



## Veolia MPPE Technology

## Shell Prelude FLNG - Australia

### Shell Prelude FLNG Project

#### Browse Basin

- World's first Floating Liquefied Natural Gas plant (FLNG)
- The largest floating structure ever built
- Expected to produce 3.6 mtpa of LNG, 1.3 mtpa of condensate and 0.4 mtpa of LPG for export



#### Challenge

- Removal of dispersed and dissolved toxic content to reach Zero Harmful Discharge.
- In hull available space being limited.



#### The MPPE process

MPPE stands for Macro Porous Polymer Extraction. Polymer beads contain a specific immobilized extraction liquid. Hydrocarbon contaminated water is passed through a column packed with MPPE particles. The hydrocarbons are extracted from the water at any designed efficiency up to 99.999%. The MPPE particles can simply be regenerated by heating with steam. The removed hydrocarbons are recovered as an almost 100% pure product. No other waste stream is created. No chemicals requires, no off gasses produced.



#### Performance

##### MPPE unit removes:

- Dispersed oil (aliphatics)
- Dissolved and dispersed aromatics (BTEX)
- Poly Aromatics (PAHs)

##### MPPE unit capacity 140 m3/h

- 100% extraction redundancy (1 extra set of 2 columns)
- Single step treatment before discharge to sea
- Full run test before shipment
- Size 11 x 10 x 16 m (L x W x H)
- Delivered 2012

##### MPP & TiPSS Technologies

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