

environment, safety and health Progress Report 2000

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### About this report

This is our third separatelypublished report on environmental, safety and health issues and covers the financial year ended 30 June 2000. Safety statistics include claims lodged or time lost up to 30 September relating to events in 1999/2000.

The report takes in all the business units from last year plus Wesfarmers Dalgety, our rural services business, which includes Wesfarmers Federation Insurance. Our hardware retailing business will be included in next year's report. Those reporting again - coal, gas retailing, gas production, fertilisers and chemicals, forest products and transport - have summarised progress towards achieving their priority objectives mentioned in the 1998/99 report.

The prime responsibility for the material contained in this publication rests with the business units. Their staff compile the information and they are required to authenticate it.

### Website

The full report is available on our website at

### www.wesfarmers.com.au.

Additional printed copies can be obtained from the Public Affairs Co-ordinator on (08) 9327 4257.

# Verification

The verification process has been conducted by the business units and subjected to two levels of review.

Representatives from our Corporate Solicitors Office and Group Risk Management department have conducted a review on a sample basis of the verification notes prepared by the business units and prepared a report for senior management.

In addition, as foreshadowed last year, external verifiers were engaged to provide both an independent assessment of accuracy and to report to us on ways to improve. The Snowy Mountains Engineering Corporation (SMEC) was asked to do this given its wide experience in the field and its leading role in working with Environment Australia to prepare "A Framework for Public Environmental Reporting - An Australian Approach" published in March 2000.

The SMEC team's assessment appears on page 46. In addition, it has provided specific recommendations for improvement over the next five years.

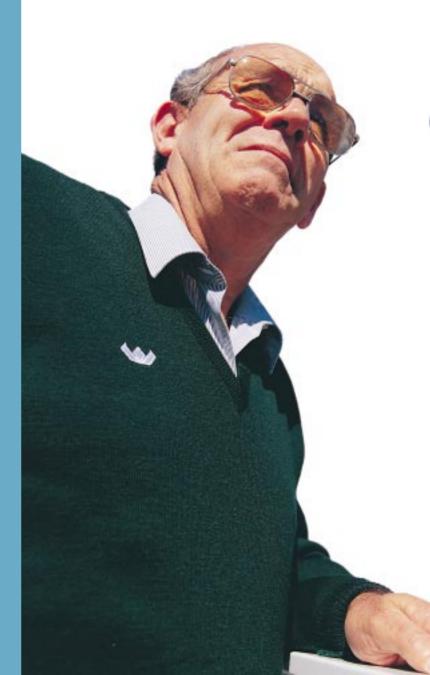
### Glossary

An explanation of technical terms or words with a special meaning in the context of environment, safety or health issues can be found on page 47.

### Feedback

Your comments are important to us. Please use the feedback form on the inside back cover to let us know what you think.

# our



**Cover** Mark Germain, Environmental Officer and Tamara Brooker, Marketing Analyst, from Wesfarmers CSBP, Kwinana, WA.





**Left** Merchandise Manager Haydn Rowland at Wesfarmers Dalgety's Midland store, WA.

**Above** (From left to right) Terrie Spencer-James, Luisa Filardi, Deborah Arrantash and Leanne Brooks from Wesfarmers Limited's Group Treasury Department.

**Right** Callum Sinclair, a service station attendant, at Kleenheat's autogas outlet at Myaree, WA.

An increased recognition of the importance of the relationship between people and their environment has been a very significant feature of the latter part of the 20th century.

At home and at work most of us treat very seriously the impacts or potential impacts of what we do on our physical surroundings.

In the age of the Internet and through other means of instant mass communication we are exposed, as never before, to things that happen around the world and to debates about major global environmental issues such as the enhanced greenhouse effect, biodiversity protection and ozone depletion.

In Australia, and in Western Australia particularly, land degradation and its effect on water quality is our single greatest environmental concern. I am pleased that one of our business units, Wesfarmers Dalgety, is a major supporter of a proposed research project aimed at combating soil salinity.

Major companies such as Wesfarmers recognise that we must act responsibly and apply the highest standards of care for the environment if we expect to retain public confidence in our operations.

Just as importantly, we have a duty to provide a safe working environment for the more than 14,000 people employed, full or part-time, across the group.

This is our third annual report dealing in detail with environmental, safety and health issues. It does not suggest that everything is perfect. But the more public focus we put on our performance in these areas the more pressure we put on ourselves to improve - and that's one of the main reasons for publishing this document.

I would very much welcome your comments on how we might do better, with respect both to the substance of the report and the way in which it is presented.

Michael Chaney MANAGING DIRECTOR

# about us

We are a major diversified Australian public company headquartered in Perth, Western Australia, with about 41,000 shareholdings on our register.

We began in 1914 as a farmers' co-operative and were listed on the Australian Stock Exchange in 1984. Since then our business and geographic base has greatly broadened and today we have interests in hardware retailing; gas processing and distribution; coal mining; fertilisers and chemicals; forest products; rural merchandise and services, including insurance; and transport.

We employ about 9,700 people full-time and a further 4,700 on a part-time or casual basis. At the end of June 2000 our market capitalisation stood at \$3.5 billion, ranking us in the top 50 of Australian listed companies.

In addition to staff employed in the various business units, we have a corporate office in central Perth where about 90 people are employed. This provides a range of services including administration; accounting and treasury; legal; human resources; business development; risk management; information technology; and public affairs.

Our company is a major contributor to the community through provision of services and job creation and through a programme of donations and sponsorships.

Each year our board provides significant financial assistance to community-benefiting activities, particularly in the areas of medical research and the arts. As Founding Sponsor of the Western Australian Institute for Medical Research we have committed \$5 million over five years to help develop a world class adult health research centre.

In partnership with the internationally-respected Earthwatch Institute we sponsor six employees from across the group to take part in scientific research projects in Australia and overseas. This is the fifth year of our association with Earthwatch and the partnership has been important in increasing awareness of broader environmental issues as well as providing opportunities for personal enrichment.













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# business overview

Our business	Our people and their work environment
We are a national retailer of Liquefied Petroleum Gas (LP Gas) and gas appliances. Through a network of depots, company-operated branches, dealers and franchisees we serve more than 21,000 bulk and 240,000 domestic customer installations.	We employ about 700 people across Australia. Our business was restructured during the year to a product-based rather than regional-based operation to improve customer focus, reduce costs, improve safety performance and prepare for further growth.
We operate a Liquefied Petroleum Gas (LP Gas) extraction plant at Kwinana, south of Perth, which processes natural gas in the Dampier to Bunbury pipeline. We are a major supplier to the domestic market and the balance of our production is exported.	We employ about 40 people at Kwinana. Our plant's production during the year was in line with 1998/99 despite a scheduled four-week shutdown for major maintenance. In May, a \$20 million expansion of the plant was announced and commissioning of the extension is scheduled for December 2000.
We operate the Premier open cut mine at Collie, about 200 kilometres south of Perth in Western Australia. During the year we sold 3.8 million tonnes of coal and removed 29.7 million bank cubic metres of overburden. (The coal and gas production and distribution operations are all part of the Wesfarmers Energy business unit.)	We employ about 340 people at Collie. During the year, Wesfarmers acquired the Curragh coal mine, 200 kilometres west of Rockhampton, in Queensland's Bowen Basin. Curragh employs about 200 people and will be included in next year's report. We also hold a 40 per cent interest in the Bengalla open cut mine in New South Wales and we own Cardinal Contractors. Neither of these businesses are covered in this report.
We are Western Australia's largest producer and marketer of fertilisers and industrial chemicals. We have a 75 per cent interest in Australian Gold Reagents which operates two sodium cyanide plants at Kwinana, south of Perth, and a joint venture interest in an ammonium nitrate plant at Moura in Queensland.	We employ about 650 people across WA, almost 100 of whom work in agricultural areas. Our fertiliser manufacturing operations are located at Kwinana, Bunbury, Albany and Esperance. During the year production ceased at Geraldton and the site is now a regional distribution centre. A new \$150 million ammonia plant was opened at our major chemicals complex at Kwinana.
We (Wesfarmers Dalgety Limited) are one of the largest suppliers of products and services to rural Australia. Wesfarmers Federation Insurance is the country's leading farm and crop insurer and one of the country's top 20 general insurance companies.	At Wesfarmers Dalgety Limited we employ 1,200 people full and part-time through more than 260 branches, partnerships and franchises/agencies operating in all mainland states. Our employees are mostly country-based and have a broad knowledge of Australia and its farming activities. Wesfarmers Federation Insurance has about 330 permanent employees (about 100 at the Bassendean head office in Western Australia) providing insurance sales and services and 52 contract agents across Australia
We are a major Western Australian forest products company, involved in hardwood sawmilling, timber processing and treatment and forest harvesting. Our name changed to Sotico Pty Ltd (an acronym for Southern Timber Company) in February 2000. Our woodchipping and hardwood plantation businesses were sold in October 2000.	With the sale of the woodchipping and hardwood plantation parts of the business we now employ about 800 people, most of whom live and work in the southwest of Western Australia. We have sawmills at Collie, Deanmill, Pemberton, Yarloop and Nannup and processing centres at Manjimup and Welshpool. Our forest harvesting operations are based at Manjimup and Yarloop and we have a pine log treatment plant at Mundijong.
We are a diverse transport operator in Western Australian and other parts of the country providing transport and logistics and specialised services. Our fleet includes more than 1200 units of operating equipment.	We employ more than 550 people with our headquarters at Kewdale in Western Australia. Our transport and logistics operations include scheduled general freight and refrigerated transport services, an express and overnight freight business and the provision of contract warehousing and distribution services across a range of industries. Our specialised services business covers dangerous goods and chemicals, heavy haulage and bulk storage.

