environment
- adversely affect the public, Power and Water staff, the sewerage system, inhibit process efficiency, increase the cost of collection and treatment of wastewater or could lead to contamination of the wastewater treatment site.



7. Customer categories

A trade waste customer category will be determined from the quantity and type of trade waste discharged as specified below.

Customer Category/ Criteria	Volume (kL)	Biochemical Oxygen Demand	Suspended Solids	Total Nitrogen	Total Dissolved Solids
Category A	<1460 kL per annum	N/A	N/A	N/A	N/A
Category B	>1460 kL per annum	<600 mg/L	<600 mg/L	<150 mg/L	<2000 mg/L
Category C	>1460 kL per annum	>600 mg/L	>600 mg/L	>150 mg/L	>2000 mg/L

7.1 Category A

A Category A trade waste customer may be determined by their discharge volume being less than 1460 kL per annum and can meet the acceptance guidelines.

Category A may include entities such as take-away food shops, sandwich bars, coffee shops and cafes.

7.2 Category B

A Category B trade waste customer may be determined by their discharge volume being greater than 1,460 kL per annum and Biochemical Oxygen Demand discharge is generally less than 600 mg/L and Suspended Solids discharge is generally less than 600 mg/L.

Category B may include commercial swimming pools and car washes.

7.3 Category C

A Category C trade waste customer may be determined by their discharge volume being greater than 1,460 kL per annum and Biochemical Oxygen Demand discharge is generally greater than 600 mg/L and Suspended Solids discharge is generally greater than 600 mg/L or cannot meet the acceptance guideline.

Category C may include major hospitals, large hotels, food manufacturing and fast food outlets.

Note - Category C may apply to any trade waste customer's approval where specific conditions allow a contaminant to be discharged above the customer categories irrespective of volumes discharged. This includes where appropriate pre-treatment has not been installed or maintained in accordance with the approval.



8. Discharge approval

Power and Water only accept trade waste for disposal to the sewerage system from a customer holding a written approval from Power and Water.

Where more than one trade waste customer discharges via a private sewer system to Power and Water's sewerage system, Power and Water may enter into an approval with an owner, managing agent, body corporate or similar. This does not preclude Power and Water from also entering into an individual approval with a trade waste customer 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:

- Trade Waste Discharge Permit (Category A)
- Trade Waste Agreement (Category B and C)

Approvals may include the following details:

- trade waste customer details
- premises discharging trade waste
- sewer receiving trade waste
- list of the processes generating trade waste
- pre-treatment and pre-treatment equipment requirements
- performance standards detailing maximum:
 - discharge concentrations
 - limits
 - quality of any trade waste characteristic approved to be discharged
- method of measurement of the discharge quantity and quality
- monitoring and sampling requirements
- the methodology for the calculation of payable fees and charges contained in the applicable Pricing Order or Price Determination
- any other matter deemed appropriate by Power and Water.

8.2 Trade Waste Discharge Permit

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

8.3 Trade Waste Agreement

Category B and Category C Trade Waste customers must apply to enter into a Trade Waste Agreement with Power and Water. An agreement allows Category B or Category C customers approval to discharge trade waste to the sewer system, subject to the terms and conditions of the Code and the Trade Waste Agreement.

8.4 Term of approval

The term of approval will be subject to the Risk Rank assessment as determined during the application or the negotiation process or both. A high risk (Risk Rank 1) customer term of approval shall be for every two years and up to every eight years for a low risk customer (Risk Rank 5). Refer to Clause 11.



8.5 Application for approval

An application to discharge trade waste to Power and Water's sewerage system must be made by the applicant customer or their authorised agent and must be made on Power and Water's standard trade waste [application form](#).

