Liquid Trade Waste

Acceptance limits and prohibited substances

Definition

Liquid trade waste (LTW) is any discharge to a sewerage system other than domestic waste from a hand wash basin, shower, bath or toilet.

Central Coast Council is referred to as Council.

Introduction

This Fact Sheet is provided to assist you to treat and dispose of liquid trade waste in an efficient and approved manner.

For further information, please contact Council's Trade Waste Section on 4350 5555.

For LTW application forms, refer to www.centralcoast.nsw.gov.au.

Effluent Improvement Programs

Where there is an existing liquid trade waste discharge and the quality or volume does not meet Council's acceptance limits, the applicant is required to submit an 'Effluent Improvement Program' setting out how Council's requirements will be met. The Effluent Improvement Program must detail the methods and actions proposed to achieve the acceptance limits, and a timetable for implementation of the proposed actions. Such actions may include more intensive monitoring, or improvements to work practices and/or pre-treatment facilities to improve the discharge quality and reliability.

Acceptance Limits

General Acceptance Limits

Parameter	Limits
Flow rate	The maximum daily and instantaneous rate of discharge (kL/h or L/s) is set on the available capacity of the sewer. Large dischargers are required to provide a balancing tank to even out the load on the sewerage works.
BOD_5 and suspended solids	Normally, approved at 300 mg/L for each of the parameters. Concentration up to 600 mg/L and in some cases higher concentration for low mass loadings may be acceptable if the treatment works has sufficient capacity and odour will not be a problem.
COD	Normally, not to exceed BOD_5 by more than three times the concentration limit. This ratio is given as a guide only, to prevent the discharge of non-biodegradable waste.
Total dissolved solids	Up to 4000 mg/L may be accepted. Acceptance limits may be reduced depending on available effluent disposal options and will be subject to a mass load limit.
Temperature	Less than 38°C
pH	Within the range of 7.0 to 9.0
Oil and Grease	100 mg/L if the volume of the discharge does not exceed 10% of the design capacity of the treatment works, and 50 mg/L if the volume is greater than 10%.
Detergents	All industrial detergents are to be biodegradable. A limit on the concentration of 50 mg/L (as MBAS) may be imposed on large liquid trade wastes.
Colour	No visible colour when the waste is diluted to the equivalent dilution afforded by domestic sewage flow.
Radioactive substances	The discharge must comply with the *Radiation Control Act 1990*.

Inorganic compounds

Parameter	Maximum concentration (mg/L)
Ammonia (as N)	50
Boron	5
Bromine	5
Chlorine	10
Cyanide	1
Fluoride	20
Nitrogen (total Kjeldahl)	100
Phosphorus (total)	20
Sulphate (as SO_4)	500
Sulphide (as S)	1
Sulphite (as SO_3)	15

Organic compounds

Parameter	Maximum concentration (mg/L)
Benzene	0.04
Toluene	0.05
Ethylbenzene	1
Xylene	1
Formaldehyde	1
Phenolic compounds (except pentachlorophenol)	5
Petroleum hydrocarbons (non-flammable)*	30
Pesticides general (except organochlorine and organophosphorus)	0.1
Polynuclear aromatic hydrocarbons (PAHs)	5

* Refer to prohibited substances

Metals

Parameter	Maximum Concentration (mg/L)	Allowed daily mass limits (g/d)
Aluminium	100	-
Arsenic	1	2
Cadmium	1	6
Chromium*	3	15
Cobalt	5	15
Copper	5	15
Iron	100	-
Lead	1	6
Manganese	10	30
Mercury	0.01	0.05
Molybdenum	5	30
Nickel	3	15
Selenium	1	15
Silver#	2	6
Tin	5	15
Zinc	5	15
Total metals excluding aluminium, iron, manganese and molybdenum	Less than 30mg/L and subject to total mass loading requirements	

* Where hexavalent chromium (Cr^{6+}) is present in the process water, pre-treatment is required to reduce it to the trivalent state (Cr^{3+}), prior to discharge into the sewer. Discharge of hexavalent chromium (Cr^{6+}) from chromate compounds used as corrosion inhibitors in cooling towers is not permitted.

This limit is applicable to large dischargers. The concentration of silver in photo processing waste where a balancing tank is provided must not exceed 5 mg/L.

