

Success Story

Procedure Automation Reduces Start-up Time and Standardizes Operations at Williams Opal Gas Processing Complex

Williams Opal

Location: Opal, Wyoming, USA
Order date: May 2018
Completion: December 2018
Industry: Gas Processing



Executive Summary

Williams Opal owns and operates natural gas gathering, processing and transmission assets in the state of Wyoming, primarily serving producers in the Greater Green River Basin. The Wyoming gathering and processing operations includes SW Wyoming and Wamsutter. The Opal processing plant, in SW Wyoming, handles a capacity of 1.1 billion cubic feet of natural gas per day, and is operated 24/7 by operators using state-of-the-art technology.

Yokogawa was the procedure automation vendor of choice for the Williams Opal complex due to Yokogawa's proven capability with modular procedure automation implementation in a wide range of industries. In addition, Yokogawa has a proven track record in integrating the procedure automation solution seamlessly with their distributed control system, the CENTUM VP.

Exapilot is Yokogawa's procedure automation software. It is used for the design, development, implementation, testing and commissioning of manual operation procedures in the Williams Opal plant. Exapilot offers a highly flexible automation solution for manual procedures and provides an environment for examining and verifying control methods in trial mode before being deployed. Other features include plant optimization functions, energy saving designs, and online operation support through the use of standard libraries available in the software. Yokogawa provided support by designing, developing, testing, and commissioning the Exapilot procedures in the respective processing units. The Williams Opal Exapilot implementation was carried out in the stabilizer separation column and Turbo Expander Plant #4 (TXP4) units.



The Challenges and the Solutions

1. Procedure Automation

The main objective of the Exapilot implementation was the training of operators to start the stabilizer and TXP4 units flawlessly and safely, without any incidents. Yokogawa conducted survey based interviews with the Williams operations team and identified that the stabilizer column startup should be automated due to the frequency of the startup and shutdown of this section of the process. Yokogawa designed and developed the stabilizer startup sequence on Exapilot being operated from CENTUM graphics, which created a seamless stabilizer startup process.

The proven success of the Exapilot implementation project prompted Williams to incorporate the automation of other sections of the plant similar to the TXP4 startup process into the Exapilot scope.

2. Process Variability

Williams was concerned about standardizing the startup process because of the disruptive nature of the process, while also stabilizing the reliability of the static and rotating equipment. This meant that no matter who the system operator was, there would be little process variability. The Exapilot implementation project resulted in the development of Standard Operating Procedures by Williams which realized both tangible and intangible benefits for the company.

Customer Satisfaction

"We were able to work closely with Yokogawa's engineers throughout each step of building, testing and implementation of the procedures that we selected to automate. With training provided by Yokogawa, and Exapilot's easy to use drag and drop functionality, we can continue working toward our goal of migrating all critical operating procedures into the Exapilot."

- Shannon Vasseur, Controls Tech Specialist, Williams

"The Yokogawa team have an in-depth understanding of many different plant processes which made the implementation and automation of our procedures much easier. The development team was easy to work with, understood the challenges we were facing and brought solutions to the table. The Opal team has been working for some time to transform our existing operating procedures to a format which makes them easy to use. When we were introduced to Yokogawa's Exapilot software, we recognized that it complimented this effort. Now our operating procedures appear in a step by step format and are implemented in the DCS where the operators can easily access and use them. In addition, Exapilot allows us to audit the procedures and check if they are being used. This helps us drive consistency in operating the facility and improving safety."

- Mike Krell, Supervisor of Operations, Williams

For more Information and Contact

[CENTUM VP](#)

[Procedural automation \(Exapilot\)](#)

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