# energy - gas retailing

## **AKleenheatGas**

### Overview

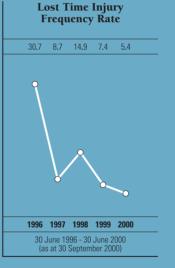
A most significant achievement during the year was the decline in our Lost Time Injury Frequency Rate (LTIFR) from 7.4 to 5.4, making good progress towards achieving our annual goal of halving the previous year's result. On the environmental front, we have had success in achieving a number of vehicle and power generation facility conversions to run on a mix of LP Gas and diesel. These include the Rottnest Island power station, five power stations on the Nullabor Plain and waste disposal trucks operated by Gosnells City Council in Western Australia and Logan City in Queensland. The promotion of LP Gas as a cleaner, more environmentally friendly energy source remains one of our main priorities.

### **Our Progress**

1999 Report Priorities	Outcomes
Safety performance goal of zero accidents.	7 Lost Time Injuries. 40 non-Lost Time Injuries requiring medical attention. LTIFR 5.4 for year.
Total compliance of the Kleenheat Gas Occupational Safety and Health management system.	Third party certification to AS 4801 is expected to be achieved in the second half of 2000.
Promotion of LP Gas as an alternative source of energy and as a replacement for higher carbon chain fuels.	Several local authorities and private companies have trial equipment converted to operate on an LP Gas/diesel mixture.
Reducing LP Gas emissions.	Monitoring of industry best practice to ensure that filling connectors are replaced as engineering technology improves.

### Priorities for the future

- Improve safety performance. Ultimate target is zero LTIs with an annual reduction in the LTIFR of 50 per cent.
- Establish a programme to evaluate the contribution of LP Gas in reducing the emissions caused by higher carbon chain fuels.
- Third party certification of the Kleenheat Gas Occupational Safety & Health management system to AS 4801.
- Provide on-line staff training utilising our operational training modules.
- Progressively establish a compliance programme addressing all aspects of the supply chain.



Number of workers' compensation claims

106 60 60 65 47



30 June 1996 - 30 June 2000 (as at 30 September 2000)



# environmental management

We are a major Australian distributor of LP Gas and gas appliances. We are committed to providing consistently acceptable goods and services to our clients, with minimum adverse impact on the environment.

To help achieve this, we have a management system that:

- integrates the consideration of safety, quality and environmental issues throughout our organisation;
- · encourages re-cycling to minimise waste and uses enhanced waste management techniques;
- · aims to prevent pollution of the environment by encouraging the use of no, or low, impact chemicals;
- aims to continually improve our environmental performance through the implementation of an audit and review process; and
- · maintains awareness of industry best practice.

Specific management commitments include:

- risk assessment to determine significant environmental impacts of all aspects of operations in normal, abnormal and emergency situations;
- adherence to appropriate legislation and non-regulatory guidelines;
- minimisation of product loss;
- reduction of adverse impacts from production processes; and
- maintenance of emergency response procedures to address environmental implications of accidents and emergency situations.

### Compliance with Australian standards

We have third party Quality Management System certification to AS/NZS ISO 9001 (Int) 2000. With our change from regional to channel management the status of national certification is

currently being re-negotiated with the independent auditing organisation with the intention of complying with each of these standards, Australia-wide.

At Myaree and Kwinana, in Western Australia, we have third party Environmental Management System (EMS) certification to AS/NZS ISO 14001.

Third party certification of our Occupational Safety and Health Management System to AS 4801, at Myaree and Kwinana, will take place in the second half of 2000.

### Legislation

The Environmental Management System requires that applicable legislation is regularly reviewed. This is performed by a company specialising in environmental law. They provide a periodic update of any changes or additions to Western Australian law which may impact on our operations. This information is disseminated via the Kleenheat Gas Intranet through changes to the Operations Management System (OMS).

We have representation on Standards Australia technical committees which review and update the standards for the storage, handling and transport of LP Gas.

### Site contamination

Three of our sites have ground contamination. These sites were contaminated by previous occupiers and are contained and monitored as required by government authorities.

The Pinkenba (Brisbane) site is contaminated by hydrocarbon residues and operates under an approved Environmental Management Plan (EMP). The site is licensed by the Queensland Department of Environment.

At Armidale, in NSW, where our site is contaminated by coal tar residues, we operate under an EMP monitored by the Armidale City Council.

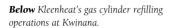
The third site, at Camellia in Sydney, is leased from a neighbouring chemical company which encapsulated the chemical contamination and restored the site prior to our occupancy.

### Water management

The management of water is not one of our major issues and mainly relates to the washing of trucks and fire containment. In all operations other than Kwinana, truck washing is the responsibility of contractors using commercially available washing facilities.

Below Truck driver Barry Collins filling Kleenheat's gas-powered truck "LPG 001" at Kwinana, WA.





**Right** Filling a vehicle at Kleenheat's autogas outlet at Myaree.





We use water in significant quantities for two activities:

- Kwinana truck washing this water is processed through an oil/water separator and is subsequently filtered and re-used for watering landscaped areas.
- Deluge systems our deluge systems, Australia-wide, consist of natural sumps or tanks full of water replenished by mains, and rainwater runoff. The water is pumped through a reticulated network of high output sprinklers in the event of leakage or fire. The system is tested weekly and, where practicable, all water is recycled back into the sump.

Waste water is produced at Myaree. This is effluent from the garage which is processed through an oil/water separator, the water being discharged to sewer under license.

### Odour management

In its natural state, LP Gas is odourless. For safety reasons it is necessary to add a small amount of ethyl mercaptan to give the gas a distinctive smell. This allows its presence to be detected should a leak occur.

The Kwinana cylinder filling and bulk LP Gas transfer operations are located away from residential areas and the small quantities of LP Gas released during filling readily dissipate.

Most other sites are in industrial areas and/or handle low volumes of LP Gas.

### Noise management

As with odour, noise generated during normal operations is not a significant issue given that most sites are in industrial areas and/or handle low volumes of LP Gas. During re-filling at sites such as caravan parks and hospitals the noise generated by pumping equipment is being addressed. By the end of June 2000 there were only five tankers, from a bulk tanker fleet of 103 units, still to have reduced noise pumping equipment fitted.

### Asbestos management

A simple, qualitative, comparative method for the visual assessment of the condition of asbestos has been developed. The procedure is now available Australia-wide and is included in the annual branch and terminal audits so that action can be taken where required.

To date, 19 sites Australia-wide have been assessed. Thirteen of those sites have been identified as not containing significant amounts of asbestos. The remaining six sites are subject to ongoing monitoring and treatment, as required.

# Hydrocarbon management

Minor emissions inevitably occur when unloading/loading and filling hoses are disconnected. The very latest industry design and technology ensures that these emissions are minimised and records of disconnections are kept so that the total annual emission can be calculated. Next year we will report emissions as a percentage of product handled.

We have been advised by the EPA that the National Pollutant Inventory (NPI) does not require reporting of LP Gas emissions for 1999/2000 and 2000/2001.

The use of low loss filling equipment ensures that emissions for cylinder filling are kept to a minimum, typically five millilitres per cylinder.

