

One tank farm has found a way of greatly reducing the amount of hydrocarbons it discharges with its wastewater

# Saving resources

Operators at an export tank farm in the Middle East were concerned about the potential for boil-over at the terminal, which occurs when there is a tank fire. The heatwave from the burning hydrocarbons causes water in the bottom of the tank to boil. When this happens, the tank becomes much like a volcano erupting, spewing, and burning hydrocarbons in a wide radius.

The terminal eventually decided it was time to consider other options and chose a new technology from Agar Corporation that uses a series of control probes for dewatering their crude storage tanks.

Installed near the top of the drain sump just below the tank floor, the probes auto-operate the opening and closing of the tank's water drain valves when either clean water or oil is detected. When clean water is detected, the water drain valve opens and remains open until a low concentration of oil is detected. Only clean, oil-free water, therefore, is discharged from the bottom of the sump.

The technology also uses a second alarm probe, inserted lower into the water draw-off sump, 50cm below the control



Tank dewatering in action

probe that serves as a low alarm fail safe mechanism.

This low alarm probe should always detect a 100% clean water environment. If an upset in the vessel occurs or the water draw-off valve does not close properly,

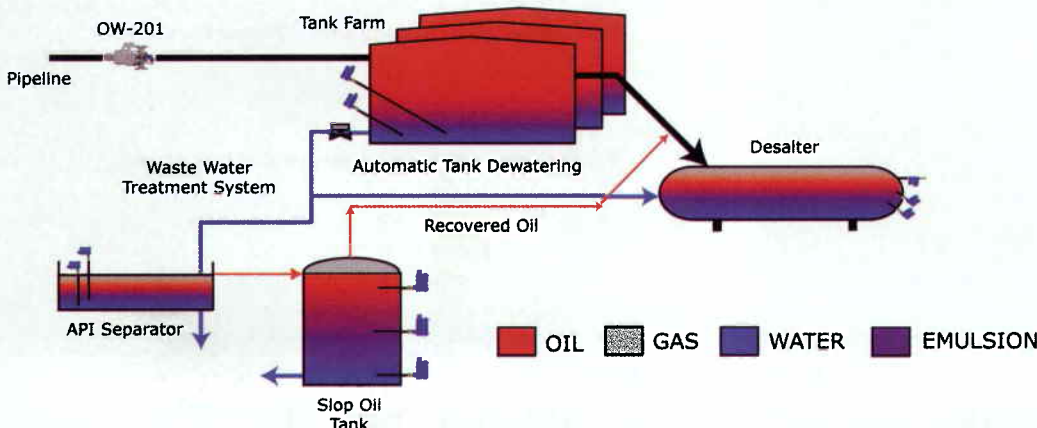
oily water will be detected at this lower elevation.

Because of previous incidents operators at the tank farm installed a second alarm probe outside the tank as an added precaution.

By installing a technology

that eliminates the problem of dumping hydrocarbon with the wastewater rather than recovering the hydrocarbons after the contaminated water has escaped, the terminal was able to realise a number of benefits including:

1. Preventing oil from being discharged with wastewater;
2. Controlling the water interface in the sump, below the tank floor (eliminating corrosion of the floor plates);
3. Maximising the tank's capacity for storing oil as the only source of accumulated water is in the sump, which in turn eliminates the possibility for tank boil-over.



Step-by-step process

**For more information:**  
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