

5. SERVICE STATION FORECOURTS

Preface

Liquid waste generated by industry, small business and commercial enterprises is referred to as trade waste. The Water Supply (Safety & 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 household wastes from water closet pans, sinks, baths, basins and similar fixtures designed for use in private dwellings*

General

Acceptance of liquid wastes to sewerage from trades liable to produce oily wastes or wastewater bearing other petroleum hydrocarbons is conditional on:

- a) provision by the customer of approved oil separation pre-treatment facilities;
- b) adequate maintenance of the facility, as per the manufacturer's recommendations, being carried out and recorded in a log and
- c) use of quick emulsion breaking detergents, degreasers etc.

The oil separation pre-treatment facilities shall be of the above ground coalescing plate separator type or Vertical Gravity Separator type with minimum specifications of 1000 L minimum capacity or sized according to the influent flow rate.

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.

Preventing stormwater entry

The discharge of stormwater to sewer is not permitted. All broad areas draining to sewer such as wash down bays, service station forecourts, garbage enclosures and workshops 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.

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 forwarded to WRC's Trade Waste Officer 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 RRC 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.


Alternative pre-treatment facilities

Any customer wishing to install an oily waste pre-treatment facility that does not conform to the specifications contained in this Guideline, will be required to submit their system for a field evaluation.

The evaluation will be specific to an Industry Process, and must be undertaken at a site that is, acceptable to WRC, typical of that Industry Process with respect to at least the quality (mg/L), mass (kg) and quantity (kL) characteristics of the liquid trade waste to be treated by the system. Customers or others submitting systems for evaluation will be required to bear all costs incurred in the evaluation including all analyses at a NATA registered laboratory.

For the facility to be accepted as an alternative "deemed-to-comply" solution, it must be shown to:

- a) provide removal of all hydrocarbon particles rising at 700mm per hour or faster or to reduce petroleum hydrocarbons to 30mg/L or less when subjected to the most extreme waste loading expected at the premises where the facility is proposed for installation, and;

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- b) continue to perform and not discharge oil into the sewer in the event of the oil tank becoming full.

Following approval the customer must operate and maintain the system in compliance with the associated technical manual (if any), and the applicable requirements of this note. It is unlikely that "triple interceptor" traps will satisfy these requirements.