

Washbay Water Recovery at Mobil

Water Efficiency Co-Funding Case Study

Cleaner Production 

Project Overview

PARTNER

Mobil Altona Refinery

OBJECTIVE

Recovery of wash bay wash water and collection of rain water harvested from the roof

HOW THE SAVINGS WERE ACHIEVED

Installation of rainwater tanks and a silt trap to enable rainwater collection and wash water reuse

TECHNOLOGY UTILISED

Rainwater tanks and a silt trap

WATER VOLUME SAVING

2.7 million litres of drinking water per year

OTHER SAVINGS OR IMPROVEMENTS

- Reduction in trade waste discharge
- Contributing to behavioural change towards proactive water conservation

TOTAL PROJECT COST

\$40,000

PROJECT FUNDING

\$20,000 from City West Water

PROJECT PAYBACK

- 11 years without City West Water funding
- 6 years with City West Water funding

PROJECT COMPLETED

June 2008

Mobil

Mobil is one of Australia's most recognisable brands and the output from the Altona Refinery physically moves half of all Victorians every day. Operating 24 hours per day, 365 days per year, the Altona Mobil Refinery processes crude oil into petrol, diesel and jet fuel.

Total production from the Altona refinery equates to around \$3 billion every year, and it produces up to 13 million litres of refined fuel products every day, enough to fill more than 300,000 cars. The refinery also provides bitumen and LPG (liquefied petroleum gas).

After these products are processed, the refined products are pumped into large storage tanks for distribution. There are almost 100 storage tanks at the refinery and the adjacent 'tank farm'. Ninety per cent of these refined products are transported via pipeline, with the balance transported by road or rail.

Water is used in the refining process. Much of it is used for cooling with additional amounts used in boilers, scrubbers as well as the deaerator. The water required for these activities was not optimised. Mobil developed an onsite water conservation team to identify and develop water efficiency projects.

The water conservation team quickly identified the wash bay area for modification as it used a significant amount of high quality drinking water. The wash bay is used to clean and maintain pieces of equipment that may have been taken out of service for any number of reasons. After refurbishment, the machinery is



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cleaned with high pressure hoses to ensure there is no contamination when it is reinstalled. While the system requires clean water, it does not require very high standard drinking water.

Furthermore, the team noticed that the wash bay shed has a significant roof area with the potential to collect large amounts of rainwater.

Mobil developed a plan to install rainwater tanks and a silt trap that had the dual benefit of collecting rain water and reusing washbay water.

Mobil then applied for, and was awarded, a cleaner production co-funding grant worth \$20,000 of the total \$40,000 funding costs.

The washbay modification saved 2.7 million litres of drinking water in its first year and was widely supported by Mobil staff and management, directly contributing to a cultural shift towards proactive water conservation.

This water conservation project was heavily promoted among Mobil staff and stakeholders and directly contributed to water and financial savings. The most direct impact, however, was among the team members who saw a highly visible project that was driven by staff making a significant impact to the company's water conservation goals.



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