Power and Water will respond to all trade waste applications within 10 business days of receiving the application, advising:

- if the application has been accepted
- if a longer period is required to assess the application, when a decision will be made and why more time is required for assessment; or
- where additional information is required to enable a full assessment, further information must be provided by the applicant

8.6 Amendment of approval

Power and Water will consider on a case-by-case basis a trade waste customer application for variations of their approval. Applications for approval variations must be in writing. Power and Water may approve the application with alternative conditions, or not approve the application based on the conditions in the Code.

Power and Water will provide its decision in writing to the trade waste customer.

8.7 Waiver of terms, conditions, power or rights

A failure, delay, relaxation or indulgence by either party to exercise a power or right under the approval or the 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 the Code.



9. Pre-treatment equipment

On-site treatment equipment, in general, must be installed to pre-treat trade waste prior to it being discharged to Power and Water's sewerage system where the concentration of a trade waste characteristic is found, or is reasonably likely, to exceed the acceptance guidelines.

9.1 Discharge likely to require pre-treatment equipment

Trade waste customers will be required to install pre-treatment equipment if they are involved with the:

- manufacture, processing, wholesaling, preparation and retail of food or food products
- motor vehicle, transport and marine industry
- other trade, commercial and industrial activities with liquid waste discharges.

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

bakeries	teaching institutions
cafes/coffee shops/takeaway outlets	laboratories
seafood outlets	mechanical workshops
restaurants	wrecking/dismantling yards
butchers	smash repairers
laundries	spray painters
hotels	veterinary clinics
small goods manufactures	tyre manufactures, wholesales, retails
day care centres	depots, for example trucks or busses
abattoirs	vehicle/machinery rental/hire facilities

9.2 Pre-treatment equipment installation

Only authorised pre-treatment equipment may be installed and connected to Power and Water's sewerage system. Trade waste customers 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 Pre-treatment equipment maintenance

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 trade waste customer between scheduled services and maintained to ensure compliance with the acceptance guidelines.

Pre-treatment equipment must be completely cleaned and serviced by an appropriately qualified person, according to the minimum frequency listed in the permit or agreement. The trade waste customer must provide Power and Water with a copy of the receipt for payment or similar from the contractor, showing the date the pre-treatment equipment was cleaned. Power and Water must receive the documentation within 14 days of the equipment being cleaned.

Failure to provide evidence of regular maintenance of pre-treatment equipment may cause a trade waste customer to be classified a Category C customer.



10. Trade waste measurement

10.1 Flow volume - annual trade waste discharge less than 7300 kL

Where the annual discharge of trade waste is expected to be less than 7300 kL per annum, the customer is not required to fit a meter to the waste discharge line. The volume of flow will be estimated using a method agreed between the trade waste customer 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 (for example bores), this additional volume will be added to the total metered water consumption.

The discharged volume will be the total water consumption less that applicable sanitary allowance determined (see Appendix A) from the number of sanitary fixtures connected to the discharge line and less an amount for other water consumed on the premises (see 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.

Flow method estimation

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.

If customers have specific information indicating that these methods are likely to systematically over or under estimate the volume of trade waste being discharged, they may request Power and Water to assess the discharge quantity based on specific information.

Power and Water may undertake a re-assessment of an estimation at any time, particularly if a customer changes production methods. Customers may also request a reassessment at any time.

If the above methods are not appropriate for a Trade Waste customer, a flow meter may be required to be installed in accordance with clause 10.2.

10.2 Flow volume – annual trade waste discharge more than 7300 kL

Where the annual discharge of trade waste is expected to exceed 7300 kL per annum the customer may be required to fit, at their own cost, 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 from the customer. The discharge volume will be the total measured discharge less the applicable sanitary allowance (see Appendix 1). Where the fitting of such a measuring device is impractical, the volume of flow may be measured or estimated using a method agreed between the trade waste customer and Power and Water.

10.3 Flow measurement

Where a discharge-metering device is fitted, the trade waste customer 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



- provide to Power and Water a statement of the volumetric discharge results for the month within fourteen days of the end of the month.

