Trade Waste Information Sheet

Motor Trades & Fuel Dispensing

Preface

Liquid waste generated by industry, small business and commercial enterprises is referred to as trade waste. The *Water Supply (Safety and Reliability) Act 2008* prohibits the unauthorised discharge of wastes, other than domestic sewage, into the sewerage system.

1. The definition of trade waste is;

- *The waterborne waste from business, trade or manufacturing property, other than:*
  - *Waste that is a prohibited substance; or*
  - *Human waste; or*
  - *Stormwater.*

2. The definition of Domestic waste is;

- *Faecal matter and urine of human origin and liquid wastes from sinks, baths, basins, showers and similar fixtures designed for personal hygiene in both residential and commercial properties.*

General

Acceptance of liquid wastes to sewerage from trades liable to produce oily wastes or wastewater bearing other petroleum hydrocarbons, including, but not limited to:

- service stations,
- car washes,
- automotive repair premises,
- auto dismantlers and
- fuel depots.

The provisions of this guideline apply to all new applications for connection of affected premises to the sewerage system and to all affected premises already connected, but not served by any form of pre-treatment for oil water separation previously approved by WRC. Premises already served by some form of pre-treatment for oil water separation previously approved and accepted by WRC will be permitted to continue to operate with their present facilities, and to discharge liquid waste to the sewerage system. However, where the existing pre-treatment facility does not meet the requirements of this guideline and the discharge criteria described within the TWEMP the owners of such premises may be required to upgrade their facility for compliance, upgrade will be required if extensions or modifications to the premises are proposed

Premises affected

- Auto dismantler

- Bus/Coach depot wash bay area
- Car detailing
- Mechanical workshop
- Service stations (workshop only)
- Vehicle washing (commercial-manual cleaning)
- Vehicle washing (automatic robots) self service
- Vehicle washing (including engine degreasing)
- Equipment hire company
- Construction Equipment maintenance
- Truck wash (external only)
- Engine/gearbox reconditioning parts washing
- Panel beater/spray painting
- Radiator repair
- Service stations covered forecourt
- Bus/Coach depot refuelling bay

Pre-treatment requirements

Stage 1

A dry basket arrestor or screen must be fitted to all floor wastes/drainage pits that drain to the pumped holding tank, to strain out gross solids.

Stage 2

A pumped holding tank with a minimum capacity of a 2000 litres or a minimum capacity nominated by the pre-treatment manufacturer shall be installed. The holding tank shall incorporate a high level alarm system. The solid and liquid waste within the holding tank is deemed to be regulated waste and must be collected and disposed of by an EPA licensed waste transport operator.

Stage 3

A non-emulsifying pump must be provided to collect:

- water used for washing of mechanical equipment or parts, e.g. sinks, troughs etc.
- floor wash-down.

A coalescing plate interceptor (CPI/CPS) with a minimum capacity of a 1000 L/h or a vertical gravity separator (VGS) or hydrocyclone separation system (HSS) sized according to the influent flow rate must also be installed to treat the wastewater.

In instances where the flow rate will exceed 1000L/h, a larger capacity unit will be required and must be sized according to the influent flow rate. The applicant must provide supporting

information in regard to sizing and recommended maintenance schedule with the application.

The units should be installed as per the manufacturer's instructions, and where applicable the distributor or supplier must be able to guarantee supply of parts and service maintenance.

An oil arrestor is more efficient if detergents are not used, e.g. cleaning done using high water pressure. If the use of detergents cannot be avoided, only quick-break detergents

should be used. Degreasers must not be discharged into the sewerage system. Further, only non-emulsifying pumps should be used to pump the liquid waste to the separator.

Note that double and triple interceptor pits and general purpose silt pits are not considered to be, nor are they approved as, appropriate pre-treatment equipment units for this type of wastewater.

