Trade Waste Information Sheet
Commercial Vehicle Washing

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

Trade waste discharges from vehicle washing businesses could harm the sewerage system.

For the purpose of this guideline 'vehicle washing' refers to the cleaning of any vehicle with water or steam.

This guideline does NOT extend to degreasing operations that use high strength detergents or solvent formulations. Wastewater from those activities typically requires removal for off-site treatment or disposal, or on-site pre-treatment methods that are able to break down emulsions, adjust pH level etc.

Trade waste discharge substance limits are;

- Total Hydrocarbons - <30mg/L
- Total Suspended Solids - <600mg/L
- pH - >6<10
- Total Phosphorus - <50mg/L

Note; flow rate discharge is dependent on capacity of sewers

Only quick breaking detergents/degreasers are permitted in conjunction with those vehicle washing activities within the scope of the guideline. These detergents/degreasers temporarily emulsify oil/grease and suspend solids during cleaning, but release this material soon afterwards. This allows the final pre-treatment device to operate effectively.

Typical Wash-bay Requirements

- Vehicles are washed on a hardstand area with a minimum 1:80 grade for wash water drainage.
- Ingress of surface water is prevented
- To exclude stormwater and rainfall,
- Above ground pre-treatment equipment is located within a roofed wash bay bund, or separate approved roofed and bunded area which drains to the pump chamber.

Important Note:

The discharge of stormwater to sewer is not permitted. All broad areas draining to sewer such as wash down bays must be roofed and bunded to prevent the entry of stormwater, including rain descending at an angle of up to ten degrees from the vertical. If bunding is not practical or possible, then grated stormwater drains and/or the grading away of surfaces surrounding the sewered area may be used to achieve the same purpose. 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. Where the stormwater catchment threatening the sewered area with inundation, is greater than 100 square metres, the application must be accompanied by a certificate from an engineer who is currently registered on the Queensland Professional Engineers Register, to verify the design's capability. The customer must ensure that stormwater drains remain free from debris and/or other obstructions that would restrict or block the flow of stormwater.

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 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

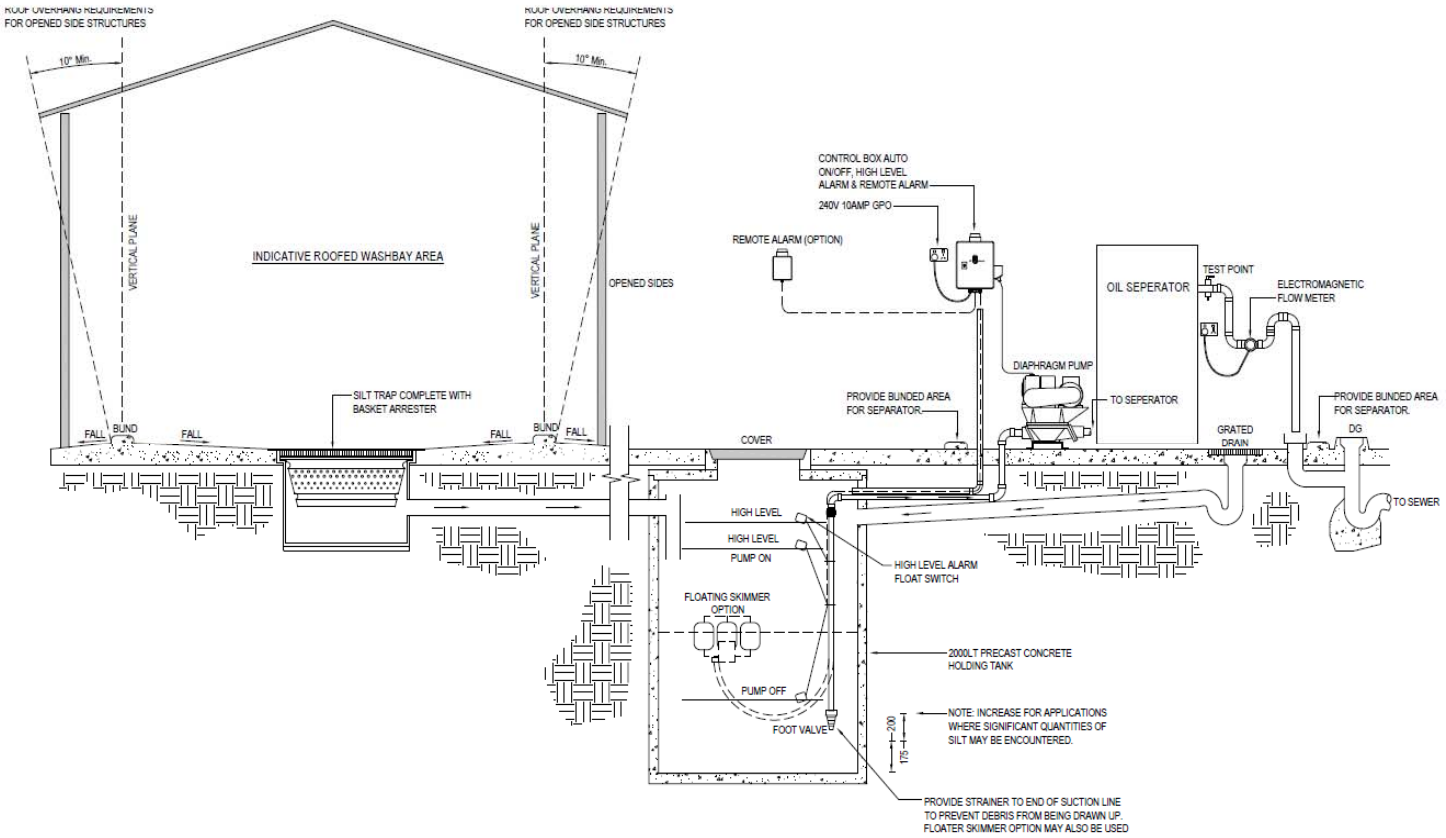
Following installation, each pre-treatment facility shall be commissioned by a person or company accredited for this purpose by the manufacturer or supplier of the equipment. As part of the commissioning, the following documents shall be provided:

(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.

Appendix 1 – Indicative washdown bay configuration



INDICATIVE ROOFED VEHICLE WASH BAY, HOLDING TANK AND OILS SEPARATOR DETAIL
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