EPA
South Australia

Good for Environment
Good for Business

www.epa.sa.gov.au

Santos Moomba Gas Plant

Introduction

South Australia's unique and vibrant environment is a vital part of our economy. From mining and resources to tourism and the production of premium food and wine, our clean, green environment supports exports, jobs, innovation and our quality of life.

The Environment Protection Authority (EPA) protects, restores and improves that environment through the risk-based regulation of pollution, waste, noise and radiation.

Working closely with industry, the community and government, the EPA ensures that we protect our unique natural environment while providing for economic, social and physical wellbeing.

Achieving good environmental management and economic outcomes require good, well-practised regulation. It drives innovation and can create a competitive edge. Reducing impact on the environment, through being more efficient and reducing resource consumption and waste, has the added benefit of reducing operating costs for business.

Communities now expect – and demand – environmentally and socially responsible practices from business and industry, and that the Government, through its environmental regulator, will work with industry and the community to provide all the necessary support to ensure that happens and to drive better, more sustainable practice.

The EPA licenses more than 2,200 businesses in South Australia. Our regulatory framework requires that we pursue both short and long-term environmental outcomes while providing for economic and social wellbeing. Getting this balance right requires ongoing, strong and genuine engagement between industry, the community and the regulator.

I am pleased to present to you this series of case studies, highlighting a few success stories that show how successful, innovative businesses can co-exist with the expectations of the local community, deliver environmental improvements, and invest in jobs and growth for the wellbeing and prosperity of all South Australians.

Tony Circelli
Chief Executive

Upgrade will deliver

29% Reduction in carbon emissions

Reduced Odour

Reduced energy usage

Thomas Foods International

Thomas Foods International is Australia's largest family-owned meat processing company, employing more than 1,000 people at the Murray Bridge facility.

As the business grew, processing up to 11,000 lambs and 1,000 cattle each day, the plant's wastewater management system didn't keep pace, leading to complaints from local residents regarding odour, runoff and moth flies.

TFI committed to significantly upgrade its wastewater management and irrigation system, including identifying a new disposal area, through a wide-ranging Environment Improvement Programme (EIP) developed in consultation with the EPA.

In late 2012, irrigation was transferred to a new wastewater system, located 7km north of the abattoir facility. During the commissioning of the upgraded system, poor quality water caused prolonged offensive odour off site at residents' homes.

"This was a really difficult issue for TFI, the Murray Bridge community, and the EPA," EPA Executive Director Operations Andrew Wood said.

Throughout the lengthy process needed to reduce odour impacts on the local community, the EPA conducted odour monitoring and modelling, and worked with the company, community and other government agencies involved. TFI's dedication to the upgrade and the process now results in a 99% improvement in wastewater quality with no impacts on the local community or residents. The new lucerne fields have transformed the once dry landscape into a year round oasis.

TFI also committed to upgrading an existing lairage and constructing a hydrolyser and biofilter system. These systems were aimed at improving environmental performance and creating energy efficiencies, as well as establishing a more positive, long-term relationship with the local community.

These upgrades are expected to reduce the site-wide carbon emissions intensity by 29% and will result in savings of $1.1 million in energy costs per year. The lairage facility has reduced odour and dust for nearby residents while improving truck unloading times and lifting the animal welfare standard. The Biofilter has made dramatic improvements to site odour with no odour complaints received since its commissioning in November 2014.

Director of Operations at Thomas Foods International, Mr David McKay said the infrastructure projects, which are in various stages of completion and commissioning, assist in securing and growing the company's workforce.

"Building our capacity and investing in industry best practice is a key part of our global growth strategy," Mr McKay said.

"Success on the international stage starts in our own backyard".

"We are focused not only on increasing the processing efficiency of our facilities, but doing so in the most environmentally sustainable way possible."

Through a designated licence coordinator, the EPA stays in contact with TFI to provide support in implementation of its environmental initiatives.

"The EPA's role as a regulator puts us in a unique position to give companies such as TFI the confidence to invest in their environmental performance; regulation, done well, is good for business." Andrew said.

