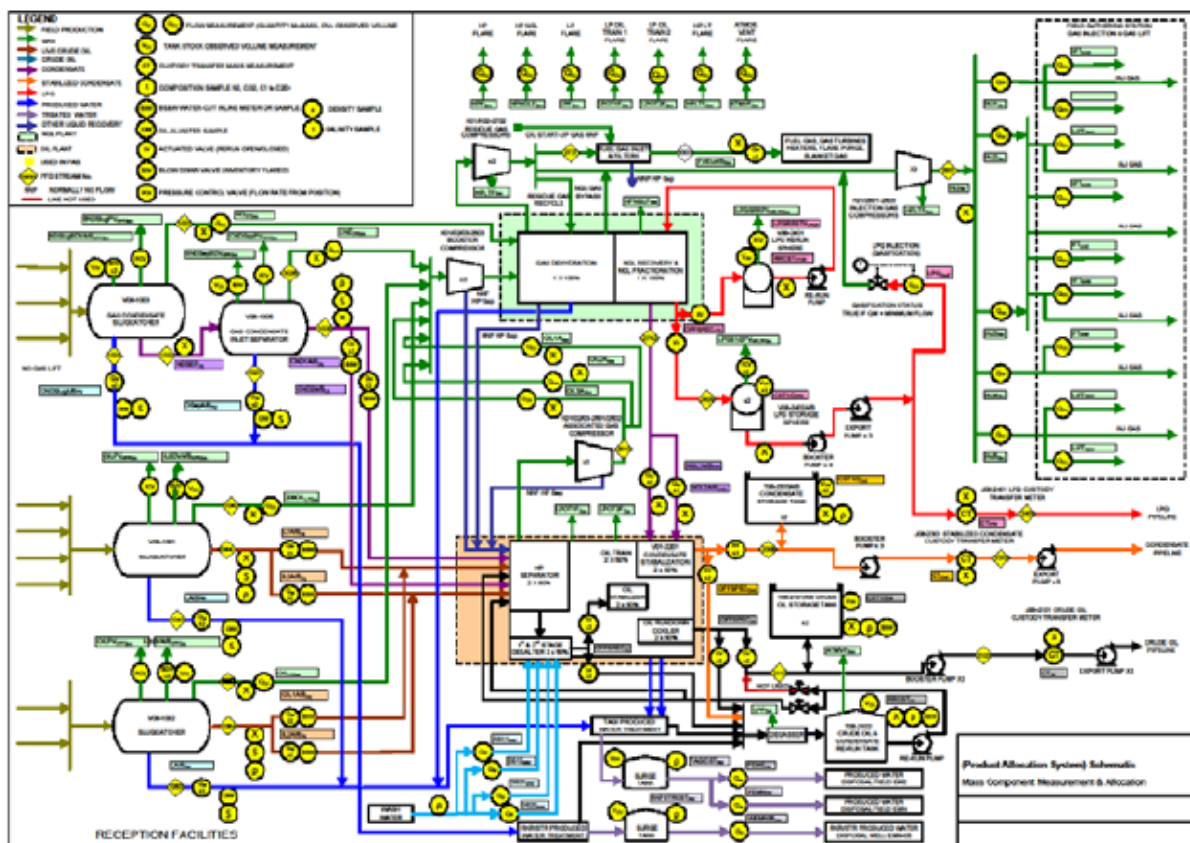


Hydrocarbon Allocation System Development (PR181126)

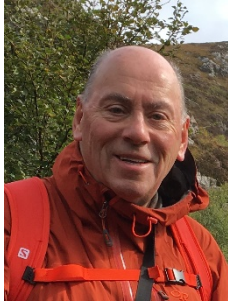
A recent paper SOLV® presented at the 2018 North Sea Flow Measurement workshop, available for download at <http://www2.flowsolv.com/ZvuHn>, outlines how a hydrocarbon allocation system was developed and implemented for a 200kbpd plant, through to operations. There are many considerations requiring an experienced team to resolve, such as found in the example below, which achieves a consistent material balance of <0.5% of throughput.



Just a few of the specialist considerations include: -

- Flow measurement and meter selection
- Measurement sensitivity and uncertainty
- Process simulation and thermodynamics
- Detailed calculations by component
- Software system design, rigorous testing and implementation
- Contract analysis and interpretation
- Software design.....and so on

At SOLV®, we have an experienced, highly qualified team that has produced exceptional, proven results for our clients. Based in Scotland with over 40 years combined experience, in oil and gas flow measurement, hydrocarbon allocation systems and software development, the SOLV® team lead by Martin Basil includes:-



Martin Basil – Flow Measurement Consultant

Chartered Engineer, and graduate of Robert Gordons University, Aberdeen, BSc Electrical and Electronic Eng. Martin has been involved in Hydrocarbon Allocation and Measurement worldwide for some 28 years. In 1998 Martin pioneered the use of Monte Carlo Simulation (MCS) techniques for flow measurement and allocation uncertainty, now the accepted norm included in the measurement uncertainty standard ISO5168: 2005.

Martin developed many allocation systems in use today from North America to the Middle East including multiphase, and allocation measurements for crudes, condensates, LPG's, LNG, and gas. He has undertaken over sixty allocation uncertainty studies for third-party exposure for field entrants.



Fiona Tinnion - Flow Measurement Engineer

Fiona graduated from the University of Edinburgh with a BSc (Hons) in Geophysics and Meteorology. Fiona has a thorough grounding in physics, mathematics, measurement and mathematical modelling. Followed by working for a Finnish company which develops environmental systems.

Fiona moved to SOLV® in 2014 where she has been involved with hydrocarbon measurement, allocation and uncertainty based projects including site audits in Algeria and Alaska. Undertaken Mass and Volume Component Allocation for a 200 kbpd Oil Development in North Africa for Crude Oil, Condensate and LPG allocation. She assisted in the design, procedure, and model testing of allocation software utilising COSTALD and API MPMS standards. She is involved in specifying, supervising and testing of FLOWSOLV® V5 Oil and Gas Flow Measurement software.

Blair Fyffe – Flow Measurement Engineer

Blair graduated with an MSc (1st) in Astrophysics and PhD in Avalanche Simulation from University of Edinburgh. Blair is well versed in underlying computer modelling techniques needed to make a SOLV® allocation system accurate and repeatable.

Specialist in multiphase systems, Mass Component Allocation for Crude Oil, Condensate and LPG including design, procedure and test model for FAT & SAT for the hydrocarbon allocation software. This comprised over seventy allocation and fiscal measurements, including flare, and rerun for multiple field developments, consistently achieving material balances of <0.5% of throughput.

For an initial discussion with SOLV® for your hydrocarbon allocation requirements, please call +44 (0)1397 773 190 or email info@solv.net