

# Statement of Approved Acceptance Criteria

**10 October 2017**

The nature and levels of the characteristics of trade waste discharged to Eastern Treatment Plant and Western Treatment Plant must at all times comply with the acceptance criteria set out in this schedule.

South East Water also operates eight local water recycling plants. Acceptance criteria for these plants vary, and will be advised upon receipt of a formal application to discharge trade waste.

## Part 1 Physical characteristics

### 1.1 Temperature

The Customer must not discharge trade waste with a temperature greater than 38<sup>0</sup>C.

### 1.2 Solids

- (a) The Customer must not discharge trade waste containing gross solids, suspended solids or total dissolved solids except in accordance with this paragraph.
- (b) Gross solids contained in trade waste must:
  - (i) 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.
- (c) Where the total mass load of suspended solids exceeds 1,000 kg/day, the concentration of suspended solids must not exceed 10,000 mg/litre.
- (d) The total mass load of total dissolved solids must not exceed 200 kg/day.
- (e) The Customer must not discharge waste containing fibrous material which, in the opinion of South East Water, is likely to cause obstructions in a drain or sewer.

### 1.3 Oils, fats and grease

- (a) The Customer must not discharge trade waste containing any free or floating layer of oil, fat or grease.
- (b) The Customer may discharge trade waste containing emulsified oil, fat or grease which, in the opinion of South East Water, is biodegradable, if the emulsion is stable:
  - (i) at a temperature of 15<sup>0</sup> C; and
  - (ii) when it is in contact with raw sewage and the resulting mixture has a pH of no less than 4.5 and no greater than 10.0.
- (c) The Customer must not discharge trade waste containing emulsified oil, fat or grease which, in the opinion of South East Water, is not biodegradable and if it contains more than 1,000 mg/litre of material recovered by a solvent prescribed by South East Water as extractable matter when the emulsion:
  - (i) is stable at a temperature of 15<sup>0</sup> C; and
  - (ii) is in contact with raw sewage and the resulting mixture has a pH no less than 4.5 and no greater than 10.0.
- (d) The Customer must not discharge trade waste containing emulsified oil, fat or grease if it contains more than 200 mg/litre of material recoverable by a solvent prescribed by South East Water as extractable matter when the emulsion is:
  - (i) unstable at a temperature of 15<sup>0</sup>C; and
  - (ii) in contact with raw sewage and the resulting mixture has a pH of no less than 4.5 and no greater than 10.0.

## 1.4 Organic liquids

- (a) The Customer must not discharge trade waste containing any free or floating layer of organic liquid.
- (b) The Customer must not discharge any trade waste which, in the opinion of an Authorised Person, may be flammable.

## 1.5 Latex emulsions

- (a) In this clause 'biodegradable' in relation to trade waste means that, in the opinion South East Water, the total organic carbon content of the trade waste would decrease by at least 90% when submitted to the sewage treatment process employed by the company for that waste.
- (b) In this clause 'latex emulsion' includes an emulsion containing paint, adhesive, rubber, plastic or similar materials.
- (c) In this clause 'stable latex emulsion' means a latex emulsion in which the solids deposited in a filter do not increase by more than 200 mg/litre when the emulsion:
  - (i) is at 15° C; and
  - (ii) is in contact with raw sewage and the resulting mixture has a pH of no less than 4.5 and no greater than 10.0.
- (d) The Customer may discharge trade waste containing a biodegradable stable latex emulsion.
- (e) The Customer must not discharge trade waste containing a stable latex emulsion which is not biodegradable at a concentration greater than 1,000 mg/litre of total solids.
- (f) The Customer must not discharge trade waste containing an unstable latex emulsion.

## 1.6 Radioactive waste

The Customer must only discharge trade waste which complies in all respects with the Radiation Regulations 2007, as amended from time to time.

## 1.7 Colour

The Customer must not discharge trade waste containing colour greater than 9 Adams- Nickerson (42) units, determined from the most pronounced colour obtained from a sample adjusted to a pH of not less than 7.0 and no greater than 8.0, following biological treatment by an activated sludge process.