**Below** Contractor Craig Jauncey at Kleenheat's truck wash down facility at Kwinana.

As LP Gas is heavier than air it dissipates at ground level with no known adverse environmental impacts.

### LP Gas/diesel mix

We have been involved in a number of vehicle and power generation conversions to operate using an LP Gas/diesel mixture. These include the Rottnest Island power station and five power stations at locations on the Nullabor Plain, waste disposal trucks operated by Gosnells City Council (WA) and the Logan City Council (Qld).

### Waste management

Wastes, such as oil, filters, rags, tyres, batteries, paper, plastics and scrap metal are disposed of under a total waste management plan with a waste management contractor using appropriately licenced disposal sub-contractors.



safety and

We are committed to providing

an accident-free and healthy

Our Operations Management

System has been further refined

the Australian Dangerous Goods

available, via our Intranet, to all

to include electronic copies of

Code and some Australian

Standards and these are

employees for reference.

We are in the process of

achieving compliance and

Standard for Occupational

certification to the Australian

Health and Safety Management

Systems (AS4801:2000) which

will complement the existing Quality and Environmental

be achieved during the first

Management systems. It is anticipated that this will

half of 2000/2001.

Employees

health survey

As part of our ongoing

Western Australia in

commitment to the general health of our employees,

a voluntary confidential health survey was undertaken in

March 2000. The survey results were given to each employee

with the overall trends in health

progress nationally. From this,

general health improvement

such as the provision of quit

smoking kits.

the company will target areas of

reported to the company. This health survey is still in

health

work environment.

### Safety performance

Our goal for employee occupational safety and health performance is zero workplace accidents. Lost Time Injury Frequency Rates (LTIFR) and Average Time Lost Rates are calculated monthly and reported to our board every two months. To achieve this goal, we target a reduction of 50 per cent in the LTIFR each year. The target for 1999/2000 was 3.7. We recorded a rate of 5.4.

### Training

Workplace training is recognised as being essential to enable employees to improve the skills they have either brought to the company, or need to acquire for their particular job.

More training has been provided in the past year with 73 per cent of staff Australia-wide receiving training in the appropriate jobrelated modules compared with 68 per cent for the previous year. The biggest increase has been through participation in formal in-house training courses, with external training out-sourced for specific areas of need also higher than 1998/1999.

All staff receive induction training to bring them into line with an integrated entry level of safety, operational and environmental awareness.

Contractors also receive induction training as a prerequisite for entry into the preferred contractor register.

### Vehicle safety

In 1999/2000 we operated approximately 160 heavy goods vehicles throughout Australia for the delivery of LP Gas in bulk and cylinders. During this period the heavy goods fleet travelled approximately 14,000,000 kilometres and, during this same period, vehicles from the fleet were involved in 11 on-road minor accidents with no personal injury. One accident involved significant damage to our vehicle.

# Community involvement

We are committed to raising the awareness in, and being responsive to, the communities in which we operate in terms of LP Gas safety and related environmental management issues. The Kleenheat Gas website now has an area dedicated to the safe handling of LP Gas and this will be expanded to include public information on a variety of related issues.

As a founding and active member of the Australian LP Gas Association (ALPGA), we have helped with the establishment and further enhancement of relevant industry codes of practice in the interest of the safety and protection of the wider community.

We provide LP Gas safe handling and storage training to voluntary organisations, country fire authorities and other interested groups.

We are very active in the conversion of general vehicle fuel systems to LP Gas, assisting in the reduction of harmful engine emissions and the achievement of Australia's commitments under the Kyoto Protocol on emission reductions. We have taken an active role in raising the public's awareness of the environmental impact of converting to autogas through relevant sponsorships, advertising and public relations activities.

### Major hazard facilities

Victoria and Western Australia have now adopted the National Standard [NOHSC:1014 (1996)] for the Control of Major Hazard Facilities. In Victoria, regulations to address this standard became effective from 1 July 2000 requiring a safety case and emergency plan to be lodged with WorkCover Victoria for the LP Gas installation at Swan Hill. This installation, with a storage capacity of 200 tonnes, is our only LP Gas major hazard facility in Victoria.

Our installation at Kwinana (WA) is classified as an LP Gas major hazard facility. A safety case and emergency plan have been lodged with the Department of Minerals and Energy.

Queensland and New South Wales have plans to comply with the National Standard and are currently formulating legislation for compliance. We will respond to these changes as required and our operations management system will form the basis for compliance.

### Emergency response

During the year emergency response exercises were successfully conducted at Kwinana and Pinkenba.



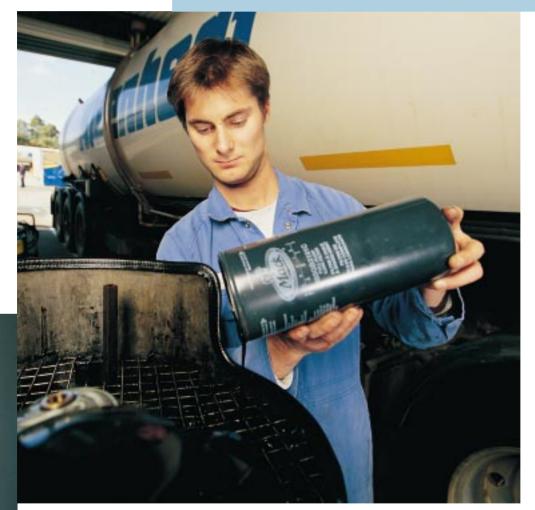
### Wesfarmers Limited Progress Report 2000

The Logan City Council, in Queensland, has converted one of its street sweepers to a mix of diesel and LP Gas. We have actually installed two systems - one for the main engine which drives the vehicle and one dedicated to operating the sweeper brushes.

Replacing 45 per cent of the diesel with LP Gas on the main engine and 75 per cent on the sweeper engine is achieving excellent emission results. The figures need to be confirmed over a longer period, but appear to be most encouraging.

Logan City has an on-site refuelling installation and is ready to look at converting more vehicles. The council is in the process of buying some vehicles that run exclusively on LP Gas to take advantage of the refuelling facility.

If operating performance is confirmed, the council is interested in utilising the system on the rest of its diesel fleet and may wish to use the on-site refuelling facility to refuel its fleet of saloons and utilities.





**Far left** Ramp hand Ray Bond refilling LP Gas cylinders at Kwinana.

**Left** Mechanic Jason Criddle recycling an oil filter at the Myaree workshops.

**Above** The Mosquito Magnet, designed to attract mosquitoes using carbon dioxide by burning LP Gas, - an innovative product distributed by Kleenheat Gas.

# energy - gas production

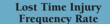


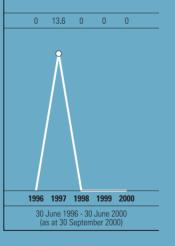
### Overview

The maintenance of our zero Lost Time Injury Frequency Rate (LTIFR) was a highlight of the year's safety performance. Workforce exposure hours without a lost time injury totalled 282,518 by the end of June, a new record of which we are very proud. As the report mentions, we are continuing to address noise reduction in conjunction with the Department of Environmental Protection. During the year we became aware of the presence on one part of the site of elevated levels of zinc and lead but these do not exceed allowable limits for industrial and commercial use set by the National Environment Protection Council. We expect the entire site will need to be assessed in the context of the proposed contaminated sites legislation.

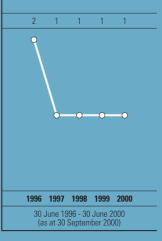
### **Our Progress**

1999 Report Priorities	Outcomes
No workplace injuries and maintain LTIFR at zero.	LTIFR of zero. One employee injury requiring medical treatment, three contractor medical treatments.
Ongoing identification and control of hazards.	Development of a Job Hazard Analysis (JHA) database system as part of our hazard identification, risk assessment and control policy.
No significant releases of hydrocarbons to the atmosphere.	Two natural gas releases to atmosphere resulting from Pressure Safety Valve operation which were safely dispersed without posing any threat to employees or the public.





Number of workers' compensation claims





### Priorities for the future

- No workplace injuries and maintain LTIFR at zero.
- Ongoing identification and control of hazards.
- No significant releases of hydrocarbons to the atmosphere.

# environmental management

Our Kwinana extraction plant has been designed with a very low environmental risk. All products will evaporate if released to atmosphere, leaving no soil or water-contaminating residues.

