

*Fonterra Co-operative Group, Ltd. is a multinational dairy company owned by more than 11,000 New Zealand farmers. Fonterra is the world's largest exporter of dairy products and the fifth-largest dairy company in the world. The company exports dairy products to customers in more than 140 countries.*

By Rich Hovan

# Large-Scale Compliance

A major dairy producer implements an environmental management solution to meet evolving regulatory standards

Fonterra's Te Rapa site is one of the company's backbone manufacturing sites and is located in the heart of the Waikato farming region in New Zealand. The site produces more than 300,000 tons of product per year, including skim and whole milk powder, anhydrous milk fat, cream cheese and butter.

### The Challenge

Fonterra is focused on mitigating the environmental impacts of its manufacturing operations. Its Te Rapa site operates a sophisticated wastewater treatment facility, which treats water from dairy factory processes to a high standard before it is discharged into the Waikato River.

New Zealand's environmental legislation requires Fonterra to provide detailed wastewater compliance reports on a regular basis. Fonterra wanted a system that could provide this information in a cost-effective and timely way. In particular, the system had to overcome the following issues:

- **Lack of timely information.** Some environmental performance information was not available to operators or the environmental staff until the next day.
- **Consuming valuable labor.** Staff spent a minimum of 14 hours per week recording, entering and formatting data into nonintegrated

lab information management systems and multiple spreadsheets.

- **Compromised accuracy and security of records and reports.** Human error, invalid/nonqualified input data, inconsistent formula use and cumbersome results correction affected the systems' wastewater and regulatory calculations. Also, having raw data, calculations, records and reports spread across several systems provided the potential for unintentional manipulation of results and difficult verification with auditors.

### Active Compliance Assurance

The Real-Time Environmental Management (REM) application allows "active compliance" of treated wastewater and other discharges to meet environmental permit conditions through real-time assessment of environmental performance.

REM provides a flexible, scalable solution to help meet a wide range of monitoring and compliance reporting requirements. It automatically collects, validates and aggregates data from a wide range of sources and could therefore manage Fonterra's key objective of providing a system to accurately monitor and provide environmental compliance.

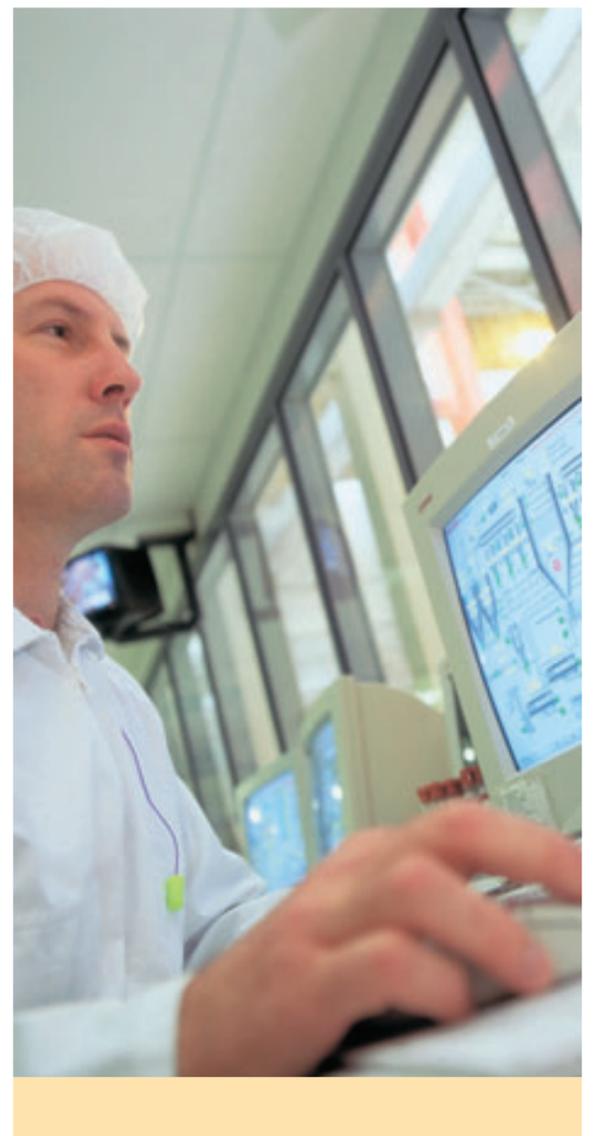
With REM, Fonterra can proactively monitor its wastewater treatment best practice performance and discharges by providing role-based, contextual real-time views with on-demand reports. Additionally, REM provides e-mail alerts of pending breaches or breached limits.

## ARTICLE SUMMARY

**Challenge:** A New Zealand dairy company needed to generate wastewater compliance reports to meet legislation requirements and streamline and secure its calculations.

**Solution:** A newly implemented Pavilion REM Wastewater application automatically and accurately reports on the company's environmental performance.

**Conclusion:** The dairy producer has saved time, reduced risks and is looking into applying the tool on additional sites.



In short, REM offers many advantages for the Te Rapa plant, including:

- Improved accessibility of real-time assessment of environmental performance;
- Ability to proactively monitor trends from anywhere at any time;
- Ease of accessibility of information to other levels in the organization, not just the plant level;
- Accuracy and timeliness of environmental performance;
- Quality assurance of input data to reduce compliance reporting errors and rework;
- A single auditable repository of regulatory information; and
- Flexibility to make additions or modifications as regulations and company objectives change.

### Reducing Risk & Saving Time

Fonterra has identified a number of benefits from the system:

- Improved real-time visibility of environmental performance to environmental staff outside of the wastewater treatment plant;
- Reduced risk of fines/penalties and adverse publicity associated with late or inaccurate agency reports or noncompliant events;
- Easier tracking of wastewater best practice key performance indicators;
- Improved investigative capability of noncompliance events; and
- Faster production of routine reports.

Te Rapa employees have taken advantage of REM's browser-based user interface to view real-time performance and create internal and compliance reports. With Pavilion8 REM, the company has a comprehensive system that automatically and accurately records and reports its environmental performance and will help verify its long-term environmental compliance. The deployment has been so successful that Fonterra is looking to expand Pavilion's REM Wastewater application to additional sites.

"We saw that Pavilion's REM software had the usability, speed and accuracy needed to accurately track environmental compliance at the Te Rapa plant. Pavilion Technologies has provided a solution that will verify our long-term wastewater compliance and help meet our key operational objectives," said Adrian Pyne, environmental manager at North Island in Fonterra, New Zealand. **wwd**

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