

APPENDICES

APPENDIX 1 – PERMITTED DISCHARGE CHARACTERISTICS

1. Introduction

- 1.1. The nature and levels of the characteristics of any trade waste discharged to the Council system shall comply at all times with the following requirements, except where the nature and levels of such characteristics are varied by the Council as part of an approval to discharge a trade waste.
- 1.2. The Council shall take into consideration the combined effects of trade waste discharges and may modify the following acceptable characteristics for individual discharges.
- 1.3. The nature and levels of any characteristic may be varied to meet any new resource consents or other legal requirements imposed on the Council.

2. Physical characteristics

2.1. Flow

- a) The 24 hour flow volume shall be less than 5 m³.
- b) The maximum instantaneous flow rate shall be less than 2.0 L/s.

2.2. Temperature

- a) The temperature shall not exceed 40 °C.

2.3. Solids

- a) Non-faecal gross solids shall have a maximum dimension which shall not exceed 15 mm.
- b) The suspended solids content of any trade waste shall have a maximum concentration which shall not exceed 2000 g/m³. For significant Industry this may be reduced to 600 g/m³.
- c) The settleable solids content of any trade waste shall not exceed 50 mL/L.
- d) The total dissolved solids concentration in any trade waste shall be subject to the approval of the Council having regard to the volume of the waste to be discharged, and the suitability of the drainage system and the treatment plant to accept such waste.
- e) Fibrous, woven, or sheet film or any other materials which may adversely interfere with the free flow of wastewater in the drainage system or treatment plant shall not be present.

2.4. Oil and grease

- a) There shall be no free or floating layer.

- b) A trade waste with mineral oil, fat or grease unavoidably emulsified, which in the opinion of the Council is not biodegradable shall not exceed 200 g/m³ as petroleum ether extractable matter when the emulsion is stable at a temperature of 15 °C and when the emulsion is in contact with and diluted by a factor of 10 by raw Wastewater, throughout the range of pH 6.0 to pH 10.0.
- c) A trade waste with oil, fat or grease unavoidably emulsified, which in the opinion of the Council is biodegradable shall not exceed 500 g/m³ when the emulsion is stable at a temperature of 15 °C and when the emulsion is in contact with and diluted by a factor of 10 by raw wastewater throughout the range of pH 4.5 to pH 10.0.
- d) Emulsified oil, fat or grease shall not exceed 100 g/m³ as petroleum ether extractable matter when the emulsion is unstable at a temperature of 15 °C and when the emulsion is in contact with and diluted by a factor of 10 by raw wastewater throughout the range of pH 4.5 to pH 10.0.

2.5. Solvents and other organic liquids

- a) There shall be no free layer (whether floating or settled) of solvents or organic liquids.

2.6. Emulsions of paint, latex, adhesive, rubber, plastic

- a) Where such emulsions are not treatable these may be discharged into the sewer subject to the total suspended solids not exceeding 1000 g/m³ or the concentration agreed with the Council.
- b) The Council may determine that the need exists for pre-treatment of such emulsions if they consider that trade waste containing emulsions unreasonably interferes with the operation of the treatment plant e.g. reduces % UVT (ultra violet transmission).
- c) Such emulsions of both treatable and non-treatable types shall be discharged to the sewer only at a concentration and pH range that prevents coagulation and blockage at the mixing zone in the public Sewer.

2.7. Radioactivity

- a) Radioactivity levels shall not exceed National Radiation Laboratory Guidelines.

2.8. Colour

- a) No waste shall have colour or colouring substance that causes the discharge to be coloured to the extent that it impairs wastewater treatment processes or compromises the treated wastewater discharge consent.

3. Chemical characteristics

3.1. pH value

- a) The pH shall be between 6.0 and 10.0 at all times.

3.2. Biochemical Oxygen Demand (BOD₅)

- a) The BOD₅ of any waste may be restricted where the capacity for receiving and treating BOD₅ is limited. A BOD₅ restriction may be related to Mass Limits.

- b) Where there is no treatment system for organic removal the BOD₅ shall not exceed 1000 g/m³. For significant industry this will be reduced to 600 g/m³.

4. Maximum concentrations

- 4.1. The maximum concentrations permissible for the chemical characteristics of an acceptable discharge are set out in Table 1, Table 2 and Table 3.

Table 1 – General chemical characteristics

(Mass limits may be imposed, refer to clause 20 of the Bylaw).