Where monitoring equipment has been installed, it must be maintained and calibrated on a regular basis in accordance with the approval. A copy of the details of any such maintenance or calibration must be provided by the customer to Power and Water within 14 days of the end of the month in which the maintenance or calibration was undertaken.

10.4 Trade waste chargeable characteristic concentration

The chargeable concentration of any characteristic of the trade waste discharge will be determined from representative discharge samples analysed by a Power and Water approved laboratory or National Association of Testing Laboratories accredited laboratory

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 the below equation:

$$\text{Mass (kg)} = \text{Discharge Concentration (mg/L)} / 1000$$

$$\text{Billable pollutant load (kg)} = \text{Mass (kg)} \times \text{Discharge Volume (kL)}$$



11. Perceived trade waste discharge risk – Risk Rank

The perceived risk of a trade waste discharge is based on the volume of trade waste discharged, the type of activity generating the Trade Waste, the location of the discharge in relation to the treatment plant, the discharged substances, the compliance history of the customer and the class.

11.1 Risk Rank assessment for approval term and inspections

Trade Waste Risk Rank is calculated as:

$$RR= V+A+L+S+H+C$$

Where:

V = Volume

The average daily discharge volume from recorded volumes. If no volumes are recorded the daily maximum volume is used.

Volume kL	Value
<5 kL	1
>5 and <25	10
>25 and <50	20
>50 and <75	30
>75 and <100	40
>100 and <500	50
>500 and <1000	75
>1000	700

A = Activity

Each customer has a list of activities associated to their business. The activity with the highest value will be used.

Activity Example	Value
Hydroponics	1
Food preparation	5
Textile finishing	10
Wool carbonising	25
Chemical manufacture	50
Liquid waste treatment	75

L = Location

The location of the discharge in relation to the treatment plant.

Treatment Plant	Value
Power and Water treatment plants	5
Treatment plants other than PWC constructed	15



S = Substance

This is the substances that will be discharged to sewer.

Activity Weighting	Value
Activity weighting between 50 and 75	50
Activity weighting between 20 and <50	10
Activity weighting <20	0

H = History

This is the compliance history taken over the last 3 years.

The number of samples with at least one parameter out of limits as a percentage of the total number of samples.

History	Value
Where the number of samples is less than 4 or the trade waste customer is new	10

C = Class

This is the class assigned to represent the risks associated with different manufacturing sectors. If more than one class applies, the highest risk is used in the risk ranking.

Class	Value
Chemical manufacture, liquid waste disposal, pesticides, refining petroleum	50
Chemical blending, electroplating	30
Laboratory, dyeing, galvanising, chromating, disinfectants	20
Contaminated groundwater, drum washing, metal etching	10
All others	0

Risk Rank assessment – inspection frequency – approval term

Risk Rank Score	Risk Rank	Inspection Frequency	Approval Term
>150	1	4 weeks	2 years
>120 and <150	2	8 weeks	3 years
>90 and <120	3	12 weeks	4 years
>50 and <90	4	26 weeks	6 years
<50	5	52 Weeks	8 years



12. Sampling

In order to monitor compliance of a customer's trade waste discharges to the Power and Water sewerage system, Power and Water uses a risk-based monitoring function with a combination of self-reporting, compliance and inspections. As part of self-monitoring, Trade Waste Agreements require sampling and monitoring of trade waste discharges. Sample(s) analysis must be conducted by National Association of Testing Authorities accredited laboratories.

Grab samples

Grab samples are used to determine compliance with the Trade Waste Acceptance Guidelines. The location of sampling points are specified in the customer's Trade Waste Agreement.

Composite sampling

Composite sampling is used to determine the mean concentration of various parameters and is a series of samples taken over a set period of time, as specified in the Trade Waste Agreement. These parameters commonly include Biochemical Oxygen Demand, Total Dissolved Solids and Suspended Solids.

Self-monitoring

Self-monitoring is a periodic sampling and analysis of trade waste, undertaken by the customer, for parameters specified in the Trade Waste Agreement.

