

Expro Excellence

Metering, Sampling and Analysis campaign supports major expansion project

Well Flow Management | Fluids



Objectives and background

- Expro's client were going through the design phase of a major new gas plant to process gas from various fields in Iraq
- To support the development, the operator required detailed and accurate measurements of the contaminants in the various feed gas streams, which originated from several reservoirs, and were processed at different sites within the region
- The current levels of toxic contaminants such as mercury, arsenic and sulphur species were not reliably known
- To ensure that the plant designs included the correct sizing and materials for the process units, ultra-trace limits of detection (sub-parts-per-billion) were required for many of the impurities
- High levels of hydrogen sulphide present in some streams limited the analytical options
- Many feed streams had no up-to-date flow rate information
- To prevent any delays to the project, it was of major importance that such analyses were completed in a timely manner

Expro Excellence

- Expro devised and delivered a comprehensive campaign combining metering, sampling, onsite analysis, and laboratory measurements
- Expro's experts proposed the most appropriate techniques and equipment to meet the client's analytical requirements
- A team of specialist chemists and engineers, along with the required analytical package, was mobilized with minimum lead time

- Analysis conducted onsite was reported to the client within hours of the samples being collected
- Expro's in-country PVT lab delivered quick turnaround compositional analysis, whilst sulphur speciation was carried out at the UK technical center
- Sonar meters were installed on the gas and liquid outlets of multiple stage separators
- Gas stream flow rates, required for the plant design inputs, were measured with Expro's non-intrusive clamp-on meters. Combined with the sampling and analysis services this provided the operator with an in-depth assessment of the quality and quantity of their feed gases

Value to the client

- The metering, sampling and analysis campaign was completed across multiple sites within the schedule with zero HSE incidents, and zero NPT
- All analyses were measured to a level meeting or exceeding the desired sensitivity
- Complementary Sonar metering services added further insight to the nature and composition of the feed gas
- Meter diagnostics indicated control valve induced slugging and gas carry under on a separator liquid outlet, as well as liquid carryover on the gas outlet
- Expro's comprehensive reports provided the operator with the information they needed, in time to complete the phase of the facility design

Safety



Insight



Contact

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