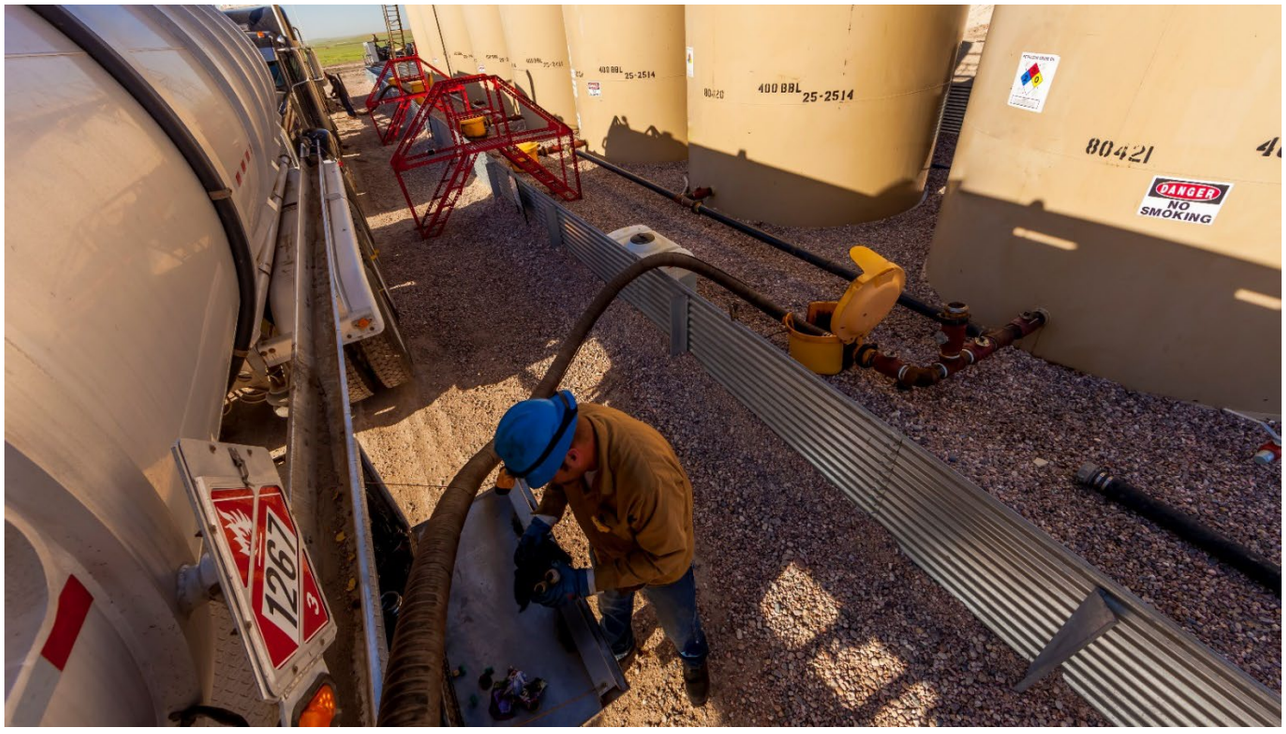
ProductionManager™ Fluid Logistics



Product Overview

ProductionManager™ Fluid Logistics (PMFL) is designed to track produced fluids into storage tanks or vessels and record any sales, or transfers of those produced fluids. The application is licensed using two different licenses. The ProductionManager Fluid Logistics Tank (PMFLT) license provides continuous, real-time gross standard volume inventory, tank levels, estimated fill rates and time to full, tank to tank or tank to recirculation transfers. The ProductionManager Fluid Logistics Loadout (PMFLL) license enables sales and transfers via LACT, truck haul, API18.2 or API 12.1.1 options. All transactions are recorded in a SCADA ready log for data collection for use in billing or auditing.

Fluid Logistics leverages ProductionManager™ Equipment Module (PMEQ) tanks, aggregates, strapping tables, loadouts, and pumps speeding deployment by simplifying configuration. When PMFL is used in conjunction with ProductionManager Edge Interface (PMEI) and the Beijer HMI you can enjoy an off-the-shelf, configurable, secure, and efficient fiscal sales, transfers, and disposals solution that needs no additional programming.

Features

- **Tanks**
  - Vertical or Horizontal
  - Oil, Water, or both using interface level sensors
  - Convert raw inventory into Gross Standard Volume
  - Production tracking
  - Estimated time until high level
  - Level alarm configuration
  - Auto-Hauling records any fluid movements without approved interaction

- **Aggregate Tanks**
  - Oil or Water aggregates
  - Aggregates of aggregates allowing creation of any needed site-specific totals
  - Production tracking
  - Auto-Hauling

EMERSON™

- **Loadouts**
  - LACT control and measurement
  - Customizable API 18.2 compliant process for dynamic metering or automated tank gauging
  - API 12.1.1 transfers based on automated tank gauging
  - Supports automated pipeline batching
    - Start permissive options
    - Measurement method options
  - Automated divert valve capability
  - Hauler credential database for secure transactions
  - Every transaction is recorded in a retrievable log
  - Pressure and temperature averaging options

User Interface

Fluid Logistics is accessed utilizing FBxConnect™ software, a Microsoft® Windows® based program created to configure, monitor and service Emerson's FB3000 RTU and applications. Fluid Logistics' graphical user interface allows you to easily navigate, operate, and configure each tank or loadout's requirements to your unique specifications.

Connectivity/Requirements

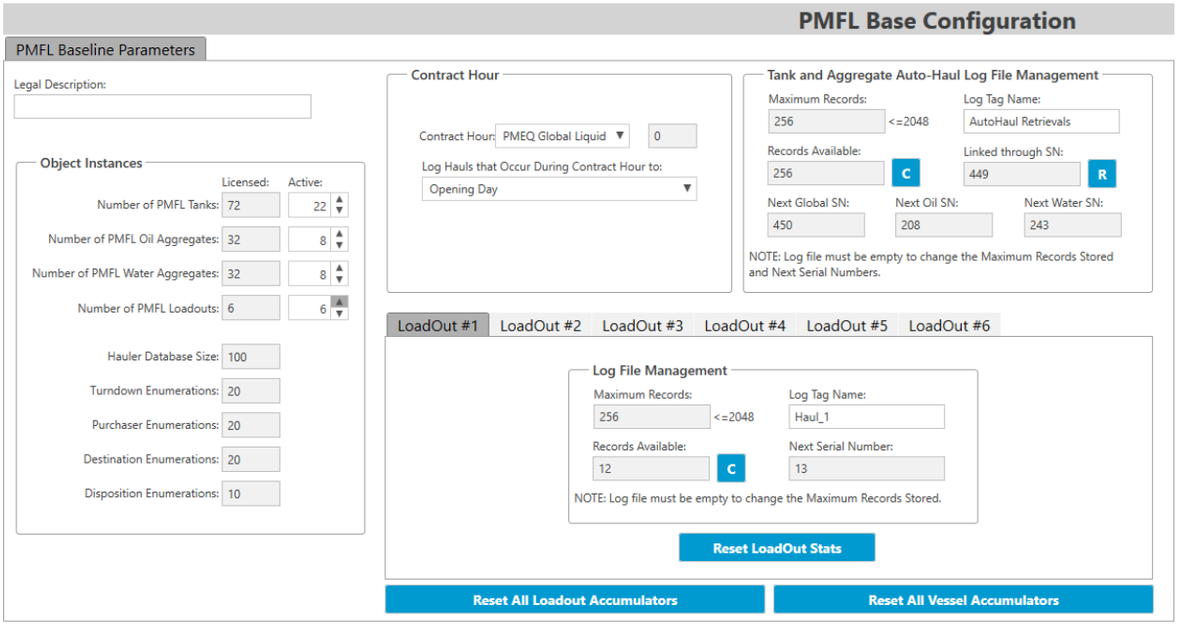
Once connected, you can access all features, including editing objects, setting alerts, reporting, diagnostics and more.

