

A project initiative of the Victorian dairy industry proudly sponsored by the Gardiner Dairy Foundation in partnership with Monash University

Monash Industry Team Initiative (MITI) 2015-2016

Water: Understanding the Physical, Chemical and Biological Profile from Pipe to Paddock

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Fonterra Cobden

Fonterra Co-operative Group Limited is a multinational dairy corporation. This MITI project was based in the Cobden site, a milk processing plant in South West Victoria. The plant produces a range of products including various milk powders, butter and spreads, milk and cream. The site's flagship product is Western Star Butter.

Scope

As a fundamental resource, water management is essential in the dairy industry. Water is used in various processes at the Fonterra Cobden plant. Currently, wastewater is treated onsite and then discharged to a lagoon system where further treatment takes place. The addition of the beverages plant has prompted concerns with wastewater storage levels due to an increase in water volume from the new factory.



Project Aims

Project A

- To prevent overflowing of wastewater lagoon
- Identify methods of water extraction
- Redirection of effluent

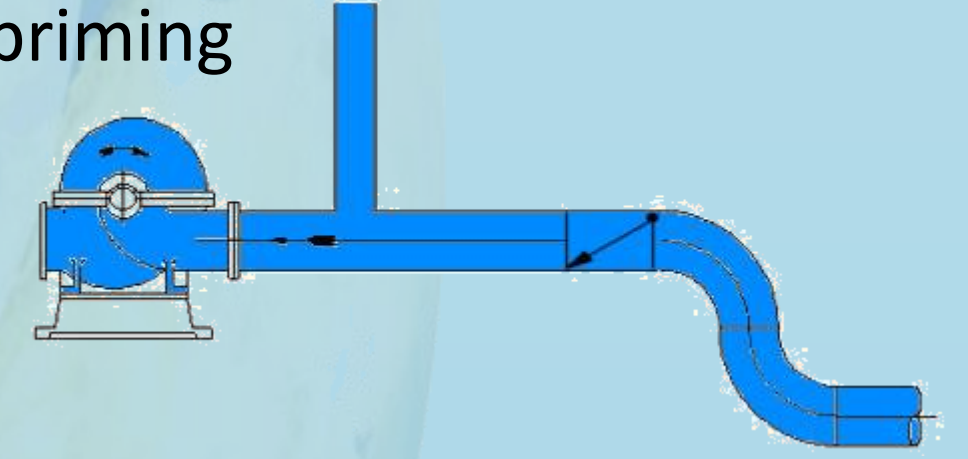
Project B

- Analysing water usage trends
- Identifying potential areas of Reverse Osmosis (RO) water reuse
- Financial analysis of RO water

Outcomes

Project A

- Devised a method to extract an extra 80ML of water from the treatment lagoons
- Considered potential problems including pump cavitation, valve operation, and pump priming



Project B

- Determined that incorporating RO water as general cleaning and cooling water would be financially beneficial
- RO water reuse promotes water sustainability on site, as a by-product of the dryer will be utilised in other areas

Learnings & Discoveries

Time management and goal setting

Factory processes and wastewater management

Teamwork and problem solving through collaboration

Report writing and presentation skills

Distribution of Water Usage

