

SPEL
PURACEPTOR



Petrol Stations
Fuel Depots
Transformer Bunds
Switchyards
Power Stations
Wash Bays
Airports

SPEL STORMWATER
PURACEPTOR™ TREATMENT

STORMWATER QUALITY IMPROVEMENT DEVICES



STORMWATER TREATMENT

SPEL PURACEPTOR Class 1 stormwater treatment separators cater for potential hazards to the environment including sites where there is a risk of oil and fuel spills.

Oils and all petroleum hydrocarbons are treated to the highest discharge quality exceeding EPA standards ensuring it safe for stormwater discharge.

Major Oil spills from a petrol tanker or a transformer rupture are captured and contained preventing any stormwater discharge.

- Independently tested (laboratory) and certified to discharge < 1.86PPM or less petroleum hydrocarbons (TPH), from 5,000PPM ingress
- Independently field tested to discharge 'no detection' from >33,000.0PPM



The results obtained at HR Wallingford, U.K. are certified to European Standard EN BS858.1 (2006) and are in line with the designed performance criteria for high performance and long service life between maintenance periods, achieving results averaging between **0.1 - 1.86mg/**



SERVICE STATION NATA TEST

Service station forecourt after 3 months operation. Includes capture and treatment of unleaded fuel, diesel and engine oil.

Total Petroleum Hydrocarbons				
Results expressed in mg/l				
	EQL*	Test 1		Reduction
		Inflow	Outflow	
C6-C9	0.05	2.4	<0.05	No Detection
C10-C14	0.05	302	<0.05	
C15-C28	0.4	1820	<0.4	
C29-C36	0.1	8.3	<0.1	

*Sensitivity: Estimated Quantitation Limit

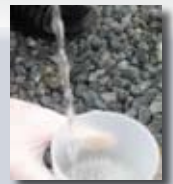
MAINTENANCE

- Designed for high performance and low maintenance over a long life span
- Visible oils (TPH) are skimmed from the surface of the water level
- Easy and safe to access and clean, with access shafts positioned on all chambers.
- No entering of the unit is required
- Not mandatory for the unit to be cleaned every 3 months.
- Only oils, sediment and gross pollutants need to be removed. All stormwater does not require removal.
- The cylindrical design ensures sediment collects easily on the floor of the chambers effecting easy, quick removal. There are no square corners or unreachable cavities and recesses.
- Waste is removed by a vacuum loading truck. (Suction truck)



Stormwater discharge quality is < 1.86 mg/l hydrocarbon content exceeding the Environmental Protection Agency (E.P.A.) requirements of 10mg/l hydrocarbon content.

Test sampling access: Field test discharged samples are taken from sampling point and analysed by NATA accredited laboratories.



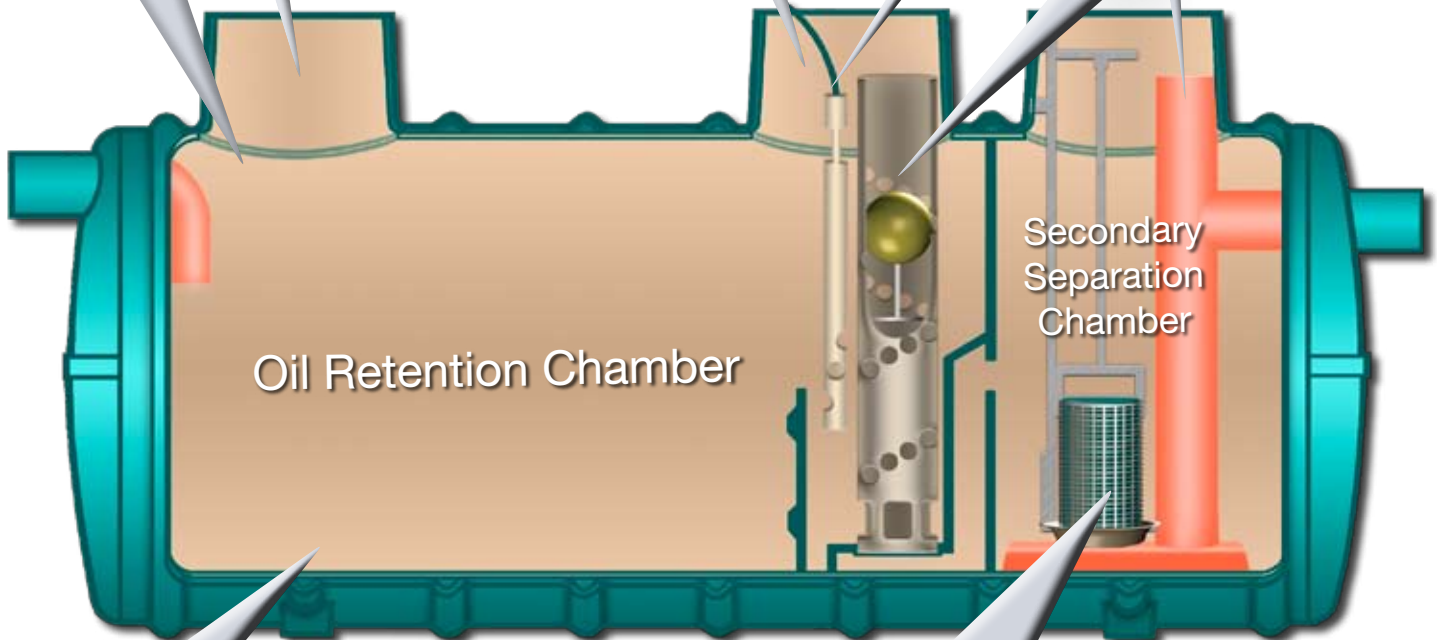
The probe is freely suspended in the probe protection tube in the separator at the correct level. When the oil-layer or depth of hydrocarbons reaches the predetermined level, the top of the probe will be immersed in the oil, breaking the circuit and activating the alarm. It is intrinsically 'fail-safe' system providing complete assurance that is operative. If a fault occurs it will be signaled immediately.