- FBxConnect™ access
- FB3000 RTU
- PMFLT or PMFLL License
- Local connectivity via USB, serial, or Ethernet

Configuration

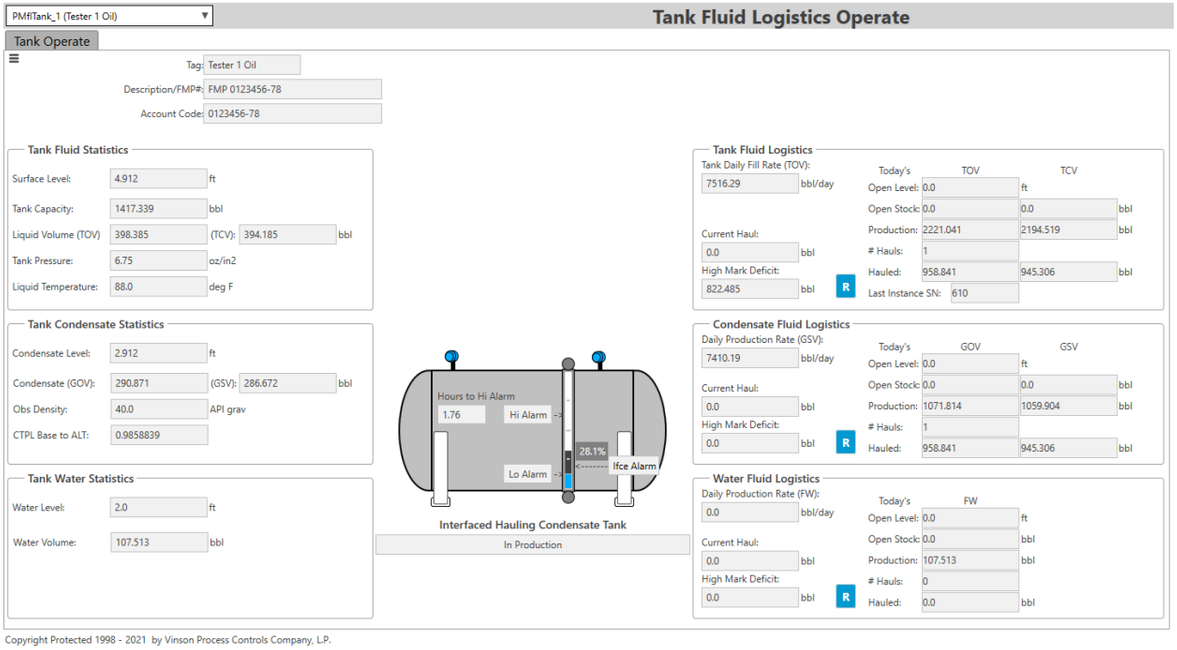
PMFL Base Configuration

Define installation size and scope

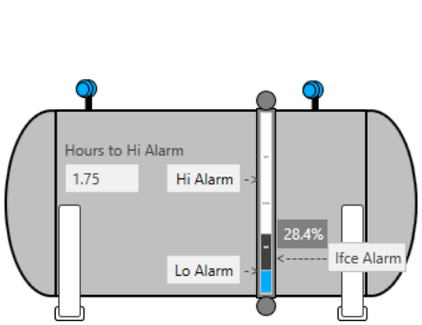


Tank Fluid Logistics Operate

Overview of tank current state and fluid logistics for the tank

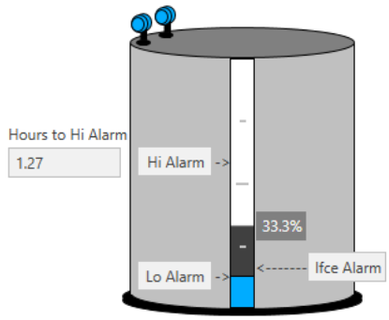


Tank Diagrams – The picture of the tank will change to either a horizontal vessel or vertical tank as defined in the PMEQ tank. Automated levels, Hi, Lo and Interface Alarms and Hours to Hi Alarm are also displayed if enabled.



Interfaced Hauling Condensate Tank

In Production

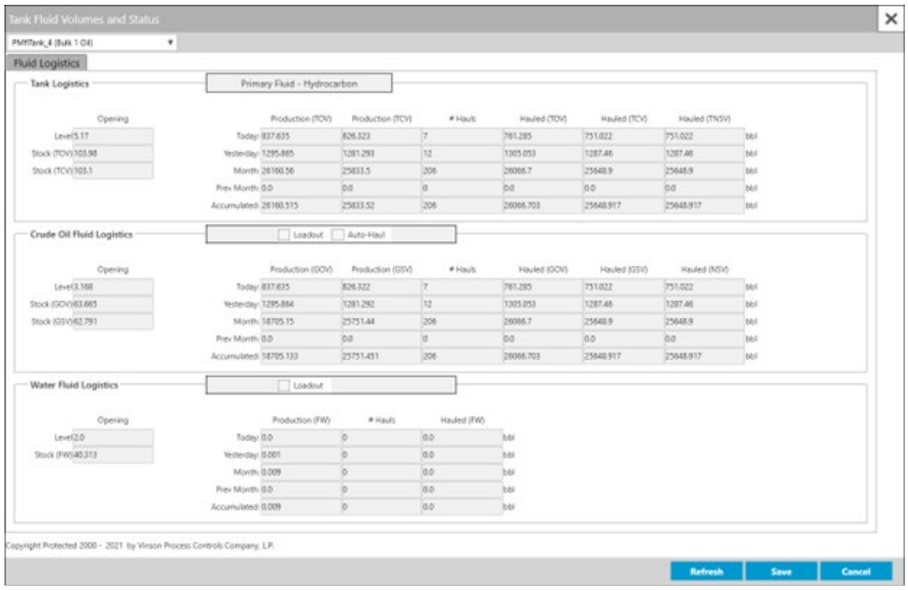


Interfaced Hauling Crude Oil Tank

In Production

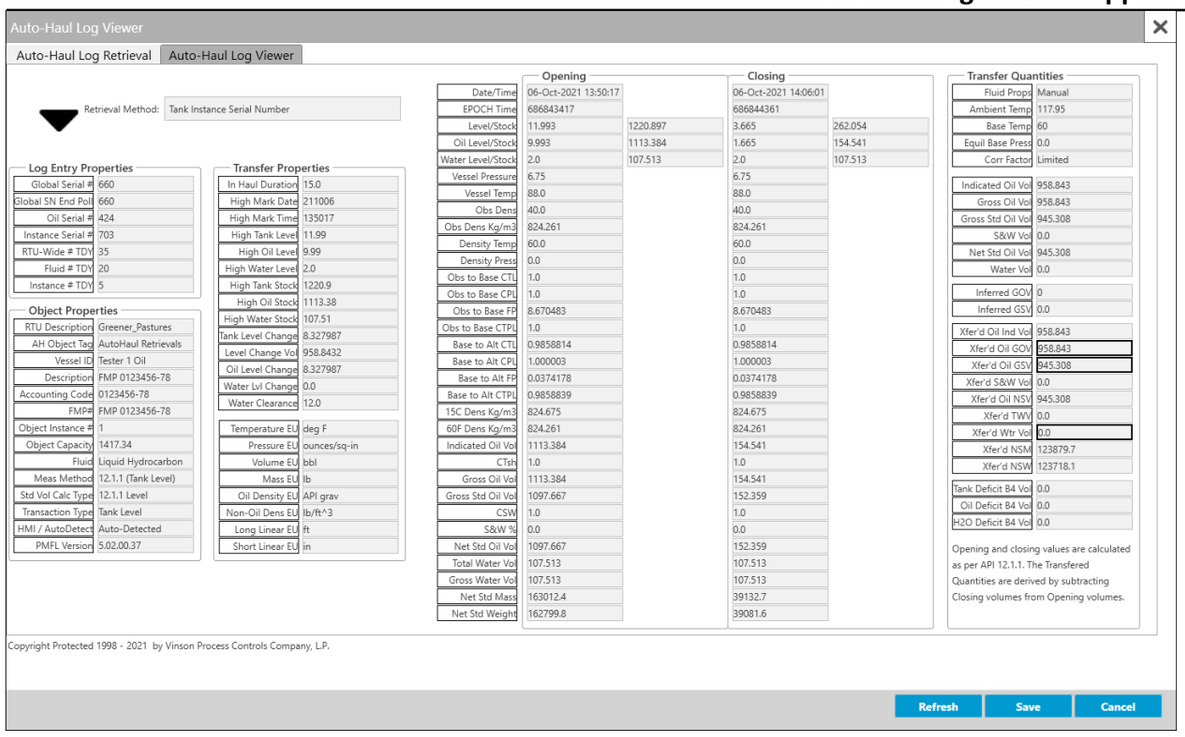
Logistics Summary

Shows current and historical values for total fluids, hydrocarbon, and water.



