

PT Badak Improves Regulatory Compliance with Emerson™ Wireless pH Solution

RESULTS

- Ensures LNG plant wastewater quality meets environmental regulatory requirements
- Helps maintain gold rating status with Indonesia PROPER* program
- Eliminates manual pH recording for enhanced accuracy and operational efficiency
- Reduces downtime and costs for maintenance and labor (saves 1,000 labor hours per year)
- Provides real-time data recording for environmental audit reporting



“Emerson’s wireless solutions provide continuous and accurate pH monitoring, ensuring that the wastewater quality complies with environment regulation before discharging the effluent to the sea.”

*Budi Miharja
PT Badak NGL
Analyzer Maintenance Supervisor
Instrument Department*

APPLICATION

Continuous remote monitoring of effluents level in industrial and community waste water.

CUSTOMER

PT Badak NGL is the largest Liquid Natural Gas (LNG) plant in Indonesia, located in Bontang area within the East Kalimantan Province. This LNG plant has eight active process trains.

CHALLENGE

As a LNG plant, PT Badak NGL has a Corporate Social Responsibility (CSR) to ensure their wastewater quality meets environmental regulatory requirements before they discharge effluent into the sea. PT Badak has been granted and proudly maintains a gold rating in the Indonesian government PROPER* program. To maintain their gold status, PT Badak must continually strive to utilize innovative methods that ensure environmental compliance and sustainability.

PT Badak’s wastewater treatment pond is located remotely, about 1 kilometer (km) from the LNG plant. Due to physical constraints and economic considerations, it had not been possible to implement online effluent pH measurement. The monitoring and reporting of process wastewater has been done manually via a third-party Health, Safety & Environment Engineer (HSE). This method requires the HSE engineer to commute to the wastewater pond at least two to three times daily, collecting effluent grab samples and reporting data back to the local environmental agency.

The manual pH recording method is extremely time-consuming and accuracy of sample data can be unreliable. The risk of poor quality effluent being discharged between manual recording intervals is also a serious concern. Sample recordings can be missed when the HSE engineer is unable to go onsite due to safety concerns, such as severe weather conditions. Any uncaptured data poses a risk of violating regulatory statutes, resulting in penalties or operation suspension.

* Indonesia Program for Pollution Control, Evaluation, and Rating (PROPER) is an alternative policy instrument to encourage compliance by companies.

SOLUTION

PT Badak implemented the Rosemount™ 56 Dual Channel Transmitter with the Emerson Wireless 775 THUM™ Adapter and gained access to real-time online effluent pH monitoring. Previously, manual sample recordings took one to one-and-a-half hours to complete, and this was carried out two to three times per day, year-round. Replacing the manual method with a wireless solution saved approximately 1,000 hours of labor and travel time to the site, increasing operational efficiency.

The remote diagnostic features of the wireless Rosemount 56 Liquid Analyzer enable PT Badak to quickly and easily identify and determine the cause of an issue, such as poor waste water quality or a device malfunction. The data logger function provides data redundancy, mitigating the risk of losing data in the event of a power failure, and offers data recording for environmental audit reporting. Maintenance engineers can also download the process data and event logger from the analyzer to a memory stick for further analysis.

Due to the success of this wireless solution, PT Badak NGL plans to expand the monitoring scope to include turbidity and dissolved oxygen (DO) monitoring.

With the Rosemount 56 Dual Channel Transmitter and the Emerson Wireless 775 THUM Adapter, PT Badak, was able to implement an innovative solution that helps maintain their gold award ranking in the PROPER program and ensures their operations remain sustainable and environmentally friendly.

RESOURCES

Emerson Chemical Solutions

Emerson.com/Industries/Automation/Chemical

Rosemount™ 56 Dual Channel Transmitter

Emerson.com/Document/Automation

Emerson Wireless 775 THUM™ Adapter

[Emerson.com/Catalog/Emerson-775-Wireless THUM](http://Emerson.com/Catalog/Emerson-775-Wireless-THUM)



The Emerson Wireless 775 THUM Adapter, added to the Rosemount 56 Dual Channel Transmitter, enables wireless transmission of measurement and diagnostic information.

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