Samples must be collected from the actual trade waste that is being discharged to Power and Water's sewerage system, at the nominated sample point(s). Samples required for compliance or charge calculation purposes are to follow the correct 'Chain of Custody' procedures.

Appropriate sample handling techniques must be used both during and after sample collection.

12.1 Number of samples to be collected

Some trade waste characteristics may need to be sampled on a continuous basis by the customer. These characteristics are generally sampled by electronic devices and telemetry and may include:

- flow rate
- temperature
- pH
- electrical conductivity.

Sampling will depend on the trade waste being discharged.

The number of samples required to be collected and analysed by the trade waste customer is determined by Power and Water as required.

12.2 Monitoring and analysis

Compliance monitoring is a checking process that assesses the characteristics of the trade waste discharge against the Acceptance Guidelines set in the Approval, to determine whether the discharge complies with the approval. Compliance monitoring may be conducted by the customer as part of self-regulation and/or by Power and Water.

Laboratory analysis

The trade waste customer will provide to Power and Water a statement of results from all laboratory analysis conducted within 14 days of the receipt of the results.

Continuous sampling

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

Compliance sampling



Power and Water may undertake, at its discretion, the collection of random trade waste discharge compliance samples.

13. Fees and Charges

Customer fees and charges for management, transfer, disposal and treatment of trade waste in Power and Water's sewerage system are those determined in the relevant Pricing Order or Price Determination.

Power and Water may seek to recover the reasonable costs associated with provision of other services or a trade waste customer's non-compliance with their approval or the Code, as determined by the relevant Pricing Order or Price Determination.



14. Regulation

14.1 Self-regulation

Trade waste customers are responsible for monitoring their own discharge and supplying Power and Water with the required details within the reporting timeframe, as specified in the approval, including:

- Trade waste characteristics to be sampled
- required sampling frequency
- number of samples.

14.2 Scheduled site inspections and compliance audits

Power and Water may conduct scheduled site inspections or compliance audits of the trade waste discharge, or both, on a periodic basis as determined by a customer's Risk Rank (see Section 11) or as deemed necessary.

14.3 Unscheduled site inspections and compliance audits

Unscheduled site inspections or compliance audits, or both, may be conducted by Power and Water where self-regulated reports indicate a non-compliance event or as-required 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 (see Section 15) and the *Water Supply and Sewerage Services Act*.



15. Non-compliance procedures

15.1 Minor non-compliance

Where a trade waste characteristic exceeds the performance limit set out 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:

- upon discovering the non-compliance event, the customer or Power and Water must notify the other party of such an event as soon as is practical, but no later than 24 hours after the event
- upon discovering or notification of a minor non-compliance event, the customer must take immediate action to investigate the non-compliance and return the discharge to within the acceptance guidelines
- sampling and analysis of the Trade Waste discharge must be undertaken to confirm compliance with the acceptance guidelines.

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

- recover any direct costs associated with a Trade Waste Approval non-compliance
- undertake an increased monitoring and compliance inspection regime
- suspend or cancel the approval where the customer fails to correct the non-complying discharge within a timeframe specified by Power and Water.

15.2 Major non-compliance

Where a trade waste characteristic exceeds, or is expected to exceed the acceptance guidelines limit set out 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:

- upon discovering the non-compliance event, the customer or Power and Water must notify the other party of such an event as soon as is practical, but no later than 24 hours after the event
- upon discovering or notification of a major non-compliance event, the customer must immediately cease the discharge of trade waste
- where the customer fails to cease discharge, Power and Water may without further notice disconnect the customer from the sewer or restrict the water supplied to the premises or both.

The customer must investigate the non-compliance event and confirm by sampling and analysis that any further discharge is within the acceptance guidelines before requesting from Power and Water permission to resume discharging trade waste. Once the customer has demonstrated that the discharge is within the acceptance guidelines and that the customer's management system is adequate, Power and Water may grant permission to resume discharging trade waste.

