



PROJECT OUTCOME

GIPPSLAND TAFE - GIPPSLAND SUPPLY CHAIN PROJECT

In 2003 EPA, in partnership with GippsTAFE, undertook a supply chain project in Gippsland, working with local industry to promote the cleaner production principles of waste management and energy conservation. The project aimed at focusing on all aspects of the supply chain, and was also supported by EcoRecycle Victoria (now Sustainability Victoria).

Local industry played their part to improve Gippsland's environment through a Gippsland Green Links pilot program. Gipps TAFE and EPA worked in partnership to manage it, with support from EcoRecycle Victoria, key local industries and their suppliers.

Gippsland Green Links was a supply chain project aimed at utilising the environmental knowledge and practices of major Gippsland organisations including Loy Yang Power, Yallourn Energy and Gippsland Water.

These organisations acted as mentors to promote waste management and energy conservation to their suppliers through training and support. The program used cleaner production and waste wise business principles to inform smaller businesses of how to minimise waste and ensure the efficient use of energy and resources.

EPA, along with other government agencies, supported this project by providing specialist advice to the companies acting as mentors, as well as to GippsTAFE, which was responsible for training.

The aim of the program was to implement a waste action plan leading to a 50 per cent uptake of developed and implemented waste management plans and complete uptake by all participating supply companies.

Alluminates, located in Morwell, participated in the program and made significant savings.

ADDITIONAL INFORMATION

Aluminates in Morwell specialises in the manufacture of a range of inorganic water and wastewater treatment chemicals. The main products produced are liquid alum (around 40,000 tonnes per year) and iron salts (around 10,000 tonnes per year). Most of the alum is used in Victoria's water treatment plants and the iron salts are used by customers mainly:

1. to remove phosphorus (for algae control) from wastewater
2. to remove sulfides (for odour control) in sewage
3. for particle and colour removal in water treatment (eg. Sydney Water's Blue Mountains plant).

WHAT IS THE WASTE PROBLEM?

During the manufacture of iron salts, there is a waste filter cake produced due to the insoluble matter in the raw materials, and incomplete conversion of raw materials to the final product. This cake is disposed of as a prescribed waste to a licensed site, and Aluminates have been keen to reduce the quantity of waste produce for both environmental and cost reasons.

THE INITIATIVES

After unsuccessfully attempting to find uses for the waste, the company decided to look at more efficient

production processes to lower the quantity produced. Iron Salts' Manager Mr. Phill Dack commenced a program of laboratory and plant trials which eventually led to the installation of some new process equipment which greatly improved the situation.

Quantities of waste as a percentage of production were reduced by a healthy 37%!

BARRIERS

The main issues which had to be confronted in solving the problem were initially technical in nature. The production process is unique to Aluminates and the answers could not be found in "text books". Once this was overcome, the design, financing and construction issues involved with installation of new chemical processing equipment all had to be faced, and as a small company, most of this had to be done "in-house" for cost reasons.

ACHIEVEMENTS AND SAVINGS

The significant benefits seen were :

1. A reduction in the handling difficulties associated with production of the filter cake waste.
2. A 37% reduction in overall waste levels.
3. A saving of around \$56,000 from a \$150,000 annual waste disposal cost.



CONTACT DETAILS

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ACKNOWLEDGEMENT

The Gippsland Green Links project succeeded because of the commitment of those involved. The following organisations played a lead role:

- Gipps TAFE;
- The lead companies, Loy Yang Power, International Power and Gippsland
- Water;
- EPA Victoria;
- and EcoRecycle Victoria.

The project would not have been possible without funding from the EPA Victoria.