Separator requirements

The separator shall have the following features:

a) The separator shall be of rigid construction to ensure the specified geometry is maintained under all operating conditions.

b) There shall be an air gap or opening to atmosphere at the point of discharge of the collected oil into the oil drum or tank to allow the separation process to continue after the drum or tank has filled.

c) A non-emulsifying feed pump shall be used. The pump must either be an electrically driven diaphragm pump or a rotary positive displacement pump. The capacity of the

d) pump shall be limited to the separation capacity of the unit. This capacity shall be clearly marked on the exterior of the unit. All associated pipe work shall be sized to match the pump capacity.

e) A nominal 25mm "full flow" sampling valve shall be provided in the effluent pipe leading to the tundish. The valve shall be located near the separator in a manner such that effluent would pass through the valve (when it is open) rather than discharging to the tundish.

f) The following information shall be permanently marked on the plate separator and pump:

- model designation, supplier name, address and phone number,
- for the separator: the maximum instantaneous flow capacity (this should equal or exceed the pump flow rate),
- for the pump: pump type and speed.

g) The pre-treatment installation's pipe work and the surrounding area must be arranged to ensure that any spillage or overflow of sludge, separated oil or untreated oily waste is prevented from bypassing the separator and entering the sewerage system

Commissioning

Following installation, each pre-treatment facility shall be commissioned by a person or company accredited for this purpose by the manufacturer or supplier of the equipment. As part of the commissioning, the following documents shall be provided:

(a) a certificate of commissioning to be to be forwarded to our Trade Waste representative and

(b) a schedule of recommended cleaning and maintenance to be given to the owner and kept at the premises for reference and available for inspection by us on request. The schedule shall provide:

- a description of activities to be undertaken (e.g. for coalescing plate separators the removal and cleaning of plates, sludge withdrawal from hopper, etc.)
- minimum frequencies for these activities; and
- any special observations to be made which would affect the frequency of this maintenance schedule or which may indicate conditions when qualified service personnel may need to be engaged.

Electrical equipment used in treating liquid trade waste

Flammable Class 3 liquids (see Australian Dangerous Goods Code), such as petrol, kerosene or other solvents, are potentially dangerous in the workplace. Although these substances must not be discharged to the sewerage system, there is the potential for them to be present or situated near an oil arrestor. Where a process has flammable liquids present, all electrical equipment within a defined area must be of special construction to avoid a dangerous situation occurring. For instance, if the applicant is proposing to install an oil arrestor, they must check that the electrically operated pump and other electrical devices have the correct electrical rating for the purposes for which they are used.

A licenced electrical contractor must connect the treatment system to the electricity supply. The contractor will then submit to the electrical distributor a notice on the electrical work performed at the premises and provide the applicant with a copy.

Good housekeeping practices

- Businesses that use detergents to clean vehicles, mechanical parts or workshop floors are required to use quick-break detergents only. These detergents assist the separation process where any type of oil arrestor is used as pre-treatment
- Oil spills should be dry cleaned prior to wash down
- Grease blobs should be scraped up before wash down
- Screens may be used to exclude nuts, washers and the like from the pump intake
- Cleaning compounds must be compatible with the pre-treatment system

- Oils and solvents should be stored in a separate bunded area that cannot drain to the sewerage or stormwater systems
- Petrol, diesel fuel, discrete oil, kerosene, solvents and other flammable and/or explosive substances must not be discharged to sewer
- Any oil or chemical containers must be stored in such a manner that spills or leaks are prevented from entering the sewerage or stormwater systems.

Draining of radiator coolant

Large quantities of ethylene glycol have the potential to upset the operation of the sewerage system and therefore must not be discharged to the system. Further, large quantities of ethylene glycol increase the emulsification of oils and greases and thereby reduce the efficiency of HSS, VGS or CPI/CPS systems.
All radiator coolant should be collected and securely stored for recycling or disposal to an appropriate treatment facility.

Use and disposal of solvents

Solvents are often used for the cleaning of parts. Spent solvents must not be discharged to the sewerage system. Instead they must be collected and taken off site for recovery or disposal. Measures must be taken to ensure that the area used for parts washing does not drain to the sewerage system or pre-treatment equipment. However, the final rinse water can be discharged to the sewerage system via the pre-treatment equipment, provided that the parts are dried and wiped clean before rinsing.
It is recommended that applicants read the material safety data sheets for the products used on site. Typical constituents found in automotive products are listed under the heading of *Premises affected* above.

Roofing of liquid trade waste generating areas.

It is not permitted to discharge stormwater to sewer. When a liquid trade waste generating or pre-treatment process does not fully occur within a building, suitable roofing must be provided to prevent the ingress of stormwater to the sewerage system.
In all cases the design must prevent runoff from any storm with an intensity of up to a 20 year Average Recurrence Interval (ARI) from entering the sewer