A leading Canadian oil sands producer had several plants experiencing high alarm rates, which made operating consistently within the engineering specifications difficult. It also increased the plant’s health, safety and environmental risk. The customer had to adopt more effective alarm management to lower alarm rates.

**Solution**

ABB AlarmInsight®, a scalable software solution that enables more effective alarm management, was adopted at two plants to help take control of the alarm rates.

After ABB engineers implemented the software at both sites, the customer started working with several of the AlarmInsight applications, including: AlarmAnalysis, EventLog Viewer, Alarm Change Recorder and AlarmHelper.

First, the customer used AlarmAnalysis to identify and prioritize the alarms that would provide the greatest benefits in terms of alarm rate reduction. The focus was on the most frequent and the longest-standing alarms.

Alarm Change Recorder then enabled the customer to compare the actual alarm settings in the control system with the rationalized alarm settings in the purpose-built master alarm database. This ensured a well-controlled and documented alarm optimization and rationalization process.

As an important extension to the rationalization process, the customer used the AlarmHelper application to provide updated operator response texts to the control room operators—directly from the alarm lists on the 800xA workplace screens.

As a result, the customer was able to steadily reduce alarm rates and improve operations by working through the alarms at each plant, section by section.
AlarmInsight
Leading Canadian oil sands producer reduces alarm rate by 75 percent

Benefits
AlarmInsight helped the customer realize a strategy for continuous alarm improvement, which resulted in the following benefits:
- About 75 percent alarm rate reduction in one year
- Improved control over operations
- Increased safety
- Ability to operate in a more stable and robust mode
- Alignment with international alarm management best practices and government regulations, such as ISA 18.2, IEC 62682 and EEMUA 191
- Improved operator confidence

ABB lifecycle approach to alarm management
AlarmInsight is one piece of a comprehensive package (Figure 1). No matter the status of an alarm strategy, ABB can determine where to start by pinpointing problem areas with benchmarking services. Or, if customers already know where their alarm system needs improvement, ABB can enable confident operators with software, training or consulting services that reduce alarm rates and prioritize alarms. If alarms are under control, ABB can ensure they stay that way with ongoing services and support. Contact your ABB representative for more information.

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Figure 1: AlarmInsight is part of the ABB comprehensive lifecycle approach to alarm management. ABB consulting services and software can help you develop, implement or improve your alarm strategy.