## Part 2 Chemical characteristics

### 2.1 pH value

The Customer must not discharge trade waste with a pH value of less than 6.0 or greater than 10.0, except as provided by Clause 2.3 (b) (ii).

### 2.2 Organic concentration

The Customer must not discharge trade waste with a total mass load of 5-day biochemical oxygen demand in excess of 1,000 kg/day, unless its concentration is no greater than 4,000 mg/litre.

### 2.3 Nitrogen

The Customer must not discharge trade waste with a concentration of:

- (a) total kjeldahl nitrogen greater than 500 mg/litre; or
- (b) ammonia, plus ammoniacal ion (expressed as N ) greater than
  - (i) 50 mg/litre, except as provided by this paragraph; or
  - (ii) 200 mg/litre, where
    - (a) the trade waste discharged can only be received Melbourne Water's Western Treatment Plant;
    - (b) a risk assessment has been conducted;
    - (c) the occupier can comply with a restricted pH range of 6.0 to 8.0; and
    - (d) the occupier has demonstrated to South East Water that commonly available waste minimization technology has been applied to the best extent practicable.

### 2.4 Sulfur substances

- (a) Oxidised sulfur
  - (i) For the purpose of this paragraph, oxidised sulfur means the chemical substances expressed as S and known as sulfates, sulfites and thiosulfates.
  - (ii) The Customer must not discharge trade waste containing oxidised sulfur with a concentration of 100 mg/litre or more, except as provided in this paragraph.
  - (iii) The Customer must treat any trade waste with a concentration of oxidised sulfur greater than 600 mg/litre before it is discharged.
  - (iv) Where trade waste prior to discharge would have a total concentration of oxidised sulfur of not less than 100 mg/litre and not more than 600 mg/litre, the Customer must treat any stream of waste contributing to the discharge which has a concentration of oxidised sulfur greater than 600 mg/litre.
  - (v) The Customer must use the best available technology, as determined by South East Water, to treat any trade waste under sub-paragraph (iii) or (iv).
- (b) The Customer must not discharge trade waste containing sulfide in a concentration greater than 1 mg/litre.

## 2.5 Metals

- (a) The Customer must not discharge any element listed in column 1 of Table A, except in accordance with this paragraph.
- (b) Where the daily mass load of any element discharged is between the lower limit specified in column 2 and the upper limit specified in column 3 for that element, trade waste must not exceed the concentration specified in column 4.
- (c) Where the daily mass loads of any element discharged is either lower than the limit specified in column 2 or greater than the limit specified in column 3, South East Water must determine the maximum concentration of that element which the Customer may discharge.
- (d) Where no entry is made in column 2 and 3 for any element, trade waste must not exceed the concentration for that element specified in column 4.
- (e) Where the Customer has demonstrated to South East Water that it is unable to limit the concentration of Boron (as B) to the concentration specified in column 4 using commonly available waste minimisation technology to the best extent practicable, the occupier may discharge trade waste containing boron in a concentration no greater than 100 mg/litre.
- (f) Where the Customer has demonstrated to South East Water that it is unable to limit the concentration of Manganese (as Mn) to the concentration specified in column 4 using commonly available waste minimisation technology to the best extent practicable, the Customer may discharge trade waste containing Manganese in a concentration no greater than 100 mg/litre.

**TABLE A**

Column 1 element	Column 2 grams/day	Column 3 grams/day	Column 4 mg/L
Arsenic			1
Boron as B			25
Barium			150
Beryllium			30
Cadmium	0.4	20	2
Chromium	100	5000	10
Cobalt			10
Copper	100	5000	10
Iron	2000	100000	100
Lead	100	5000	10
Manganese			10
Mercury	0.2	10	1
Molybdenum			10
Nickel	10	500	10
Selenium			10
Silver*	0.2	50	5
Thallium			20
Tin			10
Uranium (238)			30
Zinc	200	15000	10

\* based on analysis using digestion with aqua regia.

## 2.6 Halogens and halides

The Customer must not discharge trade waste containing a substance listed in Table B with a concentration greater than is listed for that substance.

