TYRION INTEGRATION
SIMPLE ● SECURE ● SOLUTIONS

OFF-GRID Package Connects Point of Interest

LOCATION: SAN JOAQUIN VALLEY
YEAR: 2019
TECHNOLOGY: OFF-GRID PACKAGE

CHALLENGE

Topography, poor road conditions, and remote location mean high costs for traditional infrastructure and physical access challenges.

SOLUTION

NUCLEUS, Tyrion's secure industrial IoT, powers a mobile OFF-GRID solution, providing power and connectivity directly at the point of interest.

RESULTS

Cost-effective OFF-GRID Package quickly deployed, successfully bringing data into the Cloud for easy remote monitoring of pipeline pressures and flow.

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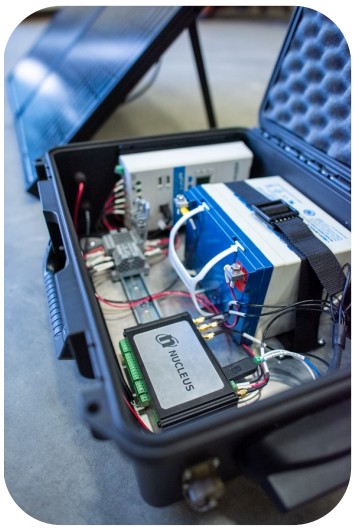
CS.OG.003

EARLY DETECTION OF CONSTRICTED PIPELINE REMEDIATED WITH MINIMAL DOWNTIME

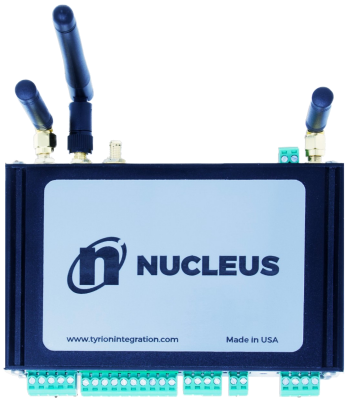
Running cable to monitor downstream infrastructure is costly and time consuming. When an Oil and Gas Producer in the San Joaquin Valley Basin needed to obtain pressures along their pipeline, they traditionally sent someone out to take spot readings. This required significant time and risk, as the location of these monitors was not easily accessible.

Without any power supply available at the monitor location, the client elected to deploy Tyrion's OFF-GRID Package, powered by NUCLEUS and the Tyrion Cloud. This combination allowed the client to monitor the pressures along their pipeline remotely. The Tyrion Cloud permitted easy access through the client's smart phone or computer.



Portable OFF-GRID Package with Fold & Store Solar Panels

When the operator received an alert for an abnormal pressure reading, they were able to compare it to other monitors along the line. The operator quickly identified the early stages of a constricted line. Having the real-time data and instant notifications, the client was able to utilize the trend history to thoroughly plan the solution and deploy a team to remedy the issue. This minimized the downtime in production and also eliminated the need for constant in person monitoring, reducing unnecessary trips along dangerous terrain.



NUCLEUS Industrial IoT Device

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OFF-GRID Package Enables Visibility of VRU

LOCATION: CALIFORNIA
YEAR: 2019
TECHNOLOGY: OFF-GRID PACKAGE

CHALLENGE

Costs of infrastructure minimizes complete visibility of production.

SOLUTION

NUCLEUS, Tyrion's secure industrial IoT, powers a mobile OFF-GRID solution, enabling visibility of flow and leak detection.

RESULTS

A previously unmonitored contribution tank is now connected and completes the full picture of field production.

Portable OFF-GRID Package

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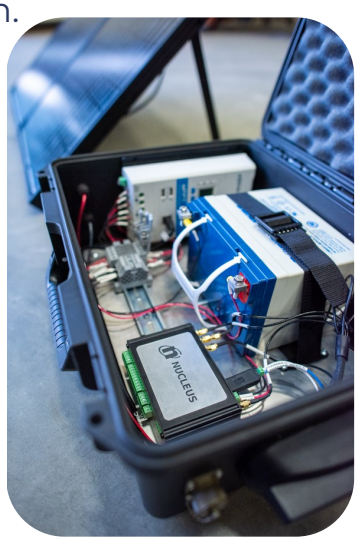
MONITORING OF REMOTE TANK ACHIEVED WITH CLOUD-BASED SOLUTION

Due to the cost of infrastructure most vapor recovery units (VRU), which are often in remote locations, are not monitored. When an Oil and Gas Operator in California noticed an anomaly in their production, they had difficulty determining the cause.

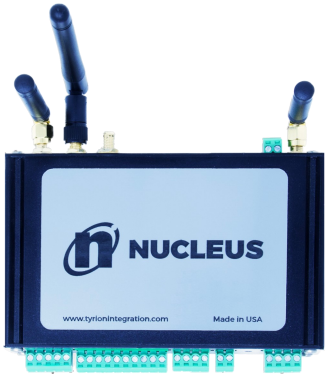
It was soon discovered that the contribution of condensate from their VRU had slowed nearly to a halt. This tank did not have any flow meters feeding into the existing SCADA system. As such, the operator had no visibility of the tank's performance.



Portable OFF-GRID Package with Fold & Store Solar Panels

Having established the need to make the VRU data visible, the client elected to deploy Tyrion's OFF-GRID Package, powered by NUCLEUS and the Tyrion Cloud. The OFF-GRID Package was paired with a flow meter and tank level gauges.

Once connected to the Cloud, the client gained access to their real-time data. Production trends from the VRU granted visibility of the condensate's activity. Alerts of abnormalities were then set to prevent any leaks or reduction in production. The client is now able to get a full picture of their field production and reduce potential downtime from troubleshooting remote processes.



NUCLEUS Industrial IoT Device