<i>Characteristic</i>	<i>Maximum concentration (g/m³)</i>
MBAS (Methylene blue active substances)	500
Ammonia (measured as N)	
– Free ammonia	50
– Ammonium salts	200
Kjeldahl nitrogen	200
Total phosphorus (as P)	50
Sulphate (measured as SO ₄)	500 1500 (with good mixing)
Sulphite (measured as SO ₂)	15
Sulphide – as H ₂ S on acidification	5
Chlorine (measured as Cl ₂)	
– Free chlorine	3
– Hypochlorite	30
Aluminum (dissolved)	100
Iron (dissolved)	100
Boron (as B)	25
Bromine (as Br ₂)	5
Fluoride (as F)	30
Cyanide – weak acid dissociable (as CN)	5

Table 2 – Heavy metals
(Mass limits may be imposed, refer to clause 20 of the Bylaw).

Metal	Maximum concentration (g/m³)	Metal	Maximum concentration (g/m³)
Antimony	10	Manganese	20
Arsenic	5	Mercury	0.05
Barium	10	Molybdenum	10
Beryllium	0.005	Nickel	10
Cadmium	0.5	Selenium	10
Chromium	5	Silver	2
Cobalt	10	Thallium	10
Copper	10	Tin	20
Lead	10	Zinc	10

Table 3 – Organic compounds and pesticides

Compound	Maximum concentration (g/m³)
Formaldehyde (as HCHO)	50
Phenolic compounds excluding chlorinated phenols	50
Chlorinated phenols	0.02
Petroleum hydrocarbons	30
Halogenated aliphatic compounds	1
Monocyclic aromatic hydrocarbons	5
Polycyclic (or polynuclear) aromatic hydrocarbons (PAHs)	0.05
Halogenated aromatic hydrocarbons (HAHs)	0.002
Polychlorinated biphenyls (PCBs)	0.002
Polybrominated biphenyls (PBBs)	0.002 each
Pesticides (includes insecticides, herbicides, fungicides and excludes organophosphate, organochlorine and any pesticides not registered for use in New Zealand)	0.2 in total
Organophosphate pesticides	0.1

APPENDIX 2 – PROHIBITED CHARACTERISTICS

1. Prohibited characteristics

- 1.1. Any discharge has prohibited characteristics if it has any solid liquid or gaseous matters or any combination or mixture of such matters which by themselves or in combination with any other matters will immediately or in the course of time:
- a) Interfere with the free flow of wastewater in the Wastewater system;
 - b) Damage any part of the Wastewater system;
 - c) In any way, directly or indirectly, cause the quality of the treated wastewater or residual Biosolids and other solids from any wastewater treatment plant in the district to which the waste was discharged to breach the conditions of a consent issued under the Resource Management Act, or water right, permit or other governing legislation;
 - d) Prejudice the occupational health and safety risks faced by Wastewater workers;
 - e) After treatment be toxic to fish, animals or plant life in the receiving waters;
 - f) Cause malodorous gases or substances to form which are of a nature or sufficient quantity to create a public nuisance; or
 - g) Have a colour or colouring substance that causes the discharge from any Wastewater treatment plant to receiving waters to be coloured.
 - h) Is likely to impact the health and safety of Council staff, agents and the public
- 1.2. A discharge has prohibited characteristics if it has any characteristic which exceeds the concentration or other limits specified in appendix 1 unless specifically 'Approved' for that particular consent.
- 1.3. A discharge has a prohibited Characteristic if it has any amount of:
- a) Harmful solids, including dry solid wastes and materials which combine with water to form a cemented mass;
 - b) Liquid, solid or gas which could be flammable or explosive in the wastes, including oil, fuel, solvents (except as allowed for in appendix 1), calcium carbide, and any other material which is capable of giving rise to fire or explosion hazards either spontaneously or in combination with Wastewater;
 - c) Asbestos;
 - d) The following organo-metal compounds:
 - i. Tin (as tributyl and other organotin compounds);
 - e) Any organochlorine pesticides;
 - f) Genetic wastes: being all wastes that contain or are likely to contain material from a genetically modified organism that is not in accordance with an approval under the

Hazardous Substances and New Organisms Act. The material concerned may be from premises where the genetic modification of any organism is conducted or where a genetically modified organism is processed;

- g) Any health care waste prohibited for discharge to a Wastewater system by NZS 4304 or any pathological or histological wastes; or
- h) Radioactive material, unless the material is discharged in accordance with the Code of Practice for Unsealed Radioactive Material published by the Ministry of Health.
- i) Cytotoxic waste, liquid antibiotics or any pharmaceutical waste.

Note: Appendix 3 – Trade Waste Consent Application Form has been removed