The plant operates under licence from the Department of Environmental Protection (DEP). This licence is issued annually and includes environmental control conditions, with which we comply.

We submitted an inventory to the DEP as part of the National Pollutant Inventory (NPI) system. The inventory details emissions to air of oxides of nitrogen, carbon monoxide, nickel carbonyl, heavy metals and associated compounds (estimated at less than 35kg/year) and particulate matter. The NPI data will be updated annually.

In May 2000 a \$20 million expansion of the plant was announced to increase gas processing capacity, allowing production to increase to 300,000 tonnes per year. Following our submission of a Works Approval Application to the DEP, the Environmental Protection Authority has determined that the proposal should be assessed as an Environmental Protection Statement including Ministerial Conditions which will apply to the operation of the upgraded facilities.

### Hazard control

The plant is defined as a Major Hazard Facility by the National Standard for Control of Major Hazard Facilities [NOHSC: 1014 (1996)].

In order to protect employee and public safety, a comprehensive Hazard Control Plan was put in place at commencement of plant operations in 1988, establishing procedures for control of change to the plant, environmental protection, employee training and safety and emergency response. This plan is subject to regular

**Below** Water hen and chicks on the water storage dam at the Wesfarmers LPG plant in Kwinana, WA.





Above Export storage tanks near the dam.

independent audit and is overseen by the Department of Minerals and Energy (DME) of WA.

As a requirement of the above standard, the Hazard Control Plan has been converted to a Safety Report, but, auditing and reporting requirements continue unchanged. The Safety Report also addresses environmental policy and procedures.

As part of the proposed plant upgrade, an updated Quantitative Risk Assessment (QRA) was submitted to the DME and DEP for their approval. After review of the updated QRA, it was agreed that a more detailed QRA would be prepared, taking into account all changes to the plant since we commenced operations and including the proposed new facilities.

# Environmental incidents

There have been no environmental incidents involving significant release (defined as a release which may affect areas outside the plant) of LP Gas, natural gas or condensate to the atmosphere since the commencement of plant operations in 1988. There have been occasional minor LP Gas releases (defined as those contained within the plant) that have been quickly brought under control. There were two natural gas releases to the atmosphere (in December 1999 and May 2000) resulting from Pressure Safety Valve operation. The gas released safely dispersed without posing any threat to employees or members of the public. The May release is now subject to investigation by the DEP and DME to determine if any breach of environmental regulations has occurred.

### Atmosphere

During plant shutdowns, or occasionally to control pressure in operating vessels, gas has to be released to the atmosphere. This gas is safely disposed of through combustion flares. The flare tips are continuously monitored in the control room via a closed circuit camera. In the event of a high flaring rate, additional combustion air is fed to the flare tips to prevent the formation of black smoke.

There are minor emissions of LP Gas to atmosphere at the completion of loading of road tankers when the hoses are disconnected. A project has commenced to determine the requirements to reduce or eliminate the level of these emissions. Emission sources have been identified and the extent of work required to reduce them is being investigated.

Propane and butane are naturally odourless. For safety reasons, we are required by legislation to inject low levels of ethyl mercaptan (odourant) into the gas. This gives it a distinctive odour allowing leaks to be detected. The injection system is closely monitored as even minor drips can give rise to offensive odours. Any leak is quickly repaired and spillage contained and neutralised. No odour complaints were referred to us by the DEP in 1999/2000.

### Greenhouse gases

During the year we released an estimated 200,000 tonnes of carbon dioxide equivalents. This is a slight reduction from the estimated 204,000 tonnes released during the previous year.

**Below** Liquid Extraction Plant and processing area seen from the export storage tanks.



The absorber, surrounded by scaffolding, during the four week plant shut down in March/April 2000. This was the largest scale check on the facility since we began operations in 1988. It involved our own employees and a contractor team of more than 200 in the inspection of all operating equipment.







**Far left** Filling an LP Gas tanker at the domestic loading bay at Kwinana.

**Left** Operator Greg Johnston checking plant operation in the control room.

### Noise management

The extraction plant operates 24 hours a day. There are numerous items of rotating equipment giving rise to a low level of background noise at the plant boundary. An environmental noise survey conducted during the year found that this noise was slightly in excess of that allowed for neighbouring industry. A comprehensive survey was undertaken to determine the extent to which our plant is contributing to this boundary noise level. This survey confirms the noise exceedance to neighbouring industry. A noise model has been developed using the survey data. This model predicts we may slightly exceed the acceptable noise levels at residential areas in Medina. A noise frequency analysis will be undertaken to determine our contribution to the overall noise levels at Medina. In addition, a noise reduction programme will be developed in conjunction with the DEP to reduce the noise emissions from the plant.

### Site contamination

A soil test late in the year revealed the presence of elevated levels of zinc and lead at one location on the site. The levels recorded were substantially higher than would normally be found in the Kwinana area and exceed the DEP's criteria for use as clean fill. They do not exceed levels set by the National Environment Protection Council for industrial or commercial land uses. Further assessment of the entire site will be required when the proposed contaminated sites legislation comes into force

### Land management

Extensive landscaping including planting of trees and shrubs has been undertaken to improve the appearance of the facility, while areas of remnant native vegetation have been protected. To prevent dust emissions, large areas of grass have been planted and are maintained.

### Waste management

A waste management contractor collects solid waste (paper, cardboard and rags). There is no landfill of waste on site. During the year, about 400 cubic metres of solid waste was removed for off-site disposal. An oil-recycling contractor collects oil wastes (lubricating and seal oil).

### Groundwater

Three groundwater bores operating on the site provide water for garden reticulation and emergency response. Storm water run-off from paved sections of the processing areas is directed to oil/water interceptors where any oil present is skimmed off and recovered. A contract waste disposal firm collects this oily water waste.

### Hazardous substances

We operate under a licence to store dangerous goods issued annually by the DME, WA. Our propane and butane products and condensate by-product are defined as dangerous goods under the Dangerous Goods Storage Regulations administered by the Department. The products are stored in vessels which comply with both Australian and international engineering standards. Small quantities of diesel are stored on site within bunded areas. Backup supplies of lubricating oil and heat transfer fluid are kept in 200 litre drums in a bunded oil storage area.

Odourant is pumped directly from sealed iso-containers. The empty containers are returned to the supplier for re-use, eliminating any residual odourant disposal requirements.

Liquid nitrogen is stored in an insulated vessel and is used for clearing LP Gas from the export pipework following completion of exports.

All of these storage areas meet legislative requirements.

# safety and health

The plant operates under licenses issued by the DME and DEP. Health and safety issues are monitored by DME and WorkSafe WA.

We are committed to providing a healthy and safe workplace for all employees and visitors to the Kwinana extraction plant and our gas export facilities. Identification and control of hazards and prevention of incidents and injury are of the highest priority. This is achieved through a consultative process involving employees and management, defining and implementing training, policies and procedures for the well being of all employees.

### Policy, plans and procedures

All health and safety policies and procedures are included in the Safety Report and are subject to independent and regular audit. Specific health and safety procedures cover working with high voltage electricity, accident and incident investigation, manual handling, working in confined places, height safety and job hazard analysis.

All modifications to the operating plant are reviewed and approved by senior plant management prior to implementation. Procedures ensure that all changes are fully documented to allow independent audit and review.

### Training

All personnel must attend a safety induction programme before being allowed access to the process area. This programme ensures they are aware of hazards, work permit requirements, occupational health and safety, and emergency response procedures.

### **Emergency response**

All employees undergo annual basic first aid and life support training, while supervisors complete advanced first aid training. A comprehensive emergency response training programme is in place relevant to each employee's position. This includes basic, intermediate and advanced fire fighting, breathing apparatus training, search and rescue and fire ground command programmes. Training under this programme is conducted annually.

### Vocational training

All employees undergo vocational training to meet the requirements of their position, with competencies measured against national standards (where available). A comprehensive competency-based structured training programme is in place for all process operators, involving demonstration of acquired competencies against internal and national standards.

### Safety and improvement notices

We operate under a continuous improvement regime where the workplace is under constant appraisal for safety and efficiency improvements. No safety improvement notices have been served on us and no prosecutions have been laid.

### Plant safety

### **Fire protection**

A water supply ring main is installed underground to satisfy both Australian Standards and National Fire Protection Authority standards. The main is fed from a 10,000 m<sup>3</sup> storage pond. Hydrants, hoses and adjustable fog nozzles are installed throughout the plant. All process equipment and product storage and loading areas are monitored.

