

MONASH INDUSTRY TEAM INITIATIVE (MITI)

EXPLORING PHYSICAL AND CHEMICAL PROPERTIES OF SALINE DAIRY WASTE FOR FUTURE END USE MARKETS

Thomas Riley O'Donnell (BE(Hons)/BCom) Sean Macpherson (BE(Hons)/BBiomedSc)

Project Background

The management of high salinity waste streams pose an interesting challenge for the dairy and water industry in Northern Victoria. In the past, best practice for saline management comprised the use of evaporation ponds. At Fonterra's Stanhope site, this method is used, resulting in the accumulation of a salty soil stockpile that currently remains stored safely onsite.

Project Objectives

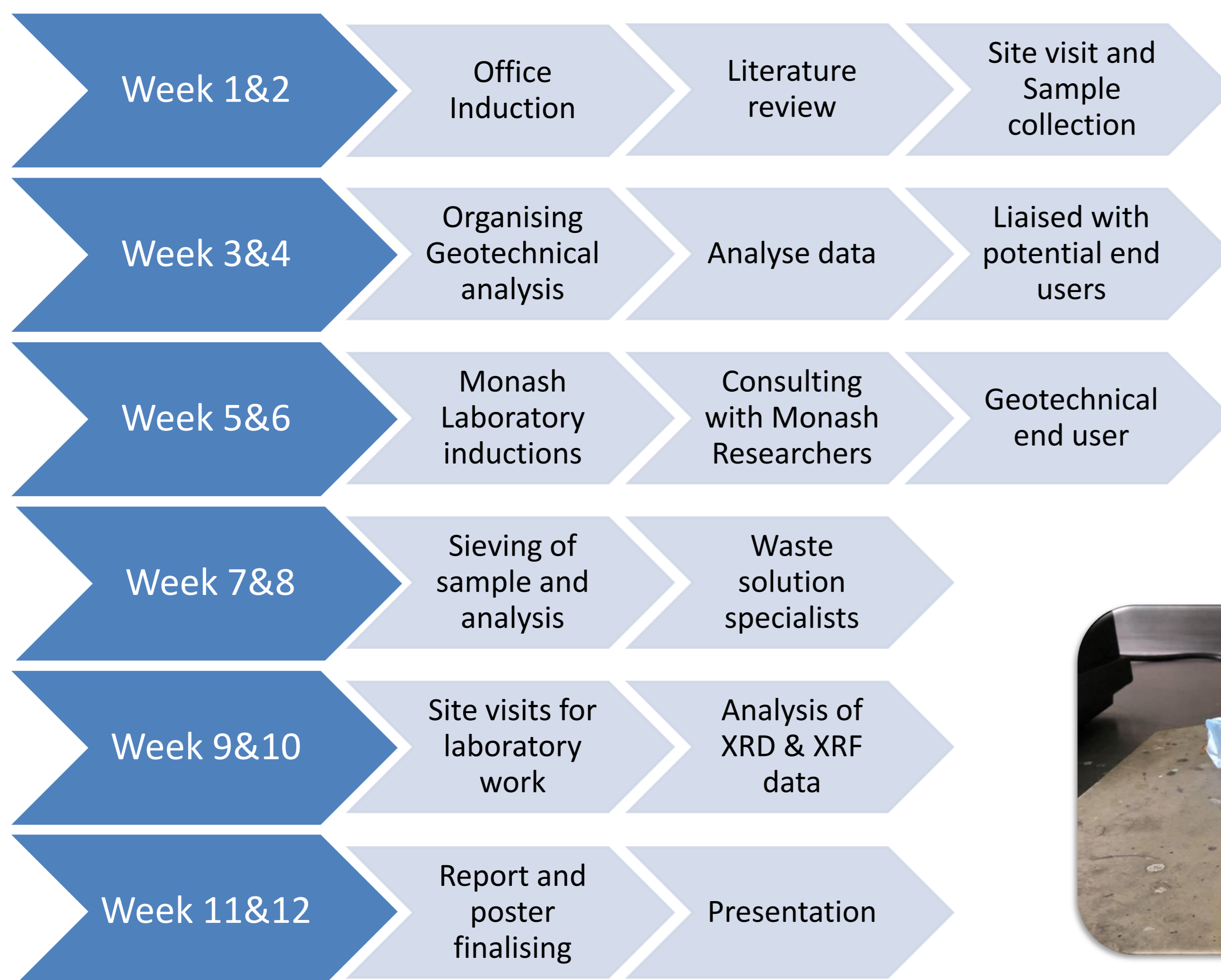
The aim of the project was to further characterise the stockpiles chemical and physical properties and provide Fonterra with recommendations for its treatment and potential end use applications.

Project Outcomes

- Develop a more comprehensive profile of the stockpile characteristics
- Establish networks between Fonterra and potential end use markets
- Assess the potential for salt separation for reuse
- Assess the feasibility and requirements for geotechnical application
- Evaluate potential treatment options for cost effective disposal
- Connect with waste management solution teams



Project Timeline



Key Learnings

- Exposure to working culture at Fonterra
- Understanding of manufacture processes assisted by onsite tours of the industry
- Developing skills necessary to collaborate with other industries
- Gaining insight into Monash laboratory safe work practices and operation
- Developing real world solutions to a prominent issue in Northern Victoria
- Practising the management of a multifaceted project