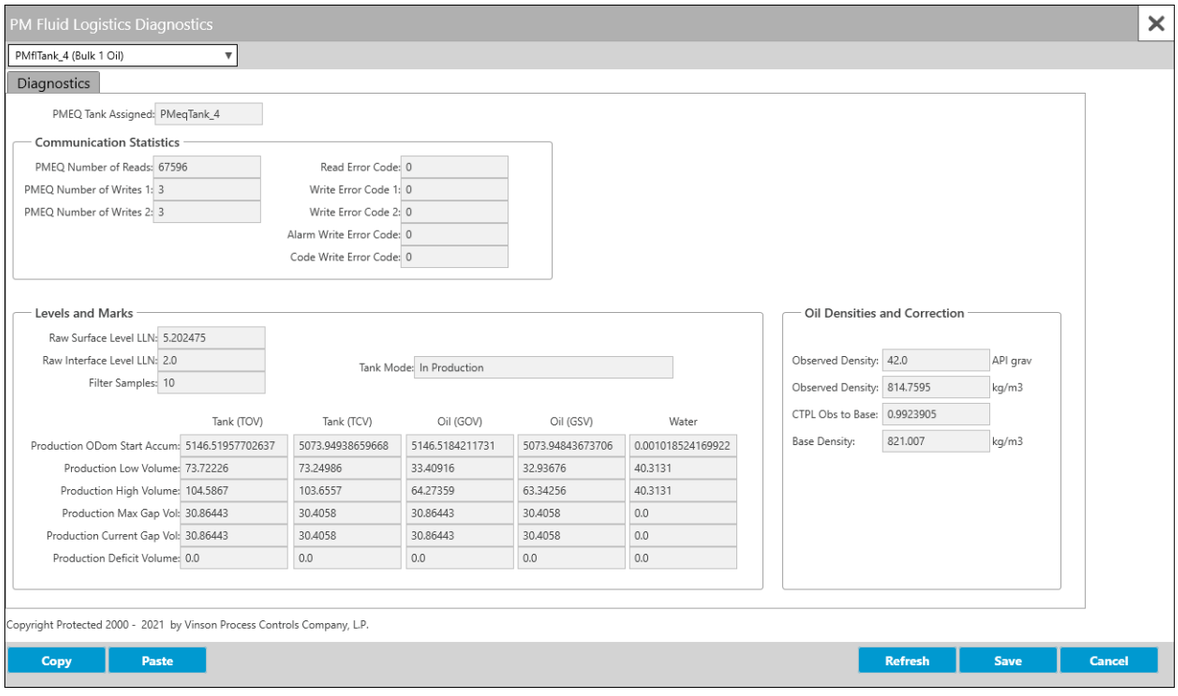
Auto-Haul Log Retrieval and Viewer

To retrieve a transaction from the log, enter the requested serial number in the Retrieve Serial Number field (Auto-Haul Log Retrieval Tab) and click the Retrieve Now button. Next and Previous buttons are available to easily scroll through the log entries by the selected retrieval method



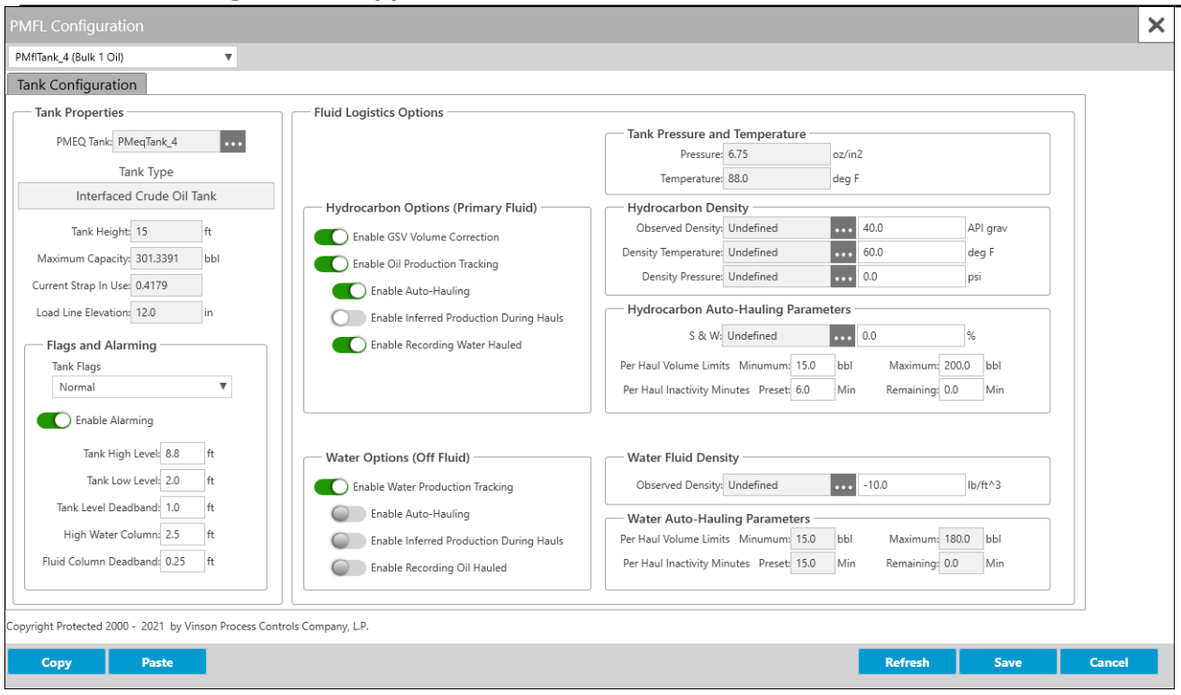
Tank Diagnostics

Shows current Levels and Marks for all fluid types and the current mode of the Tank as well as Oil Densities and Correction factor.