Fire deluge systems are installed at the domestic and export gas storage facilities and can be activated by:

- manual operation;
- fire and gas detectors in those areas; or
- by remote operation.

The export refrigerated storage tanks are spaced well apart and are fully bunded for added safety. In addition, foam is strategically positioned around the plant to combat an oil fire.

Fire pumps, monitors and deluge systems are checked monthly and the results recorded. Fire pumps are performance-tested annually.

### Gas and fire detection

Gas and fire detectors are located throughout the plant. These detectors alert control room operators in the event of gas leaks or fires. The calibration of the gas detectors is checked every three months. The plant has been divided into zones for emergency management, decision making and emergency response purposes.

Major plant equipment is fitted with heat sensitive tubing that - in the event of a fire melts, activating visual and audible alarms in the control room, shutting down that zone.

The fire and gas detection systems will be extended to the upgraded plant.

### Pressure relief to flare

A flare stack on the plant allows the release of gases from plant vessels when required. These gases are mixed with combustion air at the flare tip and burnt with a smokeless flame. Continuously burning flare pilots ensure the flares remain alight at all times. Thermocouples at the pilot tips activate alarms in the control room should individual pilots fail. This warns the process operators to respond and re-light the pilot.

### Engineering and construction standards

All equipment is subject to rigorous engineering design specifications which have been reviewed to confirm compliance with Australian Standards and internationally accepted design criteria.

# Inspection and testing

### Safety pressure relief valves

We have a Quality Assurance system meeting the requirements of ISO 9000 for the testing, inspection and servicing of pressure relief valves. These valves are tested at prescribed periods, with the results recorded to allow independent audit.

### **Pressure vessels**

We prepare a report every six months updating the status of the operation, maintenance and inspection histories of all pressure vessels. We review this report to identify any vessel that requires maintenance or inspection in addition to normal schedules. The frequency of inspections conforms to the relevant Australian Standard. Internal inspections of all process vessels were carried out during this year's major plant shutdown, confirming the suitability for continued operation.

### Safety equipment testing

The site emergency alarms and the "all clear" alarm are tested every Wednesday.

All self-contained breathing apparatus is serviced annually. All fire hoses are inspected twice annually and pressure-tested once a year. Fire extinguishers and hydrants are serviced twice a year. We also conduct monthly inspections of all other safety equipment, such as fire protection equipment, fire prevention equipment and emergency and evacuation equipment.



**Left and below** Wesfarmers LPG employees during fire training exercises at Perth Domestic Airport.

**Bottom** Testing the water deluge system on an LP Gas domestic storage tank.

### Emergency response planning

### **Emergency procedures**

We have detailed emergency response procedures covering the entire plant operations. These procedures describe the organisation and training of employees and contractors to limit the risks to people and the surrounding environment in the event of an emergency.

### **Kwinana Industries Council**

We are a full member of the Kwinana Industries Council and its sub-committee the Kwinana Designated Industries Assistance Group (KDIAG).

KDIAG member companies have established and maintain a management system for response within the Kwinana industrial area to control emergencies that may arise within the boundaries of a member company site. Member companies have a mutual aid plan to integrate emergency management where appropriate. This plan allows member companies to obtain assistance from neighbours in the event of an emergency.

### **Emergency response training**

All employees who regularly enter the site area receive appropriate emergency response training. The objective of this training is to familiarise personnel with the emergency procedures and their specific roles so they can render effective assistance during an emergency situation. Training is conducted by external training providers.

### Accident reporting

The Lost Time Injury Frequency Rate (LTIFR) and the Average Time Lost Rate (ATLR) are key performance indicators that are calculated monthly and reported to our board of directors, every two months.

There were no Lost Time Injuries (LTI's) recorded this year.

The workforce exposure hours increased to 282,518 without an LTI (a record for us). The last recorded LTI for our workforce was in August 1996.

There were three employee first aid cases, one requiring medical treatment. There were 19 contractor first aid cases, three requiring medical treatment. Sixteen of the 19 contractor incidents occurred during the increased contractor presence on the site during the plant shut down.

As there were no LTI's, both the LTIFR and the ATLR are zero for the reporting period.

# Workers' compensation

There was one workers' compensation claim during the year, involving a minor medical treatment.

There have been a total of six claims over the past five years.





# energy - coal



### Overview

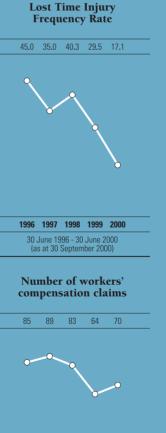
A major improvement in our safety record was a feature of our performance during 1999/2000. Our Lost Time Injury Frequency Rate (LTIFR) fell by 45 per cent from the previous year and for the first time ever we achieved 100 and 104-day periods without a lost time injury. Good progress was made on implementing an Environmental Management System and our rehabilitation effort focussed on completing work in one of our former and largest opencut mines. The rapid fill programme we have devised for this minesite will see it filled within four to five years instead of around 100 years through natural accumulation. Premier Mine was ranked very highly in a benchmarking study on greenhouse impacts and we have ready for signature a co-operative agreement under the Commonwealth Government's Greenhouse Challenge Programme.

### **Our Progress**

1999 Report Priorities	Outcomes
An injury free workplace.	12 LTIs, 61 injuries requiring medical treatment and 83 injuries requiring first aid treatment.LTIFR 17.1 for year, a 45 per cent reduction on 1999.
Implement our EMS, train employees and consider certification system.	Implementation well advanced. Documentation and procedures updated. Training programme and materials prepared.
Continue focus on noise management and associated community issues.	Consultation continued with community and Department of Environmental Protection. Total fleet noise reduced by 3.3 dB.
Develop a co-operative agreement for the Commonwealth Greenhouse Challenge Programme.	Greenhouse Co-operative Agreement developed, ready for signing.
Continue rehabilitation of mined-out areas.	Continued preparation of the WO-5B void surrounds for the ongoing rapid fill programme.

### Priorities for the future

- An injury free workplace.
- Disseminate EMS and train employees.
- Continue focus on noise management and associated community issues.
- Further reduction in greenhouse emissions through energy efficiency initiatives.
- Continue rehabilitation of mined-out areas.



 
 1996
 1997
 1998
 1999
 2000

 30 June 1996 - 30 June 2000 (as at 30 September 2000)

# environmental management

We are strongly committed to environmental management and are a signatory to the Australian Minerals Industry Code for Environmental Management. A co-operative agreement under the Commonwealth Greenhouse Challenge Programme is ready for signature. We have experienced environmental staff to support our operations and ensure a high standard of management. Our aim is for 100 per cent compliance with set environmental limits.

Our policy is to keep the local community informed and we regularly report key environmental performance data to our neighbours.

We have an Environmental Management Plan and procedures to comply with extensive legislative and licensing requirements. To support this plan, we have an ISO 14000 standard Environmental Management System (EMS) including procedures for monitoring and for any work with a significant environmental risk. Implementation of the EMS is well advanced with documentation and procedures updated and a training programme prepared.

We have in place a career path training programme for environmental issues and management. We will conduct an Environmental Awareness Training Programme with all employees early in 2001.

# Figure 1: Rehabilitation statistics 269 129 104 156 87 0 50 38 116 0 (ha) (ha) 0 0 0 1996 1997 1998 1999 2000 Year ended 30 June Year 100 100

### Land management

Major opencut mining commenced in 1970. Since then 2,454 hectares of bushlands have been disturbed by mining and associated activities. Revegetation commenced in 1975 and 832.2 hectares have now been rehabilitated (see figure 1). Rehabilitation of abandoned mine areas is now focussed on completing work in one of our former, and largest, opencut mines (WO-5B).

Prior to land clearing, operational areas are mapped to determine jarrah dieback boundaries. Peripheral areas are left as undisturbed as possible. We have procedures for clearing, topsoil removal/replacement and land rehabilitation to minimise the risk of spreading jarrah dieback. Topsoil is removed, stored and applied in rehabilitation areas. Dieback-infected soil is kept separate and only replaced in areas with minimal risk of disease spread.

Waste rock with the potential to generate acidic conditions is buried deep in the dump profile. Final dump surfaces are covered with a one-to-two metre blanket of inert material and spread with topsoil ready for revegetation.

