

Acceptance guideline 1: General acceptance criteria for liquid waste

Overview

The purpose of this acceptance guideline is to outline under what circumstances Icon Water will permit the discharge of liquid waste into the sewerage network.

Under section 35 of the *Utilities (Technical Regulation) Act (2014)*, it is an offence to discharge into the water or sewerage network any substance that is likely to interfere with the network, or form compounds that would be likely to interfere, unless the consent of the utility is obtained. Significant fines, imprisonment or both may result from an offence. Discharges entering a sewer that are in breach of the conditions set out in this note will probably constitute a breach of section 35 of the *Utilities (Technical Regulation) Act (2014)* and may lead to prosecution of the person discharging the waste, or allowing the waste to be discharged.

Liquid waste is any wastewater other than domestic sewage. We also refer to it as 'trade waste'.

Domestic sewage is wastewater and all substances contained in it arising from the use of water, typically in residences, which is produced by a person in the usual course of daily living, is non-commercial in amount and nature and has not been stored or pumped.

Application

An owner of a property may make an application, using Icon Water's *Application for Non-Domestic Discharge to Sewer*.

Approvals

In giving approval to the discharge of the waste Icon Water may specify conditions as are reasonably necessary to ensure that the fabric of the sewerage system and the operation of the sewerage system would not be adversely affected. The conditions that may be specified include, but are not limited to:

- (a) limiting the nature, components and characteristics of the waste;
- (b) limiting the total daily volume of waste which may be discharged;
- (c) limiting the average and peak rate of discharge;
- (d) requiring a specified waste treatment or management process to be used;
- (e) requiring storage facilities are used to control the rate of discharge.

Any radioactive substance which is not in accordance with the requirements set down by the ACT Radiation Council and has not been discharged in accordance with a disposal permit under the ACT Radiation Act.

Acceptance criteria

Parameter	Acceptance
Flow rate	The maximum daily and instantaneous rate of discharge (kL/h or L/s) is based on the available capacity of the sewer. Large dischargers are required to provide a balancing tank to even out the load on the sewage treatment works.
BOD5	(As determined without the addition of nitrification inhibitor) Normally, approved at 300mg/L each. Where there is sufficient capacity at the sewage treatment works and sufficient dilution in the receiving sewer, up to 600mg/L may be accepted. Higher concentrations may be acceptable for low-mass loadings if the treatment works has sufficient capacity and odour will not be a problem.
COD	Normally, not to exceed BOD5 by more than three times. This ratio is given for guidance only to prevent the discharge of non-biodegradable waste.
Suspended Solids	Normally, approved at 300mg/L each. Where there is sufficient capacity at the sewage treatment works and sufficient dilution in the receiving sewer, up to 600mg/L may be accepted.
Total dissolved solids	Up to 1000mg/L may be accepted. The acceptance limit may vary depending on an effluent disposal option and is subject to a mass load limit
Temperature	Less than 38 ^o C
PH	Within range 6.5 to 10.0
Oil and grease	100mg/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 50mg/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	Any radioactive substance must be in accordance with the requirements set down by the ACT Radiation Council and be discharged in accordance with a disposal permit under the ACT Radiation Act.

Substances excluded from the ACT sewerage system

The following shall not be discharged to the ACT Sewerage System:

- animal matter (including carcasses but not including human waste), wool, hair, grease, dust, ashes, cinders, soil, rubbish, filth, oil, salt, mud, sand, gravel, garbage, offal, vegetable or fruit parings, rags, any gross solids that would not pass through a 13 mm space, house, steam or solid matter;
- any flammable or explosive substance;
- waste liquid that contains a percentage of any substance, or waste liquid that is of a temperature, specified by Icon Water as being:
 - likely to endanger public health, public safety or public amenity or the environment;
 - damaging to, or liable to form compounds that may damage, the Icon Water's sewerage system or treatment works; or
 - likely to injure employees engaged in the operation or maintenance of the Icon Water's sewerage system or treatment works or the health of those employees.
- roof, rain, surface, flood, seepage or subsoil water (except where permitted under *Acceptance Guideline 16*, or on a case-by-case basis with agreement from Icon Water);
- organochlorine weedicides, fungicides, pesticides, herbicides and substances of a similar nature 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 oils;
- any substance which has a flash point of less than 61⁰ Celsius;
- chromate from cooling towers;
- natural or synthetic resins, plastic monomers, synthetic adhesives and rubber and plastic emulsions;
- waste liquids that contain pollutants at concentrations which inhibit the sewage treatment process – refer *Guidelines for Sewerage Systems: Acceptance of Trade Waste (Industrial Waste) (ARMCANZ/ANZECC, 1994)*.
- any waste which contains any suspended solids containing fibrous material or having a quiescent settling velocity of less than 3 metres per hour.
- any waste which contains any medical & infectious waste (no person shall discharge wastes from any hospital, clinic, surgery, laboratory or any other medical or veterinary facility to the sewers including but not limited to 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. Liquid pathological, infectious and cytotoxic wastes are prohibited except as allowed for under the current '*National Guidelines for the Management of Clinical and Related Wastes*' produced by the National Health and Medical Research Council).
- any genetically engineered organisms (except by written permission from Icon Water).
- any discharged waste which contains a concentration of a substance in excess of that appearing in the following tables. However, a lesser value may be specified where the quantities to be discharged may cause problems for the sewerage system or its operation.
- any radioactive substance which is not in accordance with the requirements set down by the ACT Radiation Council and has not been discharged in accordance with a disposal permit under the ACT radiation Act.

Acceptance guidelines for inorganic compounds

Parameter	Maximum concentration (mg/L)
Ammonia (as N)	50
Boron	10
Bromine (as Br ₂)	5
Chlorine (as Cl ₂)	5
Cyanide	5
Fluoride	10
Nitrogen (total Kjeldahl)	100
Phosphorus (total)	20
Sulphate (as SO ₄)	100
Sulphide (as S)	1
Sulphite (as SO ₃)	5

Acceptance guidelines for organic compounds

Parameter	Maximum concentration (mg/L)
Acetate	300
Benzene	0.04
Toluene	0.5
Ethylbenzene	1
Xylene	1
Formaldehyde (as HCHO)	30
Glutaraldehyde	0.05
Halogenated aliphatic compounds	5
Phenolic compounds (except pentachlorophenol)	5
Petroleum hydrocarbons (non-flammable)	20
Pesticides (general)	0.1

Acceptance guidelines for heavy metals*

Parameter	Maximum concentration (mg/L)	Allowed daily mass limit (g/day)
Aluminium	100	-
Arsenic	1	2
Cadmium	0.3	0.9
Chromium*	5	15
Cobalt	5	15
Copper	5	15
Iron	30	-
Lead	2	6
Manganese	10	30
Mercury	0.01	0.05
Molybdenum	10	30
Nickel	5	15
Selenium	0.25	0.75
Silver	2	6
Tin	5	15
Zinc	5	15
Total heavy metals excluding aluminium, iron, manganese and molybdenum	less than 30mg/L and subject to total mass loading requirements	

* Where hexavalent chromium (Cr6+) is present in the process water, pre-treatment will be required to reduce it to the trivalent state (Cr3+), prior to discharge into the sewerage system. Discharge of hexavalent chromium (Cr6+) from chromate compounds used as corrosion inhibitors in cooling towers is **not permitted**.

* These Tables are an example of acceptance limits for some substances and are not exhaustive.

Further information

Additional information about the discharge of liquid waste into Icon Water's sewerage network is available at [iconwater.com.au/tradewaste](https://www.iconwater.com.au/tradewaste) or by contacting us on **02 6248 3111** or via email on talktous@iconwater.com.au