

CASE STUDY

PROJECT REAL-TIME HYDROCARBON MONITORING OF OILY WASTEWATER DISCHARGE

PRODUCT OWS with TPH monitoring
INDUSTRY Defence

LOCATION Queensland



BACKGROUND

An industrial client in Queensland generates oily wastewater with variable hydrocarbon loading and needed to meet strict local council and regulatory discharge limits.

Although conventional Oil Water Separators (OWS) efficiently eliminate free-floating oil, compliance is usually monitored through periodic grab sampling. This method risks exceeding regulatory limits between samples, resulting in potential environmental violations, fines and increased discharge or disposal costs.

MAK Water was engaged to design and deliver a treatment solution to ensure that the discharge met local council limits at all times.

SOLUTION

Effective floating oil removal with continuous, real-time verification of Total Petroleum Hydrocarbons (TPH) in the treated discharge.

MAK WATER KEY SOLUTIONS

- Clearmake™ Oil Water Separator utilising Vertical Tube Coalescing (VTC) technology for efficient free oil separation.
- Integrated TriOS microFlu HC oil-in-water probe installed on the discharge line to provide real-time TPH measurement.
- TriBox Mini controller with analog output to the site PLC / SCADA system for continuous monitoring, alarms, and data trending.
- Full supply, installation, and commissioning of all mechanical, electrical, and instrumentation components to suit site-specific flow rates and hydrocarbon loadings.



RESULTS AND BENEFITS

- **Continuous compliance assurance** - Real-time TPH monitoring (0–5,000 ppb) provides ongoing verification of discharge quality beyond periodic sampling.
- **Reduced risk of environmental breaches** - Live monitoring and alarms enable immediate corrective action if hydrocarbon levels increase.
- **Lower discharge and disposal costs** - Confirmation of compliant effluent quality minimises unnecessary off-site disposal saving costs.
- **Improved operational visibility** - Continuous data trending provides clear insight into wastewater performance and supports proactive operational decision-making.