Disturbed land is returned to stable, compatible bushland by using local native seeds and trees. Habitat logs are placed in



rehabilitation areas to promote recolonisation. Regular inspection and permanent monitoring plots identify improvement opportunities and ensure successful vegetation uptake.

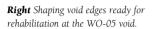
### Water management

Efficient and safe mining requires dewatering in the immediate pit area. During the year, an average of 7.3 million litres (ML) per day was abstracted (removed) with

**Above** Land rehabilitation at the WO-5B void, Premier Mine at Collie, WA.

an average of 1.5 ML/day required for dust suppression, vehicle wash down and domestic supplies (see figure 2). A total of 1217 ML was piped to Western Power for the local power stations - the major water consumer in the area - to reduce overall abstraction in the Collie Basin. We are licensed to discharge water off-site to the environment but have reduced discharge significantly since 1994 (see figure 3). There was no

**Below** Environmental engineer Peter Riley carrying out a blast monitoring test, Premier Mine.

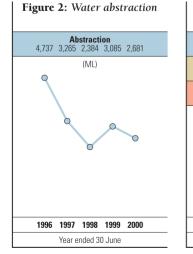


**Far right** Blast monitoring, *Premier Mine.* 

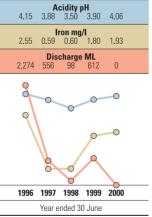
**Below** Dust suppression water sprays on one of the haul roads at Premier Mine.











off-site water discharge this year with all overflow (1026ML) from our central environmental collection dam (sump A) being captured in the WO-5H void as part of a rapid fill strategy (water quality is noted in figure 3). All groundwater abstraction and minewater discharge is monitored as well as adjacent river systems, regional groundwater levels and abandoned mine voids.

The rapid fill initiative for WO-5B, noted last year, was successfully commenced resulting in a rise of 15.7 metres in the void. This programme will increase safety control and enhance rehabilitation prospects. Filling will take four to five years instead of around 100 years through natural accumulation. Diversion is only done during peak winter flow and will have no impact on domestic water requirements or the environment. The WO-5H void level was also raised, by water diversion, by nine metres.

Rapid rehabilitation will expedite the availability of the land for other purposes. Such areas have a high potential value for recreation and aquaculture.

We have a computer database and management system for water abstraction, discharge and regional monitoring.

We remain committed to make good any domestic or stock water losses of neighbours to the Premier mine. However, dewatering has not reduced groundwater levels near private land and dwellings in this area.

### Dust management

In the past, dust has been a source of concern for local residents - particularly its potential to enter drinking water collected from roofing.

Dust is mostly generated on dumps and cleared areas during dry spells. This issue is managed by minimising clearing, forming and stabilising roads, tar sealing major arteries, speedy rehabilitation, and using water to suppress dust on road and operational areas.

Dust monitoring is required in dry months and the records show that we have operated well within compliance and that 1999/2000 dust levels were lower than last year (see figure 4). There were no complaints from the community about dust during the year.

### National Pollutant Inventory

This year was the first full year of reporting by us to the National Pollutant Inventory (NPI). Our emissions are largely due to the use of diesel fuel and the generation of dust from wind erosion, vehicular movement, overburden removal, coal processing and blasting. Compilations to date indicate that emissions should not pose a health or environmental risk. Full results will be available on the NPI Internet site in January 2001.

### Noise management

Mining equipment and blasting are the main sources of noise. Our equipment replacement policy has reduced fleet noise levels, by 3.3 dB, however, the general mine noise heard by



residents at nearby Buckingham has, at times, been reported as disturbing. This has been addressed through community consultation and ongoing development of a plan with the Department of Environmental Protection.

Noise from blasting was again usually well below the current regulations (see figure 5). No blasts exceeded the legal limit for a single blast of 125 dBL. The highest recorded was 123 dBL while 99 per cent of blasts were below 115 dBL and our average was 102 dBL at Buckingham. Occasional complaints about blasting continued even though our performance improved with the number not triggering the Buckingham monitor down by 10 per cent despite a 34 per cent increase in the number of blasts (see figure 6).

We have offered to provide building condition surveys from an independent assessor to all near neighbours. In the event of a damage complaint, we offer to fund independent structural assessments as required. The independent assessors have to date attributed no complaint about structural defects to blasting.

### Waste management

Major waste streams - including used oils, metal scraps, card boards, paper, tyres and batteries - are recycled. Our waste management programme, applies the principles of "Reduce, Reuse and Recycle". The 1998/1999 report noted a recycling target of 55 per cent may not be achievable given that it required an increase in efficiency from 83 per cent to more than 90 per cent. During the year we achieved 90 per cent but this resulted in only 49 per cent (874 cubic metres) being recycled. Our target now is a recycling efficiency of more than 90 per cent. Recycling is promoted through the provision of recycling bins in car-parks for our employees' domestic requirements. As well, we sponsor and mentor local schools in waste management.

The main infrastructure area is serviced for sewage by a treatment plant. Treated water is available for garden reticulation during summer. The mine operations centre is serviced by a septic system including open pondage.

Water from washdown and fuelbay areas is treated by a Dissolved Air Flotation (DAF) plant before being recycled.

### Site contamination

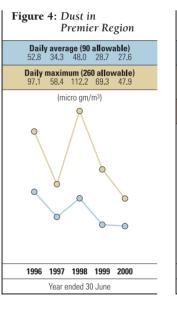
Rehabilitation work at the WO-5 open cut mine has been accompanied this year by assessment of possible site contamination, namely the wastewater settling dam and fuel bays.

No significant contamination was identified.

# Asbestos and other hazardous substances

We commissioned a hazardous material survey to cover asbestos, synthetic mineral fibre, lead in paint, PCB's and ozonedepleting substances.

Asbestos gaskets were noted in the Premier fire hydrants which will be replaced even though the external expert assessment concluded they did not pose a health risk. The presence of synthetic mineral fibre was noted



# Figure 6: Premier Mine blasting Buckingham monitor 165 262 271 261 349 Number below trigger level 49 149 191 197 297 30% 57% 70% 75% 85% dBL average when triggered 106 106 101 102

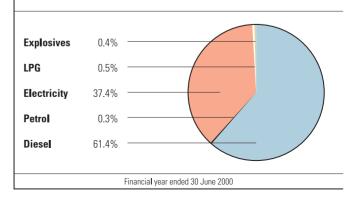
 1996
 1997
 1998
 1999
 2000

 Year ended 30 June
 Year ended 30 June
 Year ended 30 June

Figure 5: Premier Mine blasting - 1999/2000

Criteria	Buckingham	Griggs
<125 dBL	100%	100%
<120 dBL	99.7%	100%
<115 dBL	98.8%	99.4%
Average dBL	102	106
Total blasts	349	349
Not triggered	297	320





in insulation lagging at Premier but was not considered to pose a health risk. Ozone depleting substances (HCFC's), noted in air-conditioning units required no action but replacement in due course, is recommended.

### Energy consumption

A diesel-powered machinery fleet dominates our fuel consumption and emissions.

The introduction of large electric shovels and reduced haulage distances has increased the proportion of electricity but it should remain less than 20 per cent of energy requirements.

External energy audit information gathered last year has been used to develop improvement strategies. It is planned to implement one of these, a lighting management plan, in the coming year.

Total fuel energy consumption for 1999/2000 was 751,748 gigajoules, up from 627,662 gigajoules in 1998/1999.

Energy consumption increased by 20 per cent in the year for a 38 per cent increase in overburden movement and a 28 per cent increase in coal production.

### Greenhouse gas CO<sub>2</sub>

We have reduced Carbon Dioxide (CO<sub>2</sub>) emissions by 51 per cent per bank cubic metre equivalent since 1994, with a total CO<sub>2</sub> emission for 1999/2000 of 78,878 tonnes.

In the last year our emissions were reduced by 11.9 per cent from 2.78 to 2.45kg CO<sub>2</sub>/eqbcm.

Distribution of emissions by source can be seen in figure 7. During 1999, a benchmarking study, by the Australian Geological Survey Organization for 92 out of Australia's 102 coal mines, ranked the Premier mine first in greenhouse efficiency considering mines of similar ratios and equipment. Premier was ranked third overall with respect to CO<sub>2</sub>/eqbcm and seventh on CO<sub>2</sub>/gigajoule of product.

We are a signatory to the Commonwealth Greenhouse Challenge Programme and have developed a co-operative agreement which is ready for signing.

### Employee awareness training

We have an employee induction programme which includes environmental training.