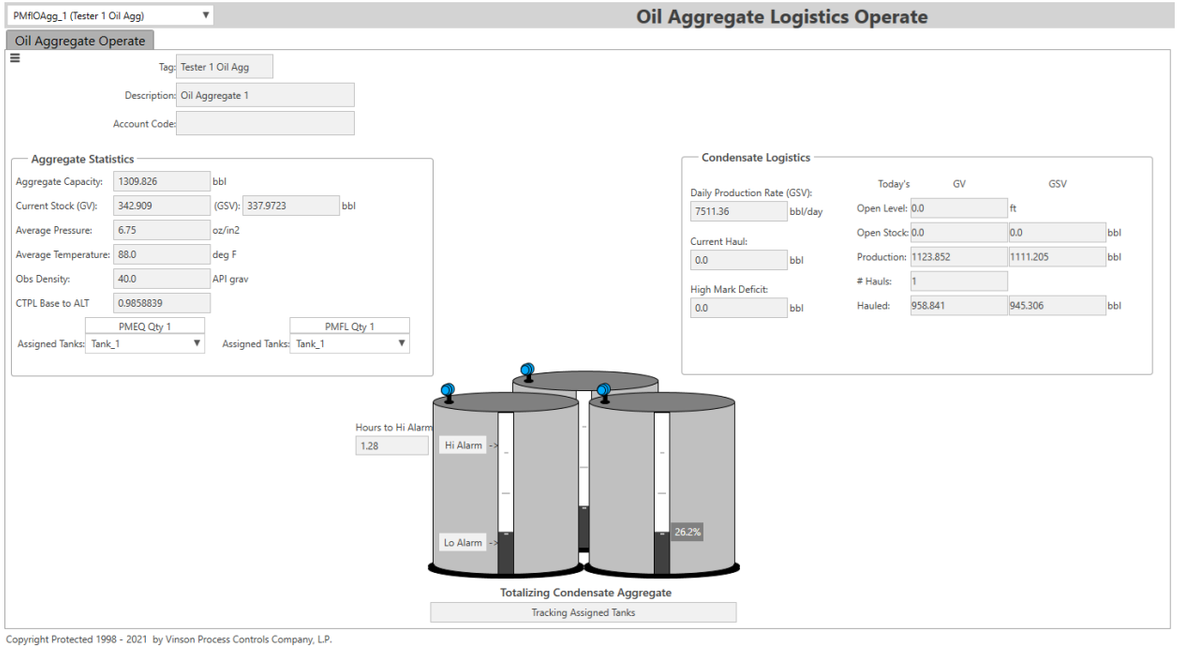
Tank Configuration

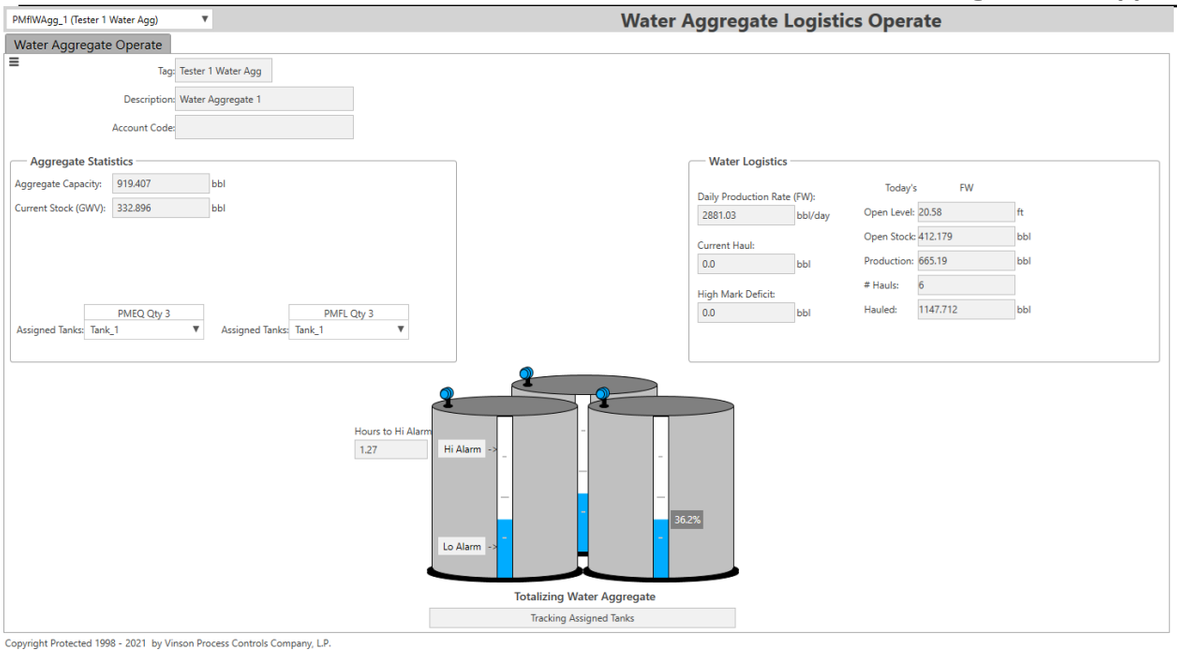
Configure Tank properties, flags and alarms, Fluid Logistics and Hydrocarbon options, Water options, Pressure, Temperature, Hydrocarbon and Water densities and Auto-Hauling parameters



Oil and Water Aggregate Fluid Logistics Operate Screens

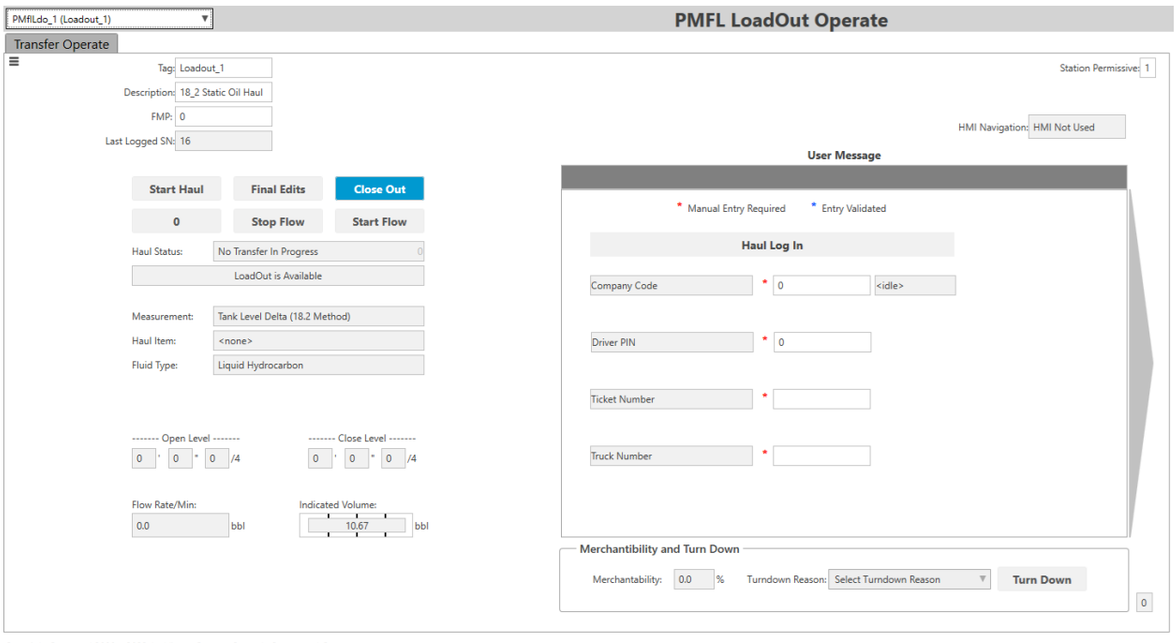
Users can combine tanks of equivalent products together in aggregates. The aggregate totalizes the combined tank values for reference and use in operations.





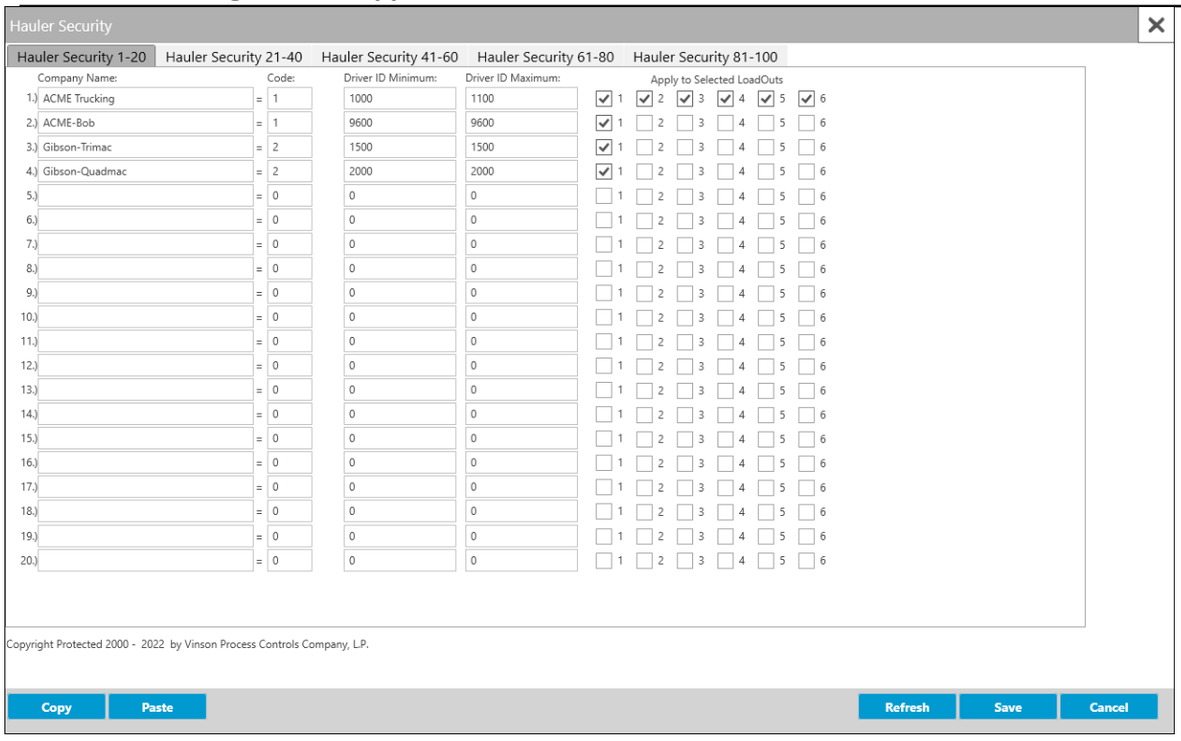
Loadout Fluid Logistics Operate

Includes screens for login, opening edits, fluid characteristics, and closing edits to conform to API 18.2 or other API hauling recommended practices as selected by the end user



