# Varec®

# DEFENSE FUEL MANAGEMENT SOLUTIONS

Varec has a deep understanding of the complex operational and technology needs related to bulk fuel storage management for the U.S. Department of Defense and international defense agencies. We offer integrated solutions for air, ground and marine logistics to enable you to easily measure, control and automate fuel management and gain global visibility into local and remote inventories.

## CIO Review
### 20 MOST PROMISING
### DEFENSE TECHNOLOGY
SOLUTION PROVIDERS - 2018

### Accounting
Enables users to accurately track, manage, reconcile, and monitor book vs. physical inventories by tank farm manager, fuel stockholder, and product on a daily, weekly and monthly basis.

### Inventory Management
Provides users with a view of all measured, and calculated inventory variables, alarms, and status for a single tank or multiple tanks on concise graphical or tabular displays.

### Leak Detection
Enhances safety by monitoring for leaks and sending alerts when potential environmental hazards occur by interfacing to 3rd-party detection systems or using tank level data from high-accuracy tank gauges.

### Load Rack Automation
Controls facility access, and facilitates efficient, safe, and secure loading operations by interfacing to the 8620 Driver Entry Terminal. Interfaces are also available for 3rd-party automation and safety equipment, such as electronic presets, ESD and grounding systems, or load rack control equipment. Compatible with TWIC identity verification standards.

### Mobile Point-of-Sale
Time, location and vehicle information are displayed on a ruggedized tablet that captures accurate fuel load data, automatically performs net volume calculations to API standards, and validates calculations for more efficient in the field dispatching.

### Maintenance
Provides users with views of current status of equipment, i.e. in/out of service in addition to capturing and reporting on maintenance activities and statistics.

### Movement System
Monitors bulk product transfers in real time to and from the facility or from tank to tank within the facility.

### Quality Control
Enables users to configure custom quality control tests and associate tests to create a test set. Schedules are maintained for required quality control test sets and inspections. Users can also record and store results, ensuring failed equipment is not used in operations.

### SCADA
Provides automation and control throughout the tank farm by integrating systems and reducing the amount of time operators have to spend in the field. This is achieved by using industry standard open communication interfaces and proven data point architecture.

### Service Station Management
Provides automation for unmanned service stations and remote fuel points by capturing and validating data at the point of sale.

### Throughput Calculator
Performs product throughput analysis and estimates emissions for U.S. compliant EPA Title V permits.

### Training
Supports the configuration of custom training requirements, and maintains training records to help ensure personnel operating on site are in compliance and current with all training requirements.

## Centralized Enterprise Systems

With a centralized enterprise fuel management solution, our customers are able to access FuelsManager® applications across all sites and locations. All fixed base and tactical operations are connected to the enterprise to provide a worldwide overview of inventories and plant status, while also automatically delivering reports securely. Automated reporting services, integration with Microsoft® Office and third-party business systems such as SAP® are supported. An enterprise system reduces IT capital expenditures as no local software needs to be installed, nor are there databases or servers to manage and maintain.

## Bulk Fuel Inventory Management



By integrating level instruments and interfaces with FuelsManager's Inventory Management and SCADA applications, operators can efficiently and accurately manage inventory and report daily stock position to the enterprise. As a single system for bulk fuel management, FuelsManager provides intuitive interfaces that display measured values from tank gauging systems, as well as pumps, valves and other automation equipment, while also increasing safety with integrated alarm management. Tracking all product movements, totals and discrepancies from tank-to-tank transfers, shipments, receipts and water drains is supported within the Movement System application. On-base truck racks include inventory management, pump and valve control, and transaction management during vehicle refueling operations. Further, the Leak Detection application provides additional monitoring capability,