Acceptance limits for hydrogen sulphide generation

Parameter	Acceptance Limit
Total sulphide	< 0.2 mg/L
Dissolved sulphide	< 0.1 mg/L
Hydrogen sulphide	< 0.1 mg/L
Dissolved oxygen	>0.1 mg/L
Redox potential	> minus 80 mV

Note: These limits will generally not be met if the sewage detention time in the pumping station and rising main is greater than 2 to 4 hours, unless the sewage is conditioned by the addition of oxygen or other agent to prevent the generation of hydrogen sulphide gas.

Deemed concentration of substances in domestic sewerage

Substances	Deemed Concentration
pH	7.0 – 9.0
	(mg/L)
Biochemical Oxygen Demand (BOD_5)	300
Suspended Solids	300
Total Oil and Grease	50
Ammonia (as Nitrogen)	35
Total Kjeldahl Nitrogen	50
Total Phosphorus	10
Total Dissolved Solids	1000
Sulphate (SO_4)	50

Prohibited Substances

Prohibited substances
Organochlorine weedicides, fungicides, pesticides, herbicides and substances of a similar nature and/or wastes arising from the preparation of these substances
Organophosphorus pesticides and/or waste arising from the preparation of these substances
Any substances liable to produce noxious or poisonous vapours in the sewerage system
Organic solvents and mineral oil
Any flammable or explosive substance
Discharge from "Bulk Fuel Depots"
Chromate from cooling towers
Natural or synthetic resins, plastic monomers, synthetic adhesives, rubber and plastic emulsions
Rain, surface, seepage or subsoil water (unless specifically permitted)
Solid matter
Any substance assessed as not suitable to be discharged into the sewerage system
Waste that contains pollutants at concentrations which inhibit the sewerage treatment process – refer ***Australian Sewage Quality Management Guidelines,* June 2012, WSAA**; and any other substances listed in a relevant regulation

Factors for consideration

Council's decision to accept liquid trade waste into the sewerage system is on the basis of a preventative risk management framework for managing risks to the sewerage system, within an integrated water cycle management* context. It is based on the discharge meeting Council's requirements#. When examining an application to discharge liquid trade waste into the sewerage system, Council will consider the following factors:

- the potential for the liquid trade waste discharge to impact on public health
- the possible impacts the discharge may pose to the environment (land, water, air, noise, or nuisance factors)
- the potential impacts of the discharge on the health and safety of Council's employees
- the possible impact of the discharge on Council's sewerage infrastructure or sewage treatment processes
- the capability of the sewerage system (both transportation and treatment components) to accept the quality and quantity of the proposed liquid trade waste discharge
- the impact the liquid trade waste will have on the ability of the sewerage scheme to meet Environment Protection Authority (EPA) licence requirements
- compliance of the proposed liquid trade waste discharge with guideline limits in this fact sheet**
- the potential impacts of the liquid trade waste discharge on the quality of, and management practices for, effluent and biosolids produced from the sewage treatment process
- the adequacy of the pre-treatment process(es) to treat the liquid trade waste to a level acceptable for discharge to the sewerage system, including proposed safeguards if the pre-treatment system fails
- whether appropriate safeguards are proposed to avoid the discharge of other, non-approved wastes to the sewerage system
- the adequacy of any chemical storage and handling facilities, and the proposed safeguards for preventing the discharge of chemicals to the sewerage system
- whether prohibited substances are proposed to be discharged
- the potential for stormwater entering the sewerage system and adequacy of proposed stormwater controls
- waste minimisation and water conservation programs
- the adequacy of the proposed due diligence program and contingency plan, where required

* *Integrated Water Cycle Management Guidelines for NSW Local Water Utilities,* Department of Industry Water, October 2004.

In considering options for waste management to drive resource efficiency, the principles outlined on page 14 of the *Australian Sewage Quality Management Guidelines, June 2012*, WSAA will be adopted.

**** Note:** The quality of the liquid trade waste from some low risk commercial activities in Classification A will exceed guideline limits in this Fact Sheet. As a higher level of pre-treatment is not cost effective, such waste is acceptable if the discharger installs and properly operates and maintains the required pre-treatment equipment. Similarly, septic tank and pan waste may exceed some guideline limits.