95%

Reduction in phosphorous load since 2004

89%

7 N NITROGEN

Reduction in nitrogen since 2004

23%

Decrease in carbon emissions from 2011 levels

Kimberly-Clark Australia

A focus on environmental sustainability by Kimberly-Clark Australia at its Millicent paper mill in the South East has dramatically improved the health of South Australia's largest freshwater lake – and culminated in a $20 million investment in South Australian manufacturing.

Kimberly-Clark Australia has taken a proactive approach to environmental sustainability at its paper mill in South Australia's South East.

Management and employees at the Millicent plant have worked closely with the EPA over many years to transition to a modern licensing system that has dramatically improved the health of South Australia's largest freshwater lake.

Kimberly-Clark Australia and New Zealand Managing Director Robbert Rietbroek said: *"Our experience has been that sustainability initiatives are not only good for the environment, they are also good for business.*

Customers are scrutinising companies more than ever before on their environmental credentials and employees want to work for companies that are environmentally and socially responsible."

The achievement has contributed to Kimberly-Clark Australia winning the Environment Minister's Award for a Cleaner Environment at the Banksia Awards in 2014.

The plant had operated under a 50 year Indenture Agreement that expired in late 2014. The indenture allowed the discharge of large volumes of waste water, containing nutrients and other contaminants into Lake Bonney.

The Indenture Agreement was put in place in the mid 1960s when environmental standards were less stringent and the community was less sensitive to negative environmental outcomes than they are today. Together with discharges from other industrial activities, Lake Bonney was severely polluted.

Significant work and commitment was required to transition Kimberly-Clark Australia to the new licensing system and the EPA began negotiations in 2002.

A three-year project involved the EPA assessing the condition of Lake Bonney and working closely with Kimberly-Clark Australia to minimise its impact on the waterbody.

A partnership between EPA, Kimberly-Clark Australia and the local community helped set environmental values for the lake, providing confidence for both industry and the community and reigniting local enthusiasm for the lake, with row boating, fishing and other recreational and economic activity now possible.

EPA Chief Executive Tony Circelli applauded the manufacturer's proactive approach to sustainability.

"Kimberly-Clark has not only dramatically reduced the volume of its wastewater discharges, but the quality of that water has improved greatly."

'It shows that a successful and innovative manufacturing business can co-exist with the expectations of the local community in relation to their local environment."

$370 million investment in the South East over a decade

Winner Banksia Environmental Award 2014

Wastewater discharge from 35 to 10 megalitres per day

Environment Protection Authority **Good for Environment | Good for Business**

Recycles more than

100K TONNES

of green organics each year

Dedicated to increasing

energy efficiency and use of renewable energy

Jeffries Group

EPA guidance adds business growth to world class organics

The Jeffries Group is a fourth-generation, South Australian family-owned company whose core business is focused on receiving, processing and marketing recyclable organic resources to sustainable end markets.

The Wingfield-based company recycles 100,000 tonnes of green organics each year and is renowned for horticultural products, landscape and garden supplies.

This includes the popular Jeffries compost, soil and mulch products that are sold through a network of landscape supply yards and nurseries throughout Adelaide and in many country areas.

A significant volume of compost and mulch products are used in the horticultural areas that include iconic wine regions like the Barossa and McLaren Vale, vegetable growing in the northern Adelaide Plains and mixed horticultural uses in the Riverland and Sunraysia regions.

The EPA plays a significant role in applying robust and cost-effective regulation, providing regulatory certainty that can give companies the confidence to invest, grow and expand in an evolving resource-recovery sector.

With guidance and support from the EPA, Jeffries has built a strong reputation both nationally and internationally as a leader in the recycling of organic resources.

Whilst working closely with the EPA in the past decade, the Jeffries Group has grown its annual volume of recycled organic material three-fold over this corresponding period.

EPA Chief Executive Tony Circelli has praised the company for its efforts towards striving for the highest standards, to develop the cleanest and most nutrient-rich products from recyclable organic resources.