**Tank Gauges and Other Field Devices:**

- Float and Tape Gauges
- Transmitters
- Tankside Monitors

- Radar Gauges
- Communication Interfaces
- Temperature Sensors

- Servo Gauges
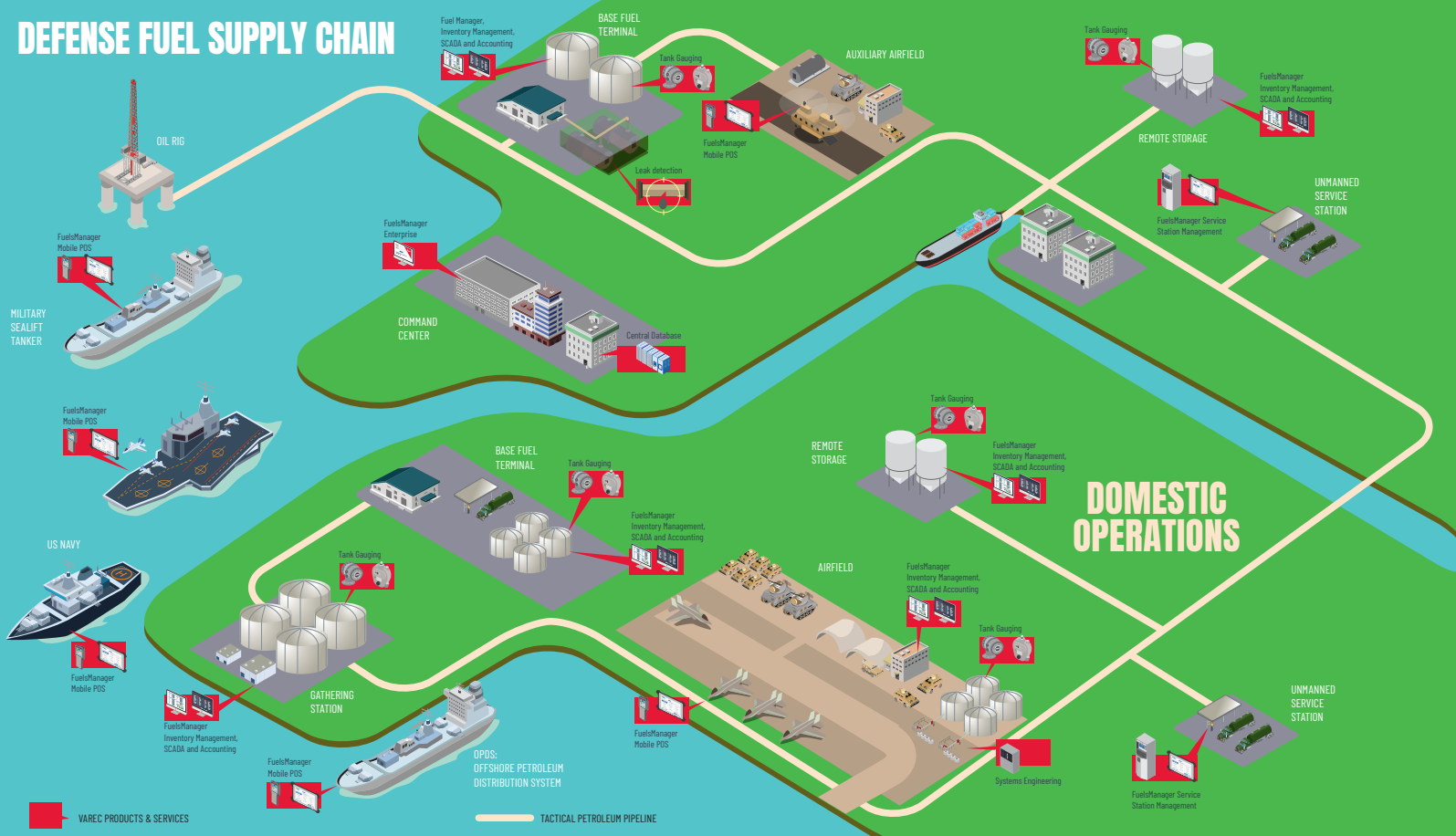- Data Capture Units
- Mobile Devices

From the tank farm to the flight line, managing daily fuel-related transactions with an efficient inventory reconciliation and audit trail is made easy with the FuelsManager Accounting application. Operators gain critical visibility in order to create end of day or end of month closeouts, capture physical inventories from storage terminals and calculate variances, maintain accurate records, and reconcile book versus physical inventories by site, owner or product on a daily basis. They also gain insight into inventory gains and losses by product per day and month. Meter reconciliation is also supported across all fueling points to enable daily reconciliation for any out of balance inventories.

