

Emerson's OpenEnterprise™ SCADA and Tank Manager Application Improve Produced Fluids Accountability

RESULTS

- Improved haul ticketing accuracy through automated collection and digital storage of haul data
- Defined rigid hauling process producing consistent standardized results across haulers
- Redefined and modified haul requirements across haulers enabling transmission with minimal effort
- Automated and centralized haul tickets facilitates more accurate and quicker bill processing
- Simplified historical query to aid in resolving trucker/producer billing discrepancies
- Improved safety through reduction of road time required for site visits to collect haul tickets
- Increased automation provided remote accessibility and oversight, minimizing "daily rounds"



APPLICATION

Onshore oil production with 2-3 tanks per pad needed an accurate method for dispensing, electronic recording, and automatic collection of accumulated truck hauls of produced oil and water from customer well pads distributed across the Utica shale formation

CUSTOMER

An active producer in the Utica shale formation

“Exception-based surveillance is the future of operations. This application allows us to achieve this such that there is no need to physically be on-site unless there is a problem.”

CHALLENGE

Produced fluids custody transfer process was completely manual – where contracted truck haulers physically recorded all haul data onto a paper ticket, which was collected later by an operator who traveled to all sites each day to collect all accumulated haul tickets.

Upon returning to the office, the operator would then work overtime to manually transpose the haul data from the paper ticket into an electronic spreadsheet. This process was sometimes error-prone due to transposition errors discovered only after 30 days during the end-of-month reconciliation, when actual hauls were compared with the electronic spreadsheet.

SOLUTION

Custody transfer of produced fluids is now accomplished through installation of a ROC800 bundled with Emerson's Tank Manager pre-engineered application, a component of Emerson's SmartProcess™ Oil & Gas Application Suite. Operator data entry for capturing haul data was accomplished using a color flat panel operator interface terminal running Vinson Process Controls local display manager application.

Each time a truck haul event occurs, the truck driver now enters data related to the haul into the display. This "ticket" data allows the volume dispensed to be recorded and associated with a specific truck, driver, and haul ticket number. Once the trucker "closes", the haul transaction is then recorded and accumulated in a haul log stored within memory of the ROC800 RTU. The haul log can record the last 512 hauls in to the RTU memory.

A computer server running Emerson's OpenEnterprise SCADA host is configured to automatically collect haul logs from each site RTU, via remote telemetry at 7:00 AM each day and save them as a *.csv file to a customer specified directory, where they are retrieved by the customer billing department for reconciliation and invoicing within 24 hours of collection.

Real-time data tank levels are passed on to the customer third-party HMI OPC client via OpenEnterprise configured as an OPC DA Server.

Global Headquarters
North America and Latin America
Emerson Automation Solutions
Remote Automation Solutions
6005 Rogerdale Road
Houston, TX, USA 77072
T +1 281 879 2699
F +1 281 988 4445

Europe
Emerson Automation Solutions
Remote Automation Solutions
Unit 1, Waterfront Business Park
Dudley Road, Brierley Hill
Dudley, UK DY5 1LX
T +44 1384 487200
F +44 1384 487258


Middle East and Africa
Emerson Automation Solutions
Remote Automation Solutions
Emerson FZE
PO Box 17033
Jebel Ali Free Zone - South 2
Dubai, UAE
T +971 4 8118100
F +971 4 8865465


Asia Pacific
Emerson Automation Solutions
Remote Automation Solutions
3A International Business Park
#11-10/18, Icon@IBP, Tower B
Singapore 609935
T +65 6777 8211
F +65 6777 0947

www.Emerson.com/RemoteAutomation

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