

Waste Water Treatment Plant Improvements Texaco



*Steering the path
to improved effluent
treatment at
Pembrookeshire
refinery*

Texaco wanted to improve the operations and reliability of their Pembroke refinery's waste water treatment plant to both improve efficiency and reliability, and to ensure continued compliance with revised discharge consents. Entec had worked previously with the site operations team to identify possible modifications and improvements to the plant.

On the basis of the investment strategy report, Texaco asked Entec to define the process design packages required for each of eight selected improvements.

To meet the very short timescale, a small process, electrical, control and instrument project team was established which reflected the specific project requirements. Working with the Texaco design and engineering staff, the investment strategy proposals were thoroughly reviewed to allow development of the detail process design. This involved spending time with the Texaco Instrument Department, the Plant Operators and the Engineering Group Management. Once the process

design had been agreed with Texaco, Entec developed the process design to produce packages for each of the site modifications, each complete with vendor quotations that met the Texaco site standards and an overall capital and design cost estimate. The process design packages also included revised process control drawings, general installation location plans, a control philosophy and electrical and instrumentation schedules.

One of the main challenges faced in refurbishing the works was to develop the head works of the treatment process into an automated system. This required the balancing and control of several competing process parameters, including pH, salinity, flow, storm water return, and maximum limits on the oil in the influent. All of these parameters are measured and controlled at the inlet to the works, and will allow Texaco to demonstrate that the works meets the new discharge consents.