## Fuel Inventory Accounting

# DEFENSE FUEL SUPPLY CHAIN



## DEFENSE FUEL SUPPLY CHAIN

OIL RIG

MILITARY SEALIFT TANKER

FuelsManager Mobile POS

US NAVY

FuelsManager Mobile POS

FuelsManager Inventory Management, SCADA and Accounting

GATHERING STATION

FuelsManager Mobile POS

Tank Gauging

FuelsManager Mobile POS

OPDS: OFFSHORE PETROLEUM DISTRIBUTION SYSTEM

BASE FUEL TERMINAL

Tank Gauging

FuelsManager Inventory Management, SCADA and Accounting

FuelsManager Mobile POS

Fuel Manager, Inventory Management, SCADA and Accounting

BASE FUEL TERMINAL

Tank Gauging

Leak detection

FuelsManager Enterprise

COMMAND CENTER

Central Database

AUXILIARY AIRFIELD

FuelsManager Mobile POS

AIRFIELD

FuelsManager Inventory Management, SCADA and Accounting

Tank Gauging

Systems Engineering

REMOTE STORAGE

Tank Gauging

FuelsManager Inventory Management, SCADA and Accounting

DOMESTIC OPERATIONS

Tank Gauging

FuelsManager Inventory Management, SCADA and Accounting

REMOTE STORAGE

FuelsManager Service Station Management

UNMANNED SERVICE STATION

UNMANNED SERVICE STATION

FuelsManager Service Station Management

VAREC PRODUCTS & SERVICES

TACTICAL PETROLEUM PIPELINE

## Integration and Support

Varec provides complete fuels logistics systems deployment, maintenance, technical support and training for the U.S. Department of Defense (DoD), NATO, the Australian Department of Defense, and other agencies, to ensure real-time, global inventory visibility and accountability of fuels logistics and supply operations. Experienced engineers and technicians work hand-in-hand with customers to seamlessly bring systems together into a single powerful solution. In addition, program and project managers with deep domain expertise oversee each project following the ISO:9001 standard.

To ensure a smooth transition on newly deployed solutions, customers benefit from life cycle sustainment services. We also have a 24x7 technical support center on site to provide additional support to customers. With tier 1, tier 2 and tier 3 levels available, our help desk processes approximately 40,000 support tickets across more than 650 sites worldwide for the U.S. DoD. Support requests can be made over the phone or email, as well as through Single Point of Entry (SPOE) and self-service, depending on contract.

## Mobile Point-of-Sale



Improving the accuracy of manually recorded fuel transactions, while streamlining administrative processes, is achieved by leveraging a mobile point-of-sale solution. Using a ruggedized tablet integrated with the FuelsManager Dispatch application, in-the-field data entry can be replaced with a fully automated defense fuels management system. The tablet provides operators with time, location, aircraft and fuel load information for efficient dispatching. It also captures accurate fuel load data, automatically performs net volume calculations to API standard, validates data entry calculations, updates the Accounting application for timely fuel reconciliation and reporting, and supports multiple point-of-sale operations and transactions types.

The FuelsManager Service Station Management application interfaces directly to the Gilbaro Gasboy Islander PRIME Fleet Management terminal to manage the complete fuel sale process in real time. This exclusive integrated solution provides an automated defense fuels management system for unmanned service stations and military fuel points. The solution validates authorized users and payment methods before fuel is dispensed and updates the accounting application with completed transaction data to support timely fuel reconciliation. It also formats the transaction data so that it is export ready for enterprise reporting or external business systems such as SAP.

## Unmanned or Remote Service Stations



## Tactical Fuel Management



TacFuels® is a specialized solution to improve petroleum accountability and auditability at tactical or expeditionary fuel points. The measurement of product stored in collapsible storage tanks (CSTs) is fully automated with gauges specially designed for these types of storage tanks. The collected data is integrated with FuelsManager, and through various applications, operations achieve a high level of precision by eliminating errors associated with manual data entry. The solution's near real-time inventory visibility drastically improves logistical efficiencies and operational decision making throughout the supply chain, while also aiding in the rapid identification of potential fraudulent activities.

# ENGINEERING SERVICES

## Leak Detection Maintenance Services

Varec provides annual preventive maintenance and certification of the tank leak detection systems operating through FuelsManager at approximately 40 continental U.S. and Alaskan facilities. Our Designated Underground Storage Tank Operator (DUSTO) services include monthly visual inspections of underground storage tanks (USTs) and annual facility employee training for facilities in California. This state required program provides the user an independent inspection in accordance with Title 23 of the California Code of Regulations.

## Hydrant Equipment Monitoring Services

Varec performs the integration of electronic sensors and systems for remote monitoring of hydrant systems in fuel operations control centers at military airfield facilities worldwide. The integration provides a standardized approach to remote monitoring of all process conditions at hydrant pump houses, ensuring rapid response to system malfunctions during times when the pump houses are unmanned. These hydrant systems are also integrated with FuelsManager Inventory Management and Accounting applications.

*Varec®*

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