"This commitment has seen Jeffries make a significant investment over many years including the development of a purpose-built Recycled Organics Sorting and Screening system, also known as ROSS."

This sophisticated x-ray unit detects and ejects highly problematic contaminants such as glass, ceramics, brick and other inert materials.

Although x-ray technology has been used in the processing of traditional recyclables such as bottles and cans, it is a world-first for it to be used to improve a source-separated organics recycling stream.

"Jeffries has a good working relationship with the EPA by working proactively to seek solutions to waste management problems and respond positively and cooperatively when issues of noncompliance are identified," Mr Circelli said.

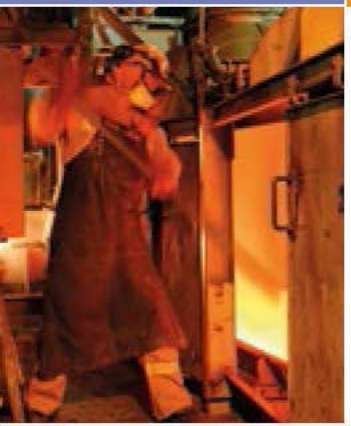
"They are a good example of how regulation can drive positive business outputs, such as the implementation of the Waste to Resources Environment Protection Policy supporting the diversion of green and food organics away from landfill, while support the composting industry."

Jeffries also actively supports the South Australian community with a specific focus on Community Gardens and School Garden projects.

2006 > 2011

Halved, from 60 to 28 percent number of children with blood lead levels above those recommended.

By the end of 2014 the percentage of children with lead in blood levels below 10µg/dL had increased to 80% and the mean level of children's lead in blood had dropped from over 20µg/dL to 5µg/dL.



Port Pirie Nyrstar redevelopment project

Nyrstar at Port Pirie is one of the world's largest lead-smelting facilities. Located on the eastern shore of Spencer Gulf, 230km from Adelaide, it has been in constant operation since 1889.

Some of its production assets had been in service for more than 60 years and, while considered best practice at the time, the assets are no longer capable of meeting increasingly stringent environmental and operational standards.

Over the years, the smelter had been the source of well-documented lead contamination in the township of Port Pirie, leading to high blood lead levels in the local community. Despite support by Nyrstar for numerous community exposure reduction programs to reduce blood lead levels particularly in children aged 0-4 years of age, and investment of more than $50 million in emissions-reducing technology, those levels while reduced significantly particularly in the last 10 years, remain higher than recommended by health authorities.

"We recognised that more advanced smelting technology could be implemented, to further lower airborne lead emissions," EPA Executive Director Operations Andrew Wood said. *"We also see that this could be done while still ensuring the future viability of the plant, which is one of the major employers in South Australia and a significant contributor to the South Australian and Australian economies."*

The EPA began working intensively with Nyrstar to revise the smelter's licence conditions, and in 2012 newer, more stringent conditions placed additional challenges on Nyrstar. The community was provided with more transparent, timely information, with data from air quality monitoring provided to the public and used by the EPA to refine the smelter's regulatory requirements.

"The tightening of EPA licence standards helped drive the Port Pirie Redevelopment project," Mr Wood said.

In May 2014, with support from the South Australian Government and the Australian Export Finance and Insurance Corporation (EFIC) Nyrstar announced it would invest $514 million in new, state-of-the-art technology which would transform the smelter into a modern multi metals processing and recovery facility, reducing emissions and ensuring the economic future of Port Pirie.

VP Metals Refining Nyrstar Port Pirie Bertus De Villiers said:

"The Redevelopment project will deliver an innovative and sustainable solution to the current environmental and technical challenges facing the Nyrstar Port Pirie operation and lead to a significant improvement in community health."

Targeted Lead Abatement Program (TLAP) established to support redevelopment.

$3 million p.a. commitment from Nyrstar for up to 10 years with an additional $5 million contribution to accelerate TLAP objectives.

$1.6 billion contribution to value of South Australia s economic output. Secures future economic viability for Port Pirie.

EPA
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