

Success Story

Kinder Morgan Canada Taps Alarm Manager for More Consistent, Efficient Pipeline Management



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Challenge

With oversight of multiple pipelines, Kinder Morgan Canada needed to ensure consistent alarm distribution, configuration and change management across all operating stations. Most importantly, the company wanted to implement consistent responses regarding alarms across all locations and operators.

Solution

Alarm Manager collects and stores all alarm and event data, allowing Kinder Morgan Canada to measure alarms, reduce nuisance alarms, adjust workloads, manage changes and standardize alarm practices across its pipelines.

Advantage

- Consistent application of alarm management best practices across pipelines
- Increased safety through proper alarm configuration, reducing operational errors and allowing for more effective workload management
- Identification of ways to manage new assets without adding staff, potentially saving on labor costs

Alarm Manager is Powered by Matrikon, which represents vendor neutrality. This product works with third-party control systems and applications.

Geographic Diversity Drives Need for Consistent Standards

Every day, Kinder Morgan Canada transports over 680,000 barrels of petroleum products across five pipelines to Canada, the U.S. and offshore. Operating in both countries, Kinder Morgan Canada must ensure compliance with applicable regulations, and, where practical, follow a higher set of standards.

“We want to take the best of breed, and, in many cases, apply standards even if they are not mandated by one country or another,” said Ron Threlfall, Manager, Simulation and SCADA Control.

That pursuit of best practices combined with rapid growth led the company to look at its approach to alarm management.

“We realized there were some imbalances among different operating stations in the control center,” Threlfall said. “We wanted to evaluate operator workloads to balance alarms more efficiently.”

Honeywell Provides Decision-Making Tool

To increase awareness of alarm management, several Kinder Morgan Canada groups attended Honeywell alarm management training courses. In the process, they learned about Alarm Manager. The solution seamlessly collects and stores all alarm and event data and automatically generates Key Performance Indicator reports to give users an accurate snapshot of current alarm system performance.

At Kinder Morgan Canada, the Honeywell solution enables Threlfall and operators to monitor and measure operations and workloads, allowing them to adjust alarms and operators as needed. It also helps ensure all changes to the control system are correct, consistent and properly recorded.

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Honeywell consultants worked with Threlfall and the company's information technology department to implement Alarm Manager. The company's pipelines connect to two different SCADA systems, all operated from the Sherwood Park control center outside Edmonton. Alarm Manager monitors the systems continuously, allowing Kinder Morgan Canada to understand alarm activity through regular reporting.

Consistent Management across Pipelines

With Alarm Manager, Kinder Morgan Canada ensures that it manages alarms across all pipelines in a consistent way. Soon

after implementing the solution, the company tapped into Alarm Manager to report on alarm numbers and types on each pipeline. “It was a bit of an eye opener,” Threlfall said. “One pipeline was receiving a lot more alarms than the others and needed to be addressed, but we weren’t hearing any complaints from those operators.”

In response, Kinder Morgan Canada uses Alarm Manager to apply the same best practices in alarm management standards across every pipeline. With real alarm numbers in hand, managers can identify not only where alarm management needs to improve but they also have the means to document and enforce those standards.

More consistency across pipelines reduces operator training time and gives the company more flexibility when allocating operators. In addition, it allows Kinder Morgan Canada to consolidate procedures and standards documents. “Once we train one operator on one pipeline, the learning curve shrinks if we move that person to another pipeline,” Threlfall said.

Alarm Manager’s Management of Change (MOC) capabilities also contribute to consistent documentation of alarm configuration and change procedures.

When the company built 10 new pump stations for its Trans Mountain pipeline, it used Alarm Manager MOC to ensure all new stations and one existing one were configured in the same way from the start.

Likewise, Kinder Morgan Canada is applying the change control capabilities to configure alarms for new storage tanks at the Sherwood Park location. For any alarm changes, the company has a record of why it was originally configured in a certain way, allowing them to make any changes conscientiously and deliberately. Discrepancy reports make sure changes never slip through the cracks.

More Efficient, Safer Operations

With Alarm Manager, Kinder Morgan Canada can identify bad actors and ensure all alarms are configured in a way that maximizes safety and efficiency. By reducing alarms, the solution helps operators notice the most important ones, thereby decreasing operator error.

“We can more effectively manage alarms during high volumes,” Threlfall said. “That takes the burden off operators and enhances safety.”

Kinder Morgan Canada also balances operator work loads more effectively. When alarms are not evenly distributed, the company can consider reallocating functions to balance coverage.



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