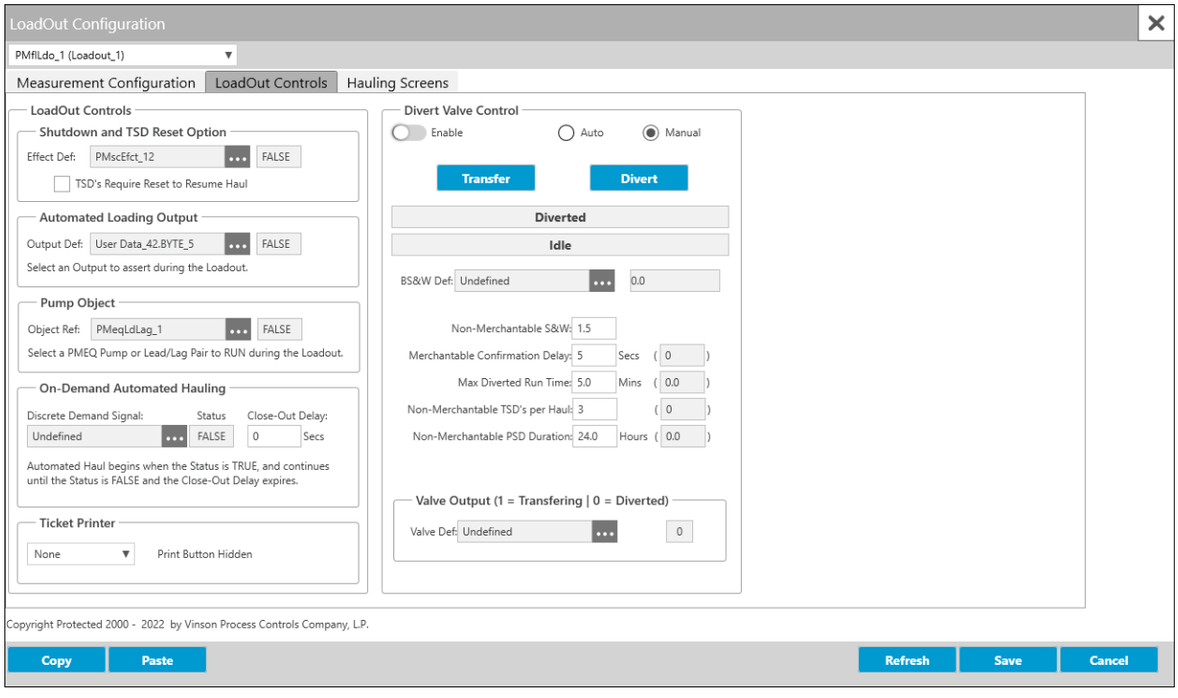
Hauler Security

A database is kept locally in the RTU for use in approving logins. This database can be maintained locally or remotely via SCADA as desired

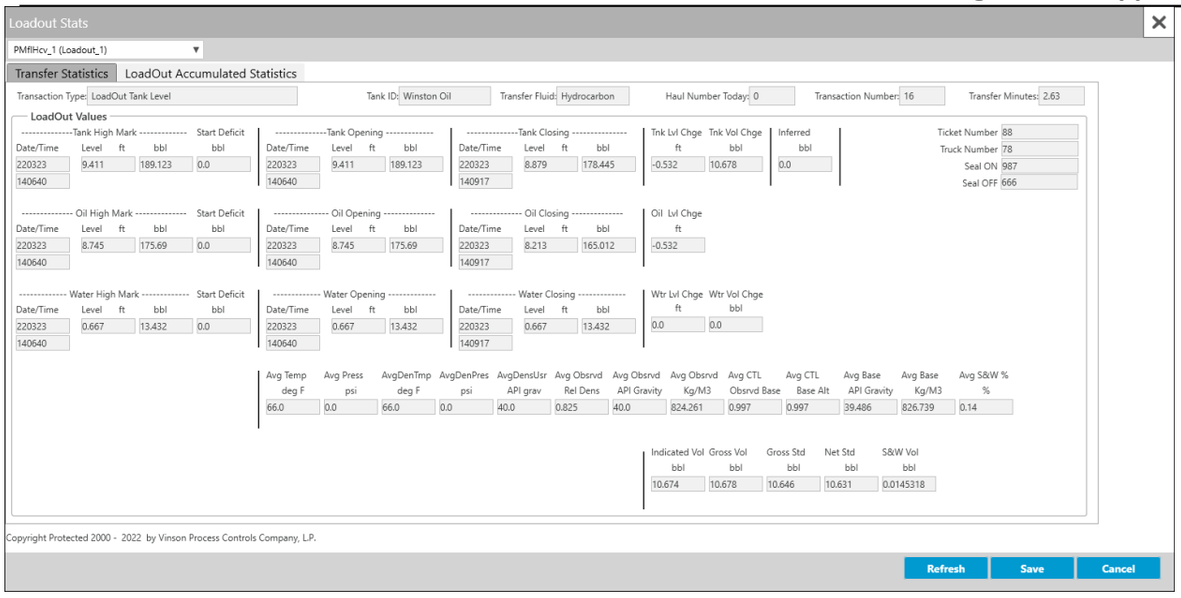


Loadout Controls and Statistics

Loadout Control configuration includes shutdown and reset options, Loadout and Pump selection from PMEQ database, ticket printer, and divert valve control.



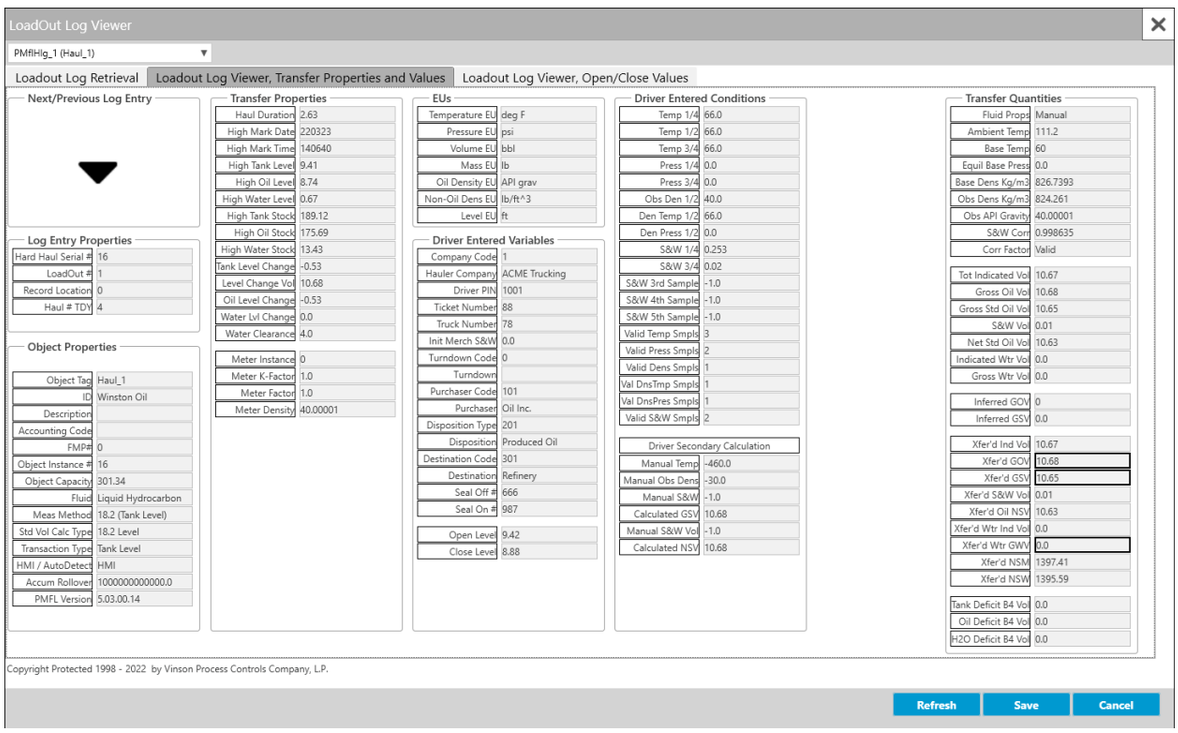
The loadout statistics screen displays the last completed haul information for each Loadout.