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

- recover any direct costs associated with a trade waste approval non-compliance
- undertake an increased monitoring and compliance inspection regime
- suspend or cancel the approval.



15.3 Failure to maintain equipment

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

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

Power and Water may charge for excess quantities discharged or claim to recover any direct costs associated with a Trade Waste Approval non-compliance, or both.



16. Termination of approval

16.1 Suspension or termination of approval

Power and Water may suspend or terminate an approval by notice in writing to the trade waste customer if:

- the customer has breached any of obligations under the Code, or
- the customer has failed to comply with the approval or the *Water Supply and Sewerage Services Act*, or
- the customer has failed to remedy or rectify a notified breach within the time required, or
- the customer has failed to comply with a notice to cease discharge or a notice of defective equipment, or
- a new approval, which supersedes the existing approval, comes into force, or
- 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 system.

16.2 Disconnection of sewer

Without limitation to any other rights Power and Water may have in respect of any breach by the trade waste customer of the 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.



17. Dispute resolution

17.1 Court proceedings

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

17.2 Dispute notification

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

17.3 Reasonable effort to resolve dispute

Parties to the dispute must use reasonable efforts to resolve the dispute within 20 business days after a notice of dispute is given (both parties may mutually agree to extend the time period to resolve the dispute).

17.4 Dispute resolution process

If the dispute is not resolved within 20 business days (unless extended under clause 17.3) 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.

17.5 Continued performance of obligations

The parties will continue to perform their respective obligations under the 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.



18. Indemnity

Each trade waste customer, by discharging trade waste into Power and Water's sewerage system, agrees to indemnify Power and Water against any damage, liability, loss or expense suffered by Power and Water to the extent that it arises directly or indirectly from:

- any failure to implement, or breach of the approval by the party, or
- any negligent acts of the party or its agents.



19. Priority

Trade waste customers must comply with this Code, as well as any applicable Trade Waste Discharge Permit and any Trade Waste Agreement. Where there is any inconsistency between this Code, any Trade Waste Discharge Permit and any Trade Waste Agreement, the order of precedence shall be as follows:

- (a) The Trade Waste Agreement (if any)
- (b) The Trade Waste Discharge Permit (if any); and
- (c) This Code.

20. Appendix A – Sanitary fixture allowance

Number of Sanitary Fittings (Registered at Premises by Power and Water)	Discharge Allowance (L per day per fitting)
0	0
1	750
2	375
3 - 24	510
25 - 49	480
50 - 99	445
100 - 149	415
> 149	400

This table may be updated as required by Power and Water.



21. Appendix B – Trade waste discharge factors

A trade waste discharge factor is the estimated volume of liquid trade waste, measured as a ratio of the total water consumption, through the Power and Water's water meter. Discharge factors in the table below are to be used as a guide only.

Type of Business and Activity	Discharge Factor
Bakery	0.25, or 25%
Boarding house	0.20
Butcher	0.90
Cakes - hot bread	0.50
Car detailing	0.80
Car vehicle washing	0.80
Caravan park	0.20
Chicken cooking	0.80
Club - bowling, racing, golf, RSL	0.25- 0.35
Correctional Centre – with laundry	0.15
Delicatessen, mixed business	0.50
Dental surgery	0.70
Fast food outlets	0.70
Fish outlet	0.80
General equipment washing	0.80
High School	0.20
Hospital	0.30
Hostel	0.20
Hotel	0.20
Industrial waste treatment plant	0.85- 1.20 *
Laundry	0.80- 0.90
Marina	0.65
Milk processing plant	0.85- 1.20 *
Mechanical workshop	0.70
Medical centre	0.25
Nursery	0.05
Nursing Home	0.35
Primary School	0.10
Photo processing	0.75
Printer	0.75
Restaurant, café, bistro	0.80
Shopping centre	0.25
University	0.20

* Denotes additional inflow from other sources