A training programme for the EMS was developed this year to cover general awareness and the risks identified during the EMS development. Training of employees will be completed by 30 June 2001.

# Community involvement

We have actively promoted environmental management in the community through sponsorship of school programmes, involvement in local government projects and support of Land Conservation District Committee activities. We are a major sponsor of the WA Energy Museum which helps promote the industry's responsible environmental approach. Environmental management is also promoted through our company newsletter which is widely distributed in the local community.

We hold twice-yearly meetings with nearby residents to discuss our activities and the environmental impacts of mining.

# Research and development

The sponsorship of the Australian Coal Association Research Programme (ACARP) in Collie into acid amelioration of abandoned mine water bodies, a three-year, approximately \$1 million project, finished this year. This was replaced by provision of \$75,000 initial funding by us for a further ACARP research and development programme based at our abandoned WO-5H void. The programme budget is \$310,750 over two years and the research and development will assess water treatment solutions and possible aquaculture options for final voids. Our recent research and development commitments have been in excess of \$800,000.



# safety and health

Safety and health remains a priority aspect of our strategic plan. The safety and health programme is continually reviewed and communicated throughout the workforce to ensure that our commitment toward a safe and healthy environment is clearly understood.

# Key performance indicators

Our performance continued to improve with a 45 per cent reduction in the Lost Time Injury Frequency Rate (LTIFR) from 31.2 for the year ending June 1999 to 17.1 for the year ending June 2000. We include contractors in calculating LTIFRs. The number of workers' compensation claims increased from 64 to 70. We have revised the incident reporting and investigation process to include risk assessment as well as capturing hazards and near-miss incidents through a better reporting process. A new computer database system has been developed which will assist in monitoring incident investigation outcomes and corrective actions.

For the first time ever we achieved 100 and 104-day periods without a lost time injury.

# Safety management system

Our safety and health policy has been revised and signed by our Managing Director. It is displayed in all buildings and included in the safety standards manuals. Under the RiskMAP safety management system we have completed and implemented 66 agreed safety and health standards. These standards form the basis for site safety compliance and safety auditing. All safety standards manuals have been updated and redistributed to managers, supervisors and safety and health representatives under a controlled document system.

A RiskMAP external audit and an employee perception survey were conducted in August. The audit results reflected the early stage of development of our safety systems with high approach (58 per cent) and deployment (46 per cent), moderate result (32 per cent) and initial improvements (29 per cent) compared with the Australian coal mining industry. The perception survey was conducted involving 69 per cent of the workforce. The survey measured a number of management factors that have relevance to how and what needs to be managed to gain continual employee involvement and support.

Compared with the same perception survey conducted in 1997, the results indicate an 18 per cent improvement overall, particularly in systems and organisational factors.

Results of both the survey and audit were communicated to employees as part of post-audit feedback.

### Employee participation and measurement

Employees have an integral role in safety standards development, facility audits and inspections. Scheduled meetings are held to review incidents, corrective actions, and training and safety behaviour. There is also involvement in off-site seminars and workshops on safety and health topics.

A workshop to improve the profile of safety and health representatives was conducted in September and attended by safety and health representatives from the Department of Minerals and Energy (DME) as well as other local industries.

### Legislative compliance

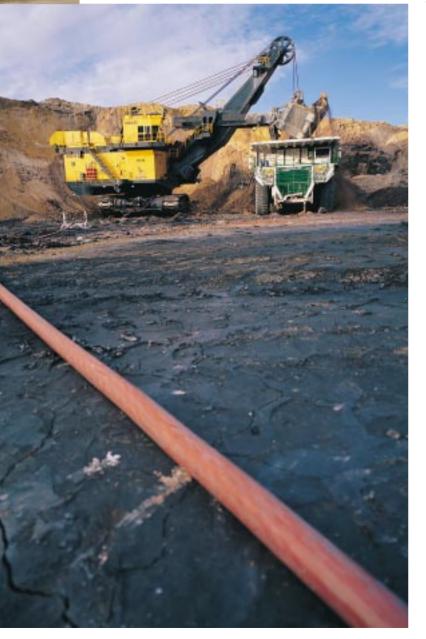
The principal legislation we operate under is the Mines Safety and Inspection Act 1994, the Mines Safety and Inspection Regulations 1995, and Explosives and Dangerous Goods Act 1961.

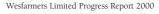
The DME conducted four compliance audits, addressing:

- explosives storage;
- emergency preparedness;
- noise and hearing conservation; and
- surface dust management.

**Left** Contractor collecting waste material near the mine's workshops.

**Below** Electric shovel in operation at Premier Mine.





Issues arising out of the noise and hearing conservation audit are being addressed.

The Mine Workers Health Surveillance Programme has entered its second test cycle since the introduction of legislation requiring health testing of mineworkers every five years. Individuals are notified of any health problems by the DME.

The Mining Occupational Health and Safety Advisory Board guidelines for risk management were reviewed in conjunction with our health and safety committee against our current standards. It was determined that we met all the requirements.

Safety and health representatives elections were conducted. Five new safety and health representatives were elected and have since undertaken a one-week introductory course.

### Health promotion

A pro-active health promotion programme, called HealthMap, was implemented to address issues relating to an aging workforce, obesity and general fitness and health. It involved local doctors and physiotherapists in providing confidential medical and fitness assessments. Any serious medical problems are discussed and referred to the employee's own doctor.

Our Employee Assistance Programme provides professional and confidential counselling services for employees and their immediate families.

An awareness campaign was completed in regard to shiftwork, lifestyle and safety to assist employees to better manage the balance between their work and non-work activities. The aim of the programme is to ensure people recognise the signs of fatigue that lead to incidents.

Injury management and workers' compensation claim procedures were reinforced by a series of training sessions conducted by WorkCover.

A diabetes awareness campaign was conducted in November.

### Risk management

We use the Standards Australia AS/NZS 4360 qualitative risk assessment matrix to evaluate the effectiveness of actions taken to reduce hazards and potential recurrences.

We have implemented facility audits covering various safety and health risks. Outcomes are fed back to the respective safety review committees.

A survey of mobile equipment was conducted by an ergonomist focussing on access and egress aimed at reducing the risk of injury associated with climbing on and off equipment. The majority of our mobile plant conforms to Australian Standards and DME guidelines. Only minor changes need to be made and these are being done progressively as vehicles are scheduled for routine maintenance. In addition, we conducted training on this issue.

A lighting survey was conducted to identify issues for night driving operations. Some adjustment of existing lighting was carried out.

Awareness training in strain injury prevention was conducted for maintenance personnel. We have reviewed the report by Global Risk Consultants of our property and prioritised action accordingly.

### Communications

Our safety and health programme is continually communicated by:

- regular safety meetings;
- electronic notice boards;
- mail-outs to employees and families;
- quarterly newsletter articles; and
- an Intranet system is under development in part to assist with dissemination of safety and health information, standards, and plans.

Safety meetings and review groups are operating in all departments. A review of safety and health activities is the first agenda item at our weekly senior management meetings.

# Awards and commendations

Once again we achieved our reduction targets through the Industrial Foundation for Accident Prevention and GIO Australia - safety performance achievement Safeway 2000 Awards. A 20 per cent LTIFR reduction was nominated and this was exceeded by all departments and the organisation. As a group we achieved a 37.9 per cent reduction in LTIFR for the period 1 January to 30 June 2000. The Maintenance Department achieved a 44.7 per cent reduction with Commercial and Technical Services incurring no LTI's in the same period.

A submission was sent to the Minerals Council of Australia for our company to be considered as an applicant to the Mining Safety Excellence Award also known as the MINEX Awards. We were audited by MINEX assessors and results will be returned in October 2000.

# Fire and evacuation systems

The central fire indication system is now monitored for 24 hours. Basic fire training was conducted for administration and maintenance personnel using portable fire fighting equipment and hoses. Familiarisation in the operation of fixed systems was also covered for production personnel at regular safety meetings.

We tested our evacuation systems during the year.

# Emergency preparedness

A new mine rescue vehicle has been purchased and equipped to facilitate first response to rescue, fire, chemical spill and first aid emergencies at the site.

About 20 training sessions for mine rescue teams have been conducted, some in conjunction with neighbouring Muja Power Station emergency teams.

We won the South West Regional Emergency Skills competition in October. We support the Shire of Collie Emergency Response Plan, which sets out the roles and responsibilities for emergency services in the district.