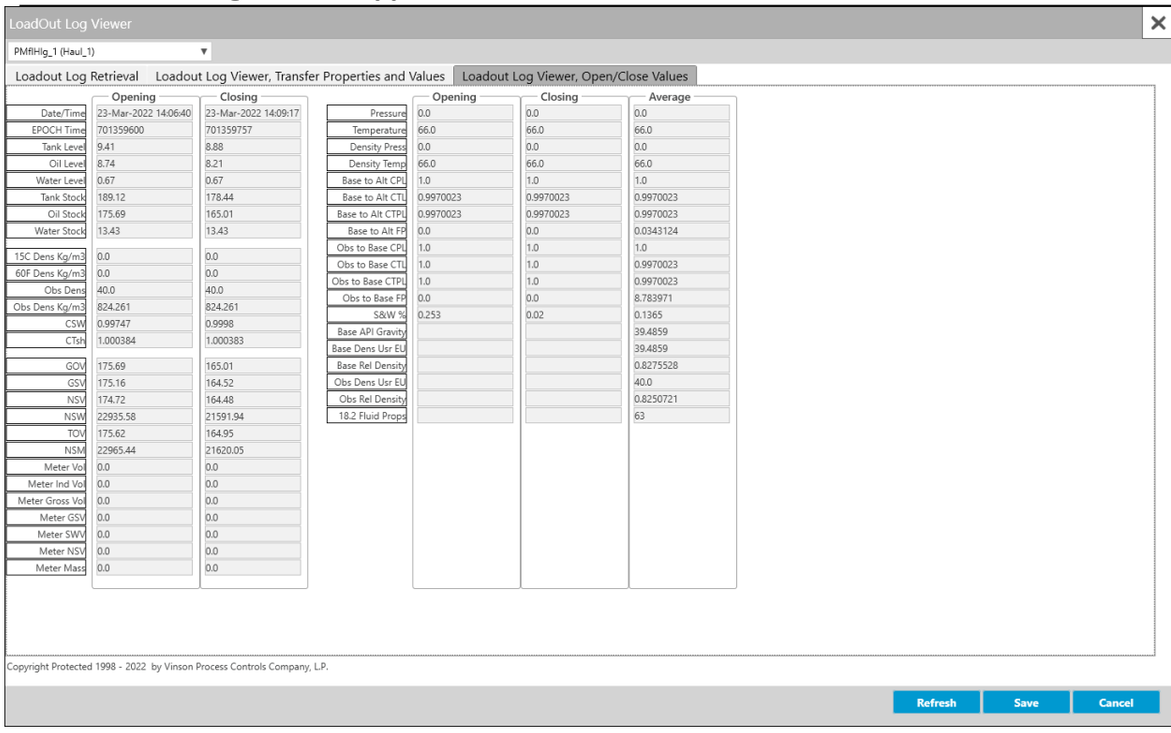
Loadout Log Retrieval and Viewer

To retrieve a transaction from the log, enter the requested serial number in the Retrieve Serial Number field (Loadout Log Retrieval Tab) and click the Retrieve Now button. Next and Previous buttons are available to easily scroll through the log entries by the selected retrieval method

Page one of the entry shows the properties of the transferred object and the values.

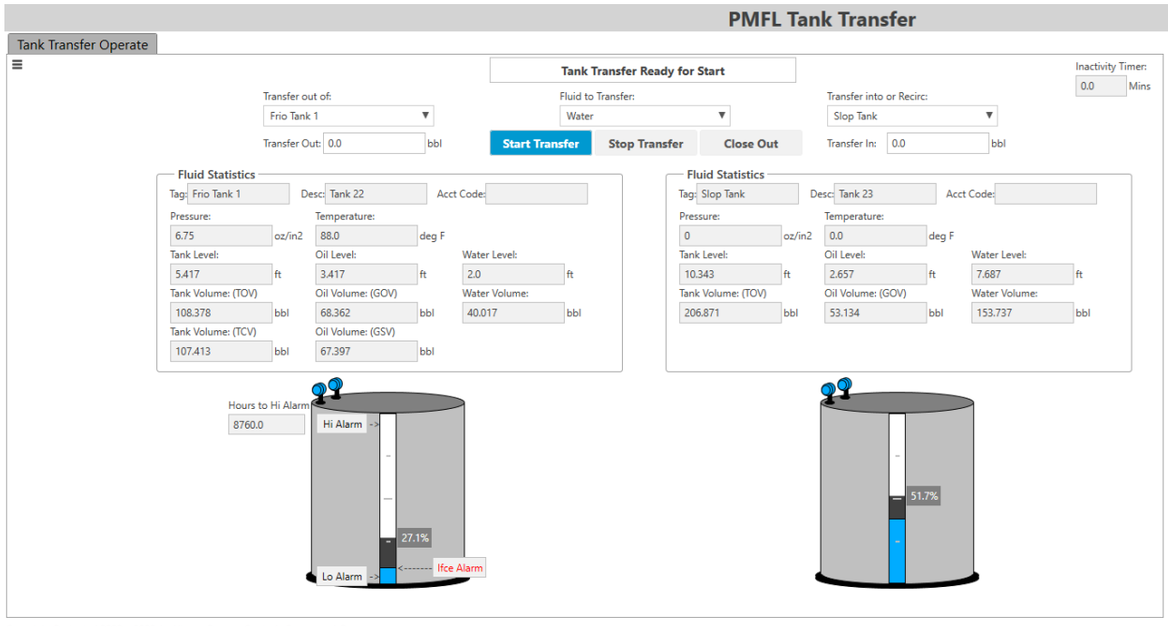


Page two shows the fluid properties for the log entry.



Tank Transfers and Recirculation

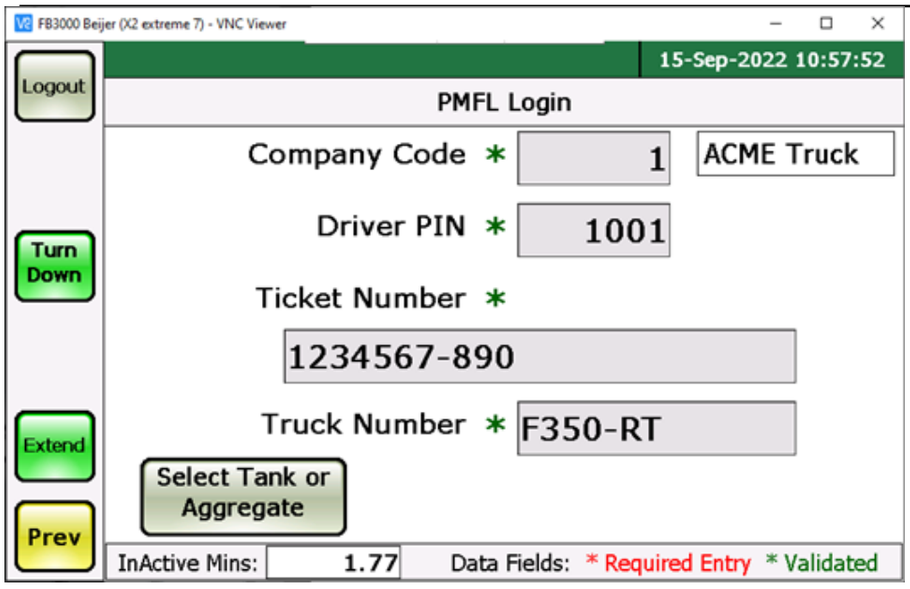
Allows the operator to track and record tank to tank transfers or recirculation of fluids through the system.