**TABLE B**

<b>Substances</b>	<b>Maximum allowable concentration milligrams per litre</b>
Bromine ( expressed as Br <sub>2</sub> )	5
Chlorine (expressed as Cl <sub>2</sub> )	5
Fluoride	30
Iodine (expressed I <sub>2</sub> ) in	5

## 2.7 Cyanide

The Customer must not discharge trade waste containing a cyanide concentration greater than 10 mg/litre.

## 2.8 Inhibitory chemicals

- (a) The Customer must not discharge any trade waste which, when diluted to a 5 per cent solution with sewage, would inhibit the microbiological sewage treatment process applicable to that trade waste by more than 20%.
- (b) South East Water must determine the microbiological sewage treatment process referred to in sub-paragraph (a).

## 2.9 Organic acids

The Customer must not discharge trade waste containing a substance listed in Table C with a concentration greater than is listed for that substance.

**TABLE C**

<b>Substances</b>	<b>Maximum allowable concentration milligrams per litre</b>
Total phenoxyacetic acids	1,000
Acetic acid	1,085
Acrylic acid	1,015

## 2.10 Phenolic substances

The Customer must not discharge trade waste containing a substance listed in table D with a concentration greater than is listed for that substance.

**TABLE D**

<b>Substances</b>	<b>Maximum allowable concentration milligrams per litre</b>
Sum of phenol, monochlorophenol, dichlorophenol and their isomers	300
Trichlorophenol	50
Tetrachlorophenols	5
Pentachlorophenol	5

## 2.11 Aldehydes and ketones

The Customer must not discharge trade waste containing a substance listed in Table E with a concentration greater than is listed for that substance.

**TABLE E**

<b>Substance</b>	<b>Maximum allowable concentration milligram per litre</b>
Acetone	380
Acrolein	0.1
Formaldehyde (expressed as HCHO)	200
Methyl Ethyl Ketone (MEK, 2-butanone)	90
Methyl Isobutyl Ketone (MIBK)	6.1

## 2.12 Nitriles

The Customer must not discharge trade waste containing acrylonitrile at a concentration greater than 1.0 mg/litre.

## 2.13 Aromatic hydrocarbons

The Customer must not discharge trade waste containing a substance listed in Table F in a concentration greater than is listed for the substance.

**TABLE F**

<b>Substance</b>	<b>Maximum allowable concentration milligrams per litre</b>
<b>Mononuclear aromatic hydrocarbon</b>	
Benzene	1
Cumene	3
2,4 Dinitrotoluene	10
2, 6 Dinitrotoluene	10
Ethylbenzene	2
Nitrotoluene	5
Styrene	2
Toluene	2
Total Xylenes	2
1,3 Dinitrobenzene	0.34
<b>Polynuclear aromatic hydrocarbon</b>	
Acenaphthene	0.016
Naphthalene	1.3

## 2.14 Halogenated aliphatic hydrocarbons

The Customer must not discharge trade waste containing a substance listed in Table G in a concentration greater than is listed for that substance.

**TABLE G**

<b>Substance</b>	<b>Maximum allowable concentration milligrams per litre</b>
1,1 Dichloroethane	5
1,2 Dichloroethane	5
1,1,1 Trichloroethane	3
1,1,2 Trichloroethane	3
1,1,2,2 Tetrachloroethane	2
Hexachloroethane	1
Chloromethane (Vinyl Chloride Monomer)	0.5
1,2 Dichloroethylene	5
Trichloroethylene	1
Tetrachloroethylene	1
Carbon Tetrachloride	1
Methylene Chloride	5
Methyl Chloride	0.001
Methyl Bromide	0.001
Trichloromethane (Chloroform)	1
Bromodichloromethane	1
Trichlorofluoromethane	1
Dichlorodifluoromethane	1
Chlorodibromomethane	5
1,1 Dichloropropane	5
1,2 Dichloropropane	5
1,3 Dichloropropane	0.001
Hexachlorobutadiene	0.001

### 2.15 Aliphatic hydrocarbons

The Customer must not discharge trade waste containing aliphatic hydrocarbons C6 to C9 at a concentration greater than 1 mg/litre.

### 2.16 Esters

The Customer must not discharge trade waste containing a substance listed in Table H in a concentration greater than is listed for that substance.



