



FuelsManager[®]
AVIATION



SkyLink and Varec - fueling a successful partnership through teamwork

Aviation Fuels Management System – Baghdad International Airport, Iraq

SkyLink and Varec

...fueling a successful partnership through teamwork

Existing Operations

The first step involved Varec and SkyLink personnel working together to identify the exact needs of the airport in the military controlled rebuilding phase, while also considering the projected needs of an automated fuels management system for a fully operational commercial airport. Two specific areas operated under makeshift procedures – the flightline and fuel farm.

The flightline fueling operation involved managing and tracking fuel loads and transactions using hand-written Fuel Service Records (FSRs or paper tickets). Data also had to be entered by the accounting department in a separate invoicing system and the FSR was electronically scanned for data transfer to the corporate office state-side. These processes consumed a lot of valuable man hours.

The fuel farm consisted of three fuel tanks connected to a truck load rack. Operators in the fuel farm control room moved fuel between the tanks and rack using a semi-functional, 20-year-old instrumentation and control panel. The panel provided basic control and display of pumps, valves and meters, but did not allow for any management of inventories or transactions.

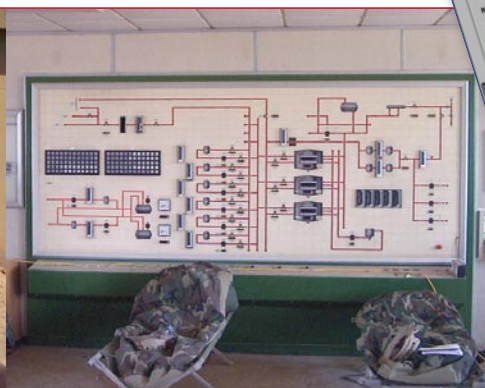
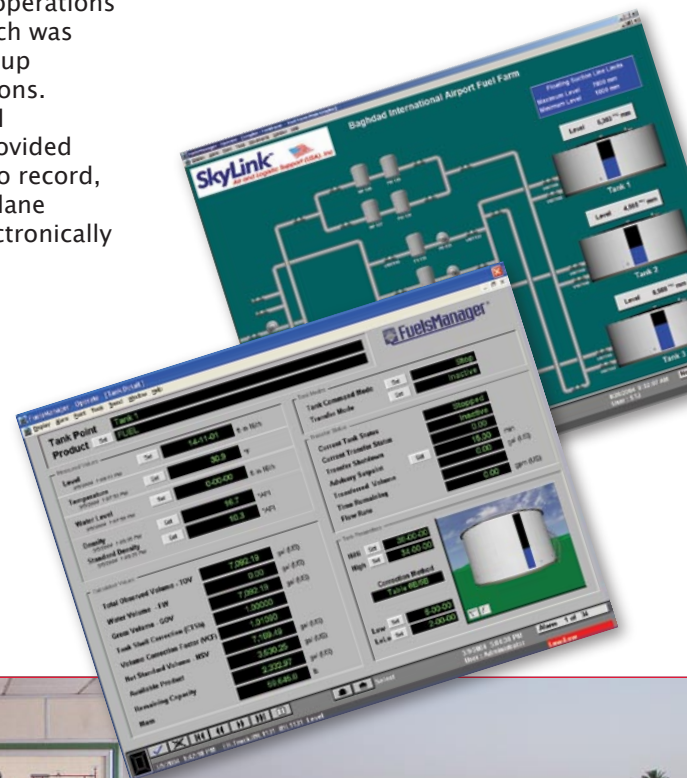
Varec Solution

Varec proposed installing its FuelsManager Aviation Professional Edition software along with all the necessary hardware in multiple phases. Working in concert with the airport rebuilding project, a Varec team, based in Baghdad and Atlanta, not only installed and configured the system, but trained on-site personnel and provided support to SkyLink personnel.

The first stage, installed in March 2004, replaced the existing system of distributing manual, handwritten FSRs. A FuelsManager Aviation data server was installed in the operations office on the flightline, which was essential for SkyLink's startup of aircraft refueling operations. Operators now have the full accounting functionality provided by FuelsManager Aviation to record, track and report the into-plane transactions (FSRs) and electronically transfer this data.

The second stage, implemented in June 2004, identified the need to provide complete inventory management capabilities at the fuel farm using a FuelsManager Aviation Professional Edition PC. Routine maintenance was performed on the existing Varec fuel tank gauges and the analog (4–20 mA) transmitters were upgraded to digital transmitters that communicate level and temperature data back to the fuel farm control room. This now allows the operators to see bulk inventories in real-time and report these levels electronically.

FuelsManager Aviation provides real-time inventory management. Also, the transaction journal displays a summary of each day's transaction data. Operators are able to quickly and easily add, view, modify or print a single or multiple transactions.



The 20-year-old existing equipment included original Varec 2500 ATG mechanical tank gauges that were still operational.

FuelsManager Aviation's SCADA capabilities will replace the out-dated instrumentation and control panel and offer complete pump and valve control at the fuel farm and truck rack.

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Future Implementations

To date, the Baghdad airport utilizes only a few of the extensive capabilities offered by FuelsManager Aviation Professional Edition. Approximately 20 non-military flights currently arrive and depart each day, but the airport has the capacity to handle 7.5 million passengers a year. As the Airport is brought online and rebuilt, the Varec project team will work with SkyLink to offer the following additional functionality:

- Fuel farm, hydrant and truck rack automation – pump/valve control
- Real-time, wireless communications between fuel farm and ramp operations office for airport-level and web-based fuel accounting and inventory reconciliation
- Real-time fuel dispatch operations management
- Automated Data Capture (ADC) at the wingtip with electronic fuel ticketing
- Leak detection and environmental monitoring
- Integration with airline, oil company and third-party ERP systems



For further information about Varec's measurement, control and automation solutions, please email: aviation@varec.com