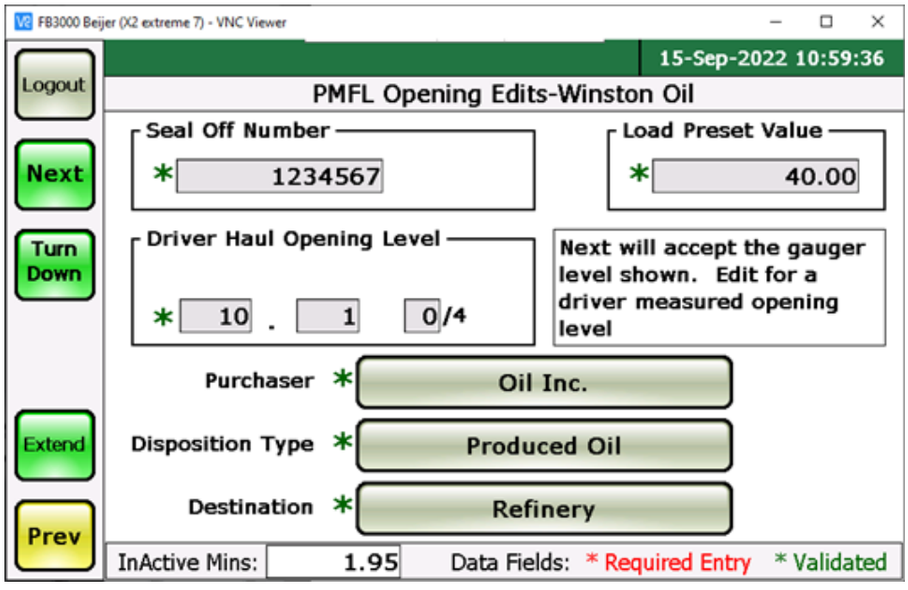
Truck Hauling Terminal Interface Using ProductionManager EDGE Interface

Allows the hauler to login and record transactions using API 18.2 methodologies or other preferred procedures.

