Saltwater Pipeline Leak Detection to Support Existing System

RESULTS

• Rapidly detects saltwater pipeline leaks and other anomalies

• Reduced false alarms by DeltaV™ SaaS SCADA with Alarm Experts

• Quick implementation to supplement pipeline detection systems

• Gained stronger visibility into operations creating efficeintcies

• Enabled with the right data and actionable insights

APPLICATION

DeltaV™ SaaS SCADA
DeltaV™ SaaS SCADA Mobile
DeltaV™ SaaS SCADA with Pipeline Protect
DeltaV™ SaaS SCADA with Alarm Experts

CUSTOMER

North American, Independent crude oil and natural gas producer

CHALLENGE

Upstream pipeline leaks can be challenging to identify and begin remediation quickly. When they develop, leaks can quickly cost hundreds of thousands of dollars' worth of damage in repairs, remediation fees, fines, and lost production during the mandated shutdown time.

This North American oil and gas producer was looking for a pipeline leak detection system for their Saltwater disposal pipeline from an injection facility with five disposal wells.

They wanted to supplement an existing pipeline system they already had in place after dealing with too many false alarms with another provider. Their objective is to find a system that can quickly mitigate risk to avoid the time-wasting, potentially damaging, ever-annoying alarm fatigue.

> **"Our current pipeline leak system was not enough, and often detected false alarms. We still wanted to keep it in place, but add additional capabilities to it to remove the many, always growing downsides of saltwater leaks."**
>
> Independent crude oil and natural gas producer
> - VP of Operations

DELTAV™

EMERSON™

SOLUTION

Emerson's DeltaV SaaS SCADA proposed adding their Pipeline Protect, a pipeline leak detection application to the customer's existing upstream pipeline monitoring systems already in place.

DeltaV SaaS SCADA with Pipeline Protect makes use of statistical approaches to profile the normal behavior of the pipeline in order to identify anomalies to help our customer meet regulatory compliance and environmental requirements.

200 Since 1986 hazardous liquid pipeline accidents have spilled an average of 76,000 barrels per year, which is equivalent to 200 barrels every day.*

$1.2 Billion dollars to cleanup Michigan crude pipeline spill and took a whopping four years to complete

* https://www.sciencedirect.com/science/article/abs/pii/S0951832020308772
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Increase Advantages with Statistical Awareness

Pipelines can easily present your operations with large, expensive challenges that have high impact on return and several levels of safety. Now, with stronger data analytics you can quickly and easily make giant gains to reduce your risk through actions.

- **Awareness = Opportunity**
- **Fast set up and path to accuracy**
- **Customize to your operation**
- **Compliments any SCADA system**

Pipeline Protect learns the normal operating parameters to diagnose when a potential incident is occurring, including system anomalies and other maintenance issues. While our system cannot eliminate leaks, it will be an essential and complimentary component the customer's pipeline asset management program they already had in place.

DELTAV™

For more information:
www.Emerson.com/DeltaVSaaSSCADA

EMERSON™

SOLUTION

We installed an Emerson gateway at the injection facility to tie to the flow meter and the discharge pump, as well as wireless sensors to bring the flow meter data back to the hardware on the injection wells. This data was collected and then is accessible through DeltaV SaaS SCADA, our scalable cloud-native IIoT platform for remote monitoring, control, and optimization.

After collecting historical data, the operators set parameters allowing the system to alarm when abnormal patterns are found. However, not every anomaly indicates a leak, so now it can easily determine, analyize and indicate other kinds of actions needed from the data.

The customer also utilized DeltaV SaaS SCADA with Alarm Experts to help with alarm management. Our service will help the producer remotely monitor, control, and adequately alarm their pipelines by assisting with alarm management for the operator as they only will be contacted when anomalies are detected, and action is required.

Since implementing the system, our customer has been able to detect upwards of 50 anomalies on their saltwater pipeline. Anomalies include water injection issues, meter maintenance, and valve changes.

Our solution now aids the existing systems to manage risk and false alarms associated with the customer's saltwater pipelines.

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SECURITY
- ✓ Monthly automatic security updates
- ✓ Secure web access anywhere, anytime
- ✓ Two-factor authentication
- ✓ Backups & disaster recovery
- ✓ ~3500 Microsoft™ security experts

SCALABILITY
- ✓ Mobile app anywhere, anytime access
- ✓ Customer roadmap involvement
- ✓ Customize your user groups
- ✓ Budget friendly & low CapEx
- ✓ 26 effortless software updates in 2023

SERVICE
- ✓ Live 24/7/365 support included
- ✓ eLearning courses & workshops
- ✓ Project Management available
- ✓ Data Exchange service available
- ✓ Alarm Management available

DeltaV™ SaaS SCADA is an IIoT cloud-native platform designed to enable asset-intensive industries to quickly and securely connect, acquire analytics and provide control of remotely located devices anywhere, anytime by anyone of your authorized users. We help our customers become more productive, profitable and sustainable to improve life around the globe.

Find us in social media

in Emerson | DeltaV Automation Platform

▶ DeltaV SaaS SCADA

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