

Itafos Establishes Digital Asset Management at OSHA VPP Star Fertilizer Manufacturing Facility

Leveraging AssetWise Develops Standard Care Plans for over 9,000 Assets

SUPPORTING SAFETY, ENVIRONMENTAL STEWARDSHIP, AND RELIABILITY GOALS

Located in Soda Springs, Idaho, Conda is a phosphate fertilizer facility initially constructed on a 250-acre parcel of farmland in 1964. With an annual production capacity of approximately 550 kilotons of monoammonium phosphate, the facility manufactures products that serve the local and regional agricultural industry, contributing an estimated USD 367 million to Idaho's economy. Over the years, Conda has undergone numerous shutdowns, restarts, and ownership acquisitions. In 2018, Itafos acquired the Conda assets and site. They decided to review the facility's asset management program to better support safety and health management systems, help maintain their Occupational Safety and Health Administration

(OSHA) VPP Star facility status and support their corporate environmental stewardship and reliability goals.

"As you can imagine, a site with 54 years of operating history has experienced a great deal of competing priorities, ideas, and methods for the care of its assets and collection of maintenance and reliability data," said Nicholas Hofeldt, senior reliability engineer at Itafos. Insurance and safety audits, including recertification of their OSHA VPP Star status, requires Itafos to gather data to demonstrate performance of asset monitoring and proof of follow up on any actionable items. With an eye on sustainability and keeping their star standing, they initiated a project to develop a consistent framework to manage and maintain plant assets, ensuring asset reliability and site operations for years to come.



Leveraging the capabilities of AssetWise enabled Itafos to better understand the operating context of their equipment for more sustainable long-term plant operations.

PROJECT SUMMARY

ORGANIZATION

Itafos Conda

SOLUTION

Utility and Industrial Asset Performance

LOCATION

Soda Springs, Idaho, United States

PROJECT OBJECTIVES

- ♦ To review the current asset reliability program at the Conda fertilizer manufacturing facility.
- ♦ To digitalize asset management and maintenance practices, supporting long-term sustainability.

PROJECT PLAYBOOK

AssetWise® Asset Reliability

FAST FACTS

- ♦ Itafos decided to review the asset reliability program at the 54-year-old Conda fertilizer manufacturing plant to better manage and maintain over 9,000 active assets.
- ♦ The project team used the AssetWise platform to digitalize asset data collection, monitoring, and maintenance.
- ♦ AssetWise provided a consistent framework in a unified digital environment to standardize asset care.

ROI

- ♦ Using AssetWise streamlined workflows, which helped to reduce asset data collection from days to minutes.
- ♦ Itafos used AssetWise to analyze their highest critical assets, verifying that over 95% of them have appropriate care plans.
- ♦ Leveraging the capabilities of AssetWise enabled Itafos to better understand the operating context of their assets for more sustainable long-term operations.



“AssetWise is the platform that Itafos has chosen to provide the digitization of our reliability processes.”

— Nicholas Hofeldt, Senior Reliability Engineer, Itafos Conda

DEVELOPING STANDARDIZED ASSET CARE PLANS

Recognizing that consistency in asset care is key to the long-term sustainability of the Conda site, Itafos wanted to better understand the operating context of their assets and standardize their asset care plans. “With over 9,000 active maintainable assets, we recognized that our site’s long-term sustainability was intimately linked with our ability to effectively and efficiently maintain these assets,” said Hofeldt. Consequently, they identified asset management as a key pillar in their reliability program and sought a rapid implementation that would be accessible to as many staff and stakeholders as possible. However, they faced challenges incorporating inconsistently collected historical asset data, which was scattered and stored in various place across all operating units.

To overcome these challenges, Itafos wanted to develop asset care plans with maintenance and reliability data that was readily accessible, quick to deploy, and consistent across the entire facility. With thousands of assets and the various changes in ownership, manufacturing processes, environmental requirements, and management philosophies, they realized that manual, paper-based methods for data collection, analysis, and management were insufficient. Itafos needed to identify all their assets, assign monitoring responsibilities, determine inspection frequencies, and ensure that they were looking at the right assets and the right parameters at the right time. To complete these tasks, they needed to establish a digital asset management and reliability program and standardize the development of effective asset care plans.

ASSETWISE PROVIDES A DIGITAL SOLUTION

After considering their options, Itafos selected AssetWise to transition their operations and maintenance inspections from paper check sheets to electronic, tablet-based check sheets. They upgraded their traditional manual paper trails to digital versions, including alarm features for each asset indicator to prompt appropriate action. Relying on the digital features of Bentley’s application, Itafos developed a consistent framework for asset data collection and monitoring, accessible to all stakeholders in a single digital environment. They developed customized templates to leverage years of historical data with current data and industry best practices. Based on the data, they performed asset prioritization analysis, identifying highly critical assets and monitoring failure modes, and generated a roadmap for further improvement to their reliability program. “We leveraged the AssetWise software to identify highly critical assets, including safety critical assets, to assist with planning and scheduling prioritization, as well as provide direction for the development and optimization of our asset care plans,” said Hofeldt.

By connecting AssetWise with their internal computerized maintenance management system (CMMS), Itafos seamlessly linked their work management and execution processes with the asset information and failure modes.

This practice enhanced their current workflows to target efforts toward assets with high relative risk. Leveraging the capabilities of Bentley’s application, the team explored and documented the changing operating context of their assets over the years, providing insight into asset health to create effective asset care plans and ensure asset reliability. Working in a connected digital environment with automated alerts simplified and streamlined asset monitoring, enabling Itafos to develop more effective asset management strategies and gain a better understanding of the current operating context of the facility assets. The digital solution transformed their traditional asset reliability program, ensuring that common criteria are used to determine asset criticality and implement corrective measures to help avoid premature asset failure and replacement.

DIGITALIZATION DRIVES SAFETY, SAVINGS, AND SUSTAINABILITY

Using AssetWise, Itafos analyzed their highest critical assets, verifying that over 95% of them have appropriate asset care plans in place. Leveraging the capabilities of the software, they optimized asset information management that provided the team with maintenance history, documented checks, inspections, and reports accessible to all stakeholders in a single digital environment. The digital solution provides immediate email notifications on equipment readings and abnormalities to automate previously manual tasks that reduced data collection from days to minutes. The solution also allows for timely implementation of effective corrective action plans, preventing asset failure and the potential need for replacement. By connecting AssetWise with their internal CMMS work management system, Itafos saved approximately four minutes of time for each identified issue. “With an average of 450 check sheets completed across the site each week, this means that our 220 active AssetWise users will have collected over 23,000 checks on equipment by the end of the year,” said Hofeldt.

Working in the unified AssetWise environment, Itafos not only is actively monitoring and maintaining the Conda assets, but they also have documented digital verification of the checks performed to troubleshoot an abnormal event and assist with regulatory reporting. The consistent framework provided by AssetWise ensures that Itafos understands the operating context of their equipment to address any underlying failures and develop effective asset management strategies, ensuring safe, reliable operations. By digitalizing their asset reliability processes, Itafos achieved complete control of all plant assets, enabling Conda to operate in a more sustainable manner as they continue their journey to excellence. “We understand that the digitization of our reliability process [using the AssetWise platform] provides a consistent framework to integrate our people, our processes, and our reliability analysis in the effort to achieve longevity of our plant, maintain our freedom to operate, and positively affect the surrounding community,” said Hofeldt.