**TABLE H**

Substance	Maximum allowable concentration milligrams per litre
Ethyl Acrylate	1.5
Methyl Methacrylate	30

### 2.17 Ethers

The Customer must not discharge trade waste containing a substance listed in Table I in a concentration greater than is listed for that substance.

**TABLE I**

Substance	Maximum allowable concentration milligrams per litre
Diethylene glycol monobutyl ether (butyl carbitol)	2,000
2-Butoxyethanol	295
Tetrahydrofuran	75

### 2.18 Other organics

The Customer must not discharge trade waste containing Epichlorohydrin at a concentration greater than 3.9 mg/litre.

### 2.19 Pesticides and herbicides

The Customer must not discharge trade waste containing a substance listed in Table J with a concentration greater than is listed for that substance.

**TABLE J**

Substance	Maximum allowable concentration milligrams per litre
<b>Organochlorine pesticides</b>	
Aldrin	0.001
Chlordane	0.006
DDT	0.003
Dieldrin	0.001
Heptachlor	0.003
Lindane	0.1
<b>Herbicides</b>	
Glyphosate	10
Trifluralin	10

### 2.20 Halogenated aromatic hydrocarbons

The Customer must not discharge trade waste containing halogenated aromatic hydrocarbons listed in Table K in a concentration greater than is listed for that substance.

**TABLE K**

Substance	Maximum allowable concentration milligrams per litre
Polychlorinated Biphenyls (PCB's)	0.002
Polybrominated Biphenyls (PBB's)	0.002

## 2.21 Alcohols

The Customer must not discharge trade waste containing a substance listed in Table L with a concentration greater than is listed for that substance.

**TABLE L**

<b>Substances</b>	<b>Maximum allowable concentration milligrams per litre</b>
2-Ethyl Hexanol	155
Allyl Alcohol (2-Propen-1-ol)	9.1
Ethanol	3,765
Ethylene Glycol	4,000
Isobutanol	140
Isopropanol	1,155
Methanol	615
Propylene Glycol	4,000

## 2.22 Chlorodibenzo-p-dioxins and Chlorodibenzo-furans

- (a) The Customer must not discharge any trade waste containing any of the full range of chlorodibenzo-p-dioxin and chlorodibenzo-furan congeners, except in accordance with this paragraph.
- (b) Subject to sub-paragraphs (c), (d) and (e), the Customer must not discharge trade waste containing any of the full range of chlorodibenzo-p-dioxin and chlorodibenzo-furan congeners in a concentration greater than the NATO total toxic equivalent of 40.0ng/L.
- (c) Notwithstanding sub-paragraph (b), South East Water may at any time in writing require the Customer not to discharge any trade waste containing any of the full range of chlorodibenzo-p-dioxin and chlorodibenzo-furan congeners in a concentration greater than the NATO total toxic equivalent of 20.0 ng/L.
- (d) Subject to sub-paragraph (e), the Customer must not discharge trade waste containing any 2,3,7,8 tetrachlorodibenzo-p-dioxin congeners in a concentration greater than the NATO toxic equivalent of 20.0 ng/L.
- (e) Notwithstanding sub-paragraph (d), South East Water may at any time require the Customer not to discharge any 2,3,7,8 tetrachlorodibenzo-p-dioxin congeners in a concentration greater than the NATO total toxic equivalent of 5.0 ng/L.

## 2.23 Other substances

A Customer must not discharge trade waste containing any substance not otherwise mentioned in this schedule:

- (a) In a concentration no greater than 1µg/L;
- (b) Where the discharge or release of which to any element of the environment is restricted or prohibited by any legislation applying in Victoria; and
- (c) In quantities of, or of a quality that, in the opinion of South East Water would or is reasonably likely to endanger human life, compromise the safety of a person or of the works, or significantly adversely affect the operation of a sewage treatment plant or any part of the environment.

## 2.24 Headspace air

The Customer must not discharge trade waste to a sewer which, at the nearest point of the sewer accessible by humans from the point of discharge, in any respect fails to comply with every relevant Safe Work Australia Exposure Standard relating to time weighted average exposure standard (TWA).