SPEL® PURACEPTOR tanks contain an immersed inlet dip pipe to extinguish flames and prevent inflammable vapours from passing through to the drainage system. Complies with Section 6.3.4 of BS EN 858.1.2006. SPEL PURACEPTOR can withstand temperatures of up to 140°C.



The AUTOMATIC CLOSURE DEVICE (A.C.D.) is a precisely engineered device comprising a water-buoyant ball that is sensitive to any change in the water density as a consequence of light liquids build up, thereby automatically activating a process of depressing the A.C.D. to SHUT OFF the separator, preventing pollutants from discharging to drains and waterways.



SPEL® PURACEPTOR units are glass reinforced plastic vessels made by the technical advanced chop hoop filament winding process (patented) producing circumferential and longitudinal strength complying with AS 2634-1983 for tank design.

Laminate construction

- Tank shell designed in accordance with AS2634-1983 (S1 S75).
- Filament wound shells are lightweight, but have great strength and durability and carry a 25 year warranty.
- Life expectancy in excess of 50 years.
- Smooth, high gloss, corrosion resistant, scratch resistant internal surface.
- Excellent 'flow coat' water penetration barrier.



SPEL PURACEPTOR Class 1 separators incorporate coalescer units. They consist of a quality stainless steel mesh container with an adjustable handle and high volume reticulated foam insert.

The coalescer unit is mounted in the second chamber, providing a coalescence process for the separation of smaller globules of light liquid pollutants before final discharge to stormwater.



SPEL PURACEPTOR™

OIL CAPTURE & CONTAINMENT

SPEL

Oil Capture and Containment

High Risk

Ararat Wind Farm



SITE	Ararat Wind Farm, VIC.
APPLICATION	Transformers
RISK	High
POLLUTANTS	Transformer oil
DISCHARGE	Stormwater
UNIT SUPPLIED	P006 - Puraceptor™ Class 1 with 20,000 litre retention tank
T.F.R.	6 LPS
OPERATION	Due to the remote position of this transformer and the impact on the environment in the event of a failure, it was essential to the power provider to have a proven and reliable system. SPEL PURACEPTOR™ was selected due to its proven “track record” in supplying the power industry, overall reliability and the necessity to have optimum quality discharge. Whilst the design of 6 LPS from the bund area caters for the nominal flow, a 20,000L spill retention was built into the system to hold the capacity of a transformer rupture.

Cranbourne Switchyard



SITE	Cranbourne Switchyard, VIC.
APPLICATION	Transformer Switchyard
RISK	High
POLLUTANTS	Transformer oil (70,000 litres)
DISCHARGE	Stormwater to river
UNIT SUPPLIED	P040 - Puraceptor™ Class 1 - oil capacity 70,000 litre
T.F.R.	40 LPS
OPERATION	This unit was installed to treat stormwater and firewater from the deluge system simultaneously. The unit caters for a 40 LPS flow rate, and has the capacity to capture a 70,000L transformer spillage and remain operational. SPEL units are designed and built to BS EN 858.1. 2006 it was able to be used as a designated flame trap, further enhancing its selection for this site.

Fuel Station



SITE	Fuel Service Station, NSW.
APPLICATION	Stormwater runoff from forecourt and immediate adjacent surfaces.
RISK	High
POLLUTANTS	Petrol, diesel, oils, suspended solids
DISCHARGE	Stormwater drain to Georges River.
UNIT SUPPLIED	P006 Puraceptor™ Class 1
T.F.R.	6 LPS
OPERATION	Functions by gravity, will continue to be treated in the event of a power failure. Equipped with an oil/fuel alert probe for maintenance monitoring and to alert in the event of an emergency spill.