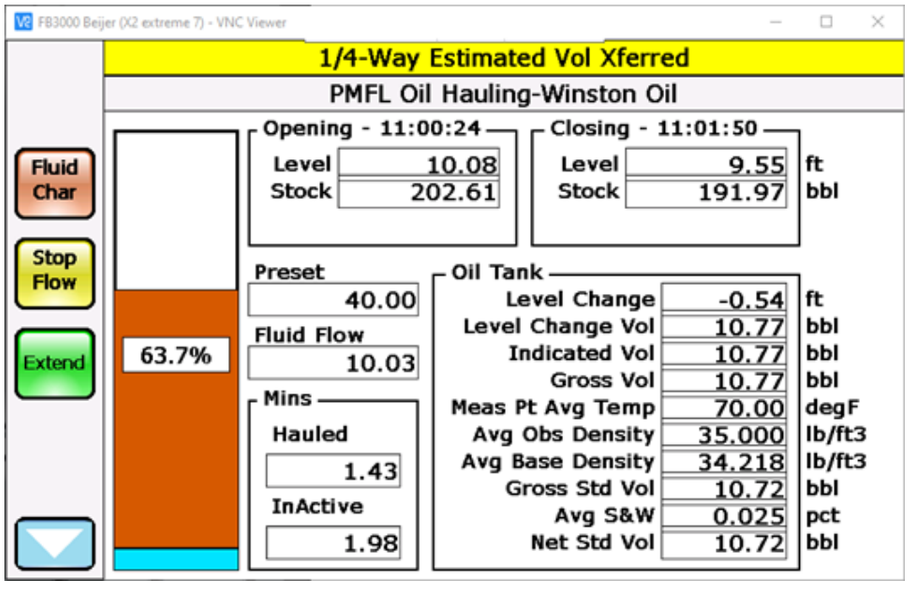
Secure Login

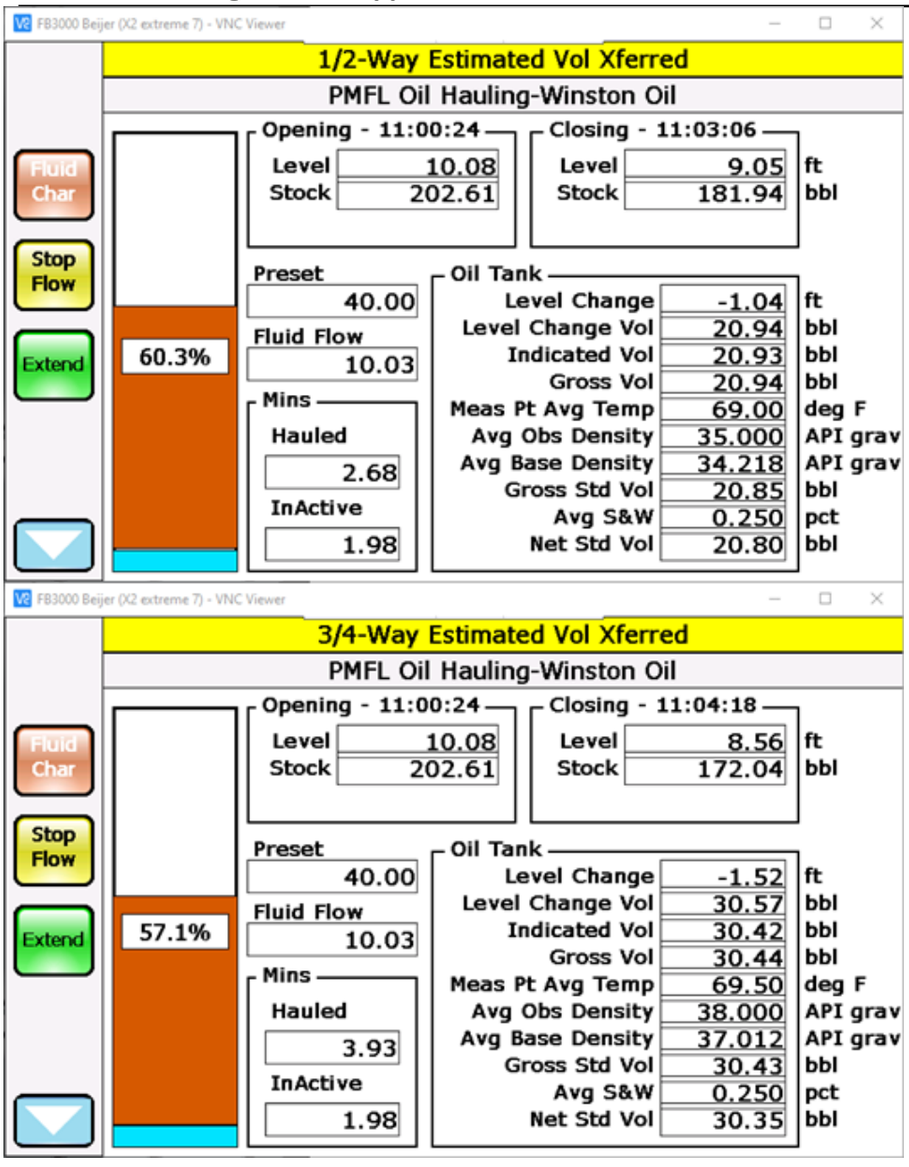


Opening Edits

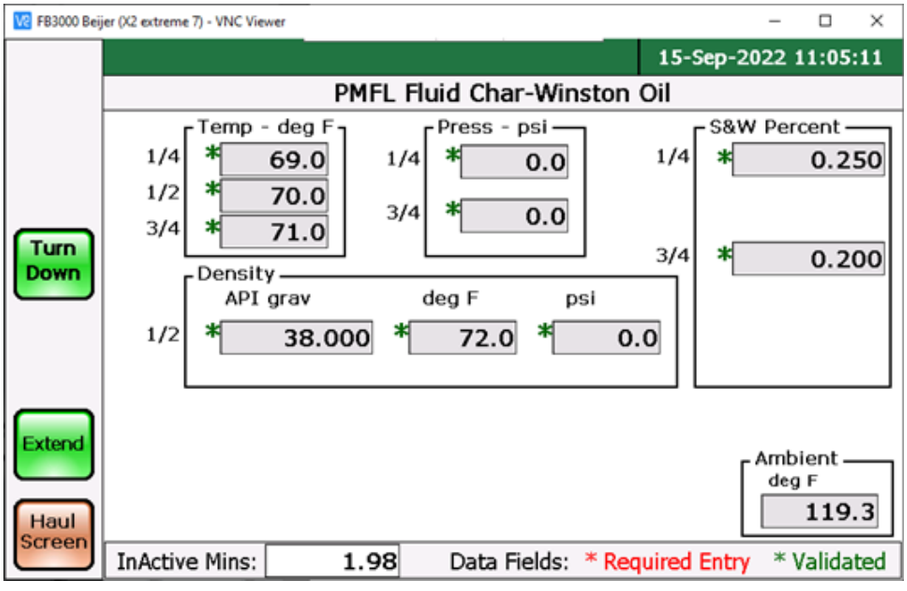


Progress Notifications for ¼, ½, ¾ Haul points

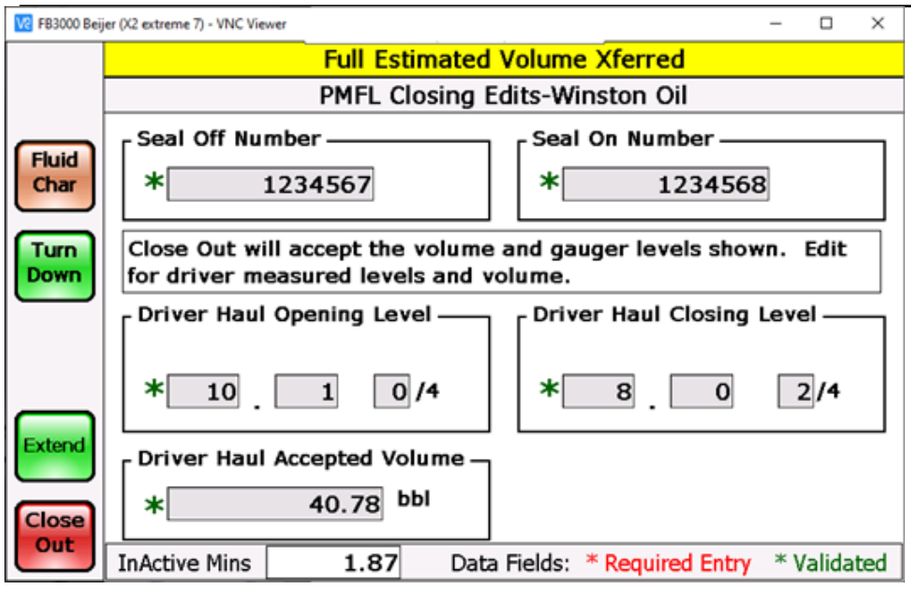




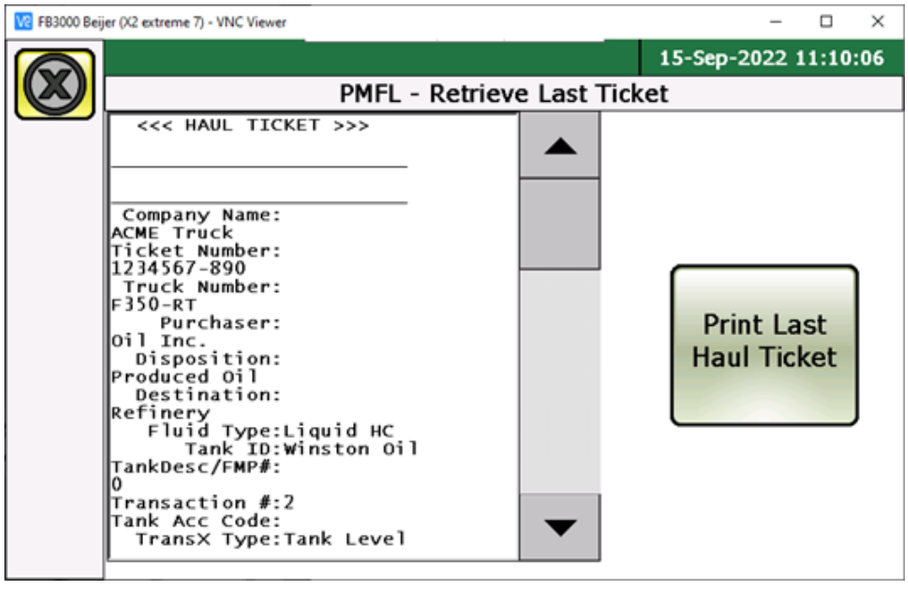
Records Fluid Characteristics



Closing Edits



Digital Logging, Ticket Printing and QR Code options for Haul Log Management



How Will Fluid Logistics Benefit Your Operation?

If optimizing well production in the field or behind a desk is important to you, Well Optimization can be of great benefit.

- **Field Operations**

  Ease-of-use and configuration, measurement, current operating status, production optimization

- **Facility Engineers**

  Standardized deployment of equipment and facilities

- **Production/Reservoir Engineers**

  Better reservoir management through captured data and well analytics

- **Management/HSE/Accounting**

  Safety controls, standardization, custody transfer measurement and log retrieval

- **SCADA/IT Administration**

  Provides a standardized data model that enables consistent access to optimization, analytics, and operational parameters

Support

- Help desk support is available 24/7.
- Training classes are offered year-round.
- Onsite configuration assistance is available upon request via your local Emerson Impact Partner.

ProductionManager EDGE® Suite

The ProductionManager EDGE® suite of applications is designed to provide standardized yet flexible solutions to common processes in the Oil & Gas production field. The suite is designed to assist with managing the lifecycle of the well (from flowback to abandonment), managing well testing for allocation purposes, and complete fluids management from well-to-sell. This comprehensive suite of applications has been enhanced by input from Major and Independent E&P companies alike and utilized in North America for over 20 years with tremendous success.

ProductionManager™ Equipment Module (PMEQ)

The ProductionManager Equipment Module (PMEQ) gives you the ability to define, build, monitor, track and diagnose the equipment installed on your upstream production site. PMEQ allows for operational analysis and diagnostics of onsite equipment.

ProductionManager™ Well Optimization (PMWO)

ProductionManager™ Well Optimization (PMWO) allows you to optimize production based on industry standard methods. This application provides your operation with continuous, real-time optimization of production, as well as surface and downhole analytics. PMWO records optimization statistics needed to identify key trends, allowing you to better manage your decline curves.

ProductionManager™ Well Test (PMWT)

ProductionManager™ Well Test (PMWT) allows you to maintain accurate allocation measurement while achieving facility cost reduction goals. Now you can rest easy knowing that potential issues with allocation, scheduling, multiple testers, and optimal test results are gone.

ProductionManager™ Surface Controls (PMSC)

ProductionManager™ Surface Controls allows the user to perform control, logic, and mathematical functions using easy to configure pre-designed menus. Surface Controls facilitates configuration of your complete cause and effect narrative, handling temporary or permanent shutdowns, permissives, bypasses, alarming, and other utility functions.

ProductionManager™ Fluid Logistics (PMFLT, PMFLL)

ProductionManager™ Fluid Logistics is a single application with two licenses associated (PMFLT and PMFLL) to allow the user to add Tanks (PMFLT) or Loadouts (PMFLL) as needed. Fluid Logistics allows you to manage your tanks, as defined and strapped in PMEQ, to manage transfers, Auto-hauls, production allocation and provide gross standard or net standard volume corrections on the raw inventory in those PMEQ tanks. You can also define and operate loadouts like LACTs, API 12 truck hauls, API 18.2 level or meter transactions, and produced water disposal with transactional logs for each event. When paired with PMEI you have a complete, off the shelf, well facility terminal solution that can be configured to follow your company procedures.

ProductionManager™ Edge Interface (PMEI)

ProductionManager™ Edge Interface (PMEI), coupled with a Beijer X2 HMI, provides a user interface for PMWO, PMWT, PMFL and PMSC applications. It also allows the configuration of customized lists and menu navigation to care for your site operations and reporting needs beyond these applications. FBxVue™ display builder for the FB3000 allows custom screens to be created and included to handle any additional requirements.

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vinsonprocess.com/products/remote-automation-solutions/

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