A crisis management plan has been implemented to define actions and responsibilities.



Basic workplace first aid training was conducted monthly by a qualified St John ambulance instructor. Each person receives a certificate of qualification.

### Materials safety

We conducted an audit of materials classified either as hazardous substances and dangerous goods to confirm storage, separation, quantities and their location. A database is maintained to track the storage and location of chemicals and other substances.

Material Safety Data sheets are accessed within the same database as well as in hard copy volumes at strategic centres across the site. Ongoing assessments of substances includes scrutiny of procurement, contractor usage of chemicals and disposal procedures.

# Community involvement

The Safety Voucher committee met through the year and donated some \$22,000 toward community projects from funds accumulated through a no LTI scheme. The major recipients were the Collie Health Service, Collie PCYC and Collie Toy Library. Left Preparing an area for blasting.

Below Emergency response vehicle.

**Bottom left** Training and Safety Co-ordinator, Production, Gary Giblett talking to John Brown at Premier Mine.

**Bottom right** Shotfirer Mark Paget priming holes and filling with emulsion for blasting.







Wesfarmers Limited Progress Report 2000

# fertilisers & chemicals

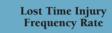


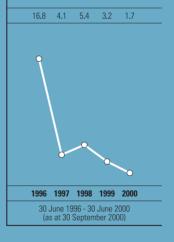
### Overview

An Environmental Management System (EMS) covering all our manufacturing and large storage operations was implemented in March 2000 and we will consider seeking accreditation to the ISO 14001 standard. During the year we succeeded in achieving reduced discharges to Cockburn Sound of phosphorus, fluoride and nitrogen and we remain committed to a goal of zero contaminant emissions to receiving environments. We also dealt successfully with a significant amount of our historic wastes. On the debit side, the accidental discharge of an arsenic-containing solution from the shut down ammonia plant, referred to last year, is detailed in this report. The plant has been replaced by a new \$150 million facility that does not use arsenic in the manufacturing process. During the year we achieved a significant reduction in our overall Lost Time Injury Frequency Rate (LTIFR). We are proud of the fact that for employees alone the LTIFR was zero.

### **Our Progress**

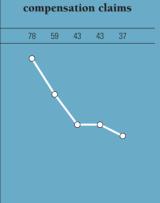
1999 Report Priorities	Outcomes	
Further reduce nutrient losses to waterways.	Reduced discharges to Cockburn Sound of phosphorus, fluoride and nitrogen.	
Implement revised safety systems for our major hazard facilities.	Safety reports completed and audited.	
Continue programme for safely treating and disposing of hazardous wastes.	More than 2,000 tonnes of hazardous waste safely treated or disposed of.	
Implement revised workplace safety management plan.	Implemented.	
Reduce LTIFR from 4.1 to 2 and reduce All Injuries Frequency Rate (AIFR) by 15 per cent.	LTIFR of zero for employees, 1.7 including contractors. AIFR increased by 3.1 per cent.	





### Priorities for the future

- Work towards a goal of zero contaminant emissions to receiving environments.
- Continue progressing the safety management systems for our major hazard facilities.
- Continue working to safely and effectively deal with our historic wastes by 2006.
- Groundwater management to protect the resource and water quality.
- Train and develop our staff in environmental awareness.
- No Lost Time Injuries.



Number of workers'

 
 1996
 1997
 1998
 1999
 2000

 30 June 1996 - 30 June 2000 (as at 30 September 2000)

# environmental management

An Environmental Management System (EMS), consistent with ISO 14001, was implemented in March 2000. The EMS reviewed all our manufacturing and large storage operations to determine the important environmental impacts for each site/process, and allowed for action plans to be developed. The EMS is subject to continual review and improvement. We will consider seeking accreditation to ISO 14001 in 2001. The EMS was audited by the Department of Environmental Protection (DEP) as part of the commissioning of our ammonia plant, and was found to be satisfactory.

Our environmental policy was reviewed during 1999/2000 to accommodate the requirements of ISO 14001, and provides the direction for all our environmental management activities.

Each business unit reports twice yearly to senior management on their Environmental Action Plans, which are drawn from the EMS. This ensures a focus is maintained on managing significant issues.

### Legal compliance

Our operations are regulated under the terms of licences issued under the Environmental Protection Act, the Rights in Water and Irrigation Act, the Explosives and Dangerous Goods Act, and the Poisons Act. In addition to these licences, we manage compliance with a wide range of statutory policies, regulations, permits and legislation. To assist in this purpose we implemented during 1999/2000 a dedicated and regular legal review of relevant laws, as part of our EMS.

The company complied with all of its licence, and other regulatory requirements during the year, apart from the following issues.

A sulphate concentration exceedance in our effluent at Albany was reported to, and then dealt with by the DEP, and a licence amendment resulted. No further action is to be taken by DEP. The DEP and the Department of Minerals and Energy (DME) accepted action plans covering bunding requirements for sulfuric acid at Albany and Esperance in 2000/2001.

The implementation during the year of lower licence limits at Kwinana on effluent concentrations of heavy metals (e.g. cadmium, copper, zinc and arsenic) led to 58 reports of numerical exceedances of parts per billion licence concentration limits, or some load-based limits. Generally these related to issues like the accuracy of analysis at these low levels, and masking of the target elements in seawater. During the year the DEP confirmed that it would not pursue many of these through its prosecution processes, but three were still under discussion at 30 June 2000.

There was one breach of a DME licence requirement (see below).

# Environmental incidents

During 1999/2000 we had three incidents with potential for off-site impact. One of these related to a potential emission from our ammonia plant during commissioning in 2000, and another resulted in an actual emission of ammonia. Industrial neighbours were notified as a courtesy.

### Arsenic release

The third incident was an accidental release of vetrocoke solution (containing arsenic) from a storage tank in our 1967 ammonia plant at Kwinana, which had been closed down in mid-July 1999. The vetrocoke solution, used for removing CO<sub>2</sub> from the ammonia gas stream, is usually in circulation within the plant, but on shut down was transferred to a storage tank where it had to be kept warm by a steam coil.

A flange on the steam coil developed a slow leak, and over a period of about six weeks, approximately 900 kg of arsenic was lost to the plant's ocean outfall. Many inspections and investigations had failed to identify the leak until 6 September 1999, when its source was discovered and remedial actions put in place.

This plant will be decommissioned. The new \$150m ammonia plant does not use arsenic for CO<sub>2</sub> removal.

The incident has been extensively investigated by both DEP and DME, with our co-operation. At the time of preparing this report, the DEP investigation was ongoing. The DME launched a prosecution into a related matter (the bund containing the storage tank being insufficient, and not meeting regulatory standards), to which we pleaded guilty in April 2000 and were fined \$25,000.

We very much regret this accident. It has been established the discharge did not result in concentrations of arsenic at or higher than Australian guidelines for marine waterways.

Further information on this incident can be gained by interested readers by telephoning (08) 9411 8232, or by e-mail to responsible\_care@ csbp.wesfarmers.com.au.

**Below** Laboratory technician Lisa Carrabba preparing a sample for total nitrogen analysis at CSBP's Kwinana operations in WA.



### Responsible Care

Responsible Care is a voluntary programme for environmental and safety management, developed by the world's chemicals industry, and implemented in over 40 countries. We are a signatory to the Australian programme.

It aims to go beyond regulatory compliance by promoting effective systems, risk management, and continuous improvement processes. It is implemented through eight Codes of Practice, covering:

- transport;
- warehouse and storage;
- manufacture;
- research and development;
- community right to know;
- product stewardship;
- waste management; and
- emergency response and community awareness.



**Left** Operator Stuart Wragg gas testing for leaks on isotainers at the ammonia rail loading facility.

**Below left** CSBP Kwinana's new \$150 million ammonia plant.

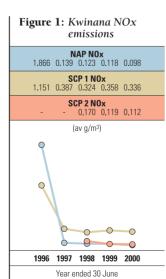
Water spray suppression on an ammonia storage tank at CSBP's Albany fertiliser works in WA.

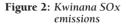
**Below** The superphosphate manufacturing plant's effluent recycling area.

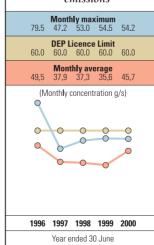












The Codes are assessed internally against published commitments. In the last two years two Codes were externally audited. This process confirmed the accuracy of our internal audits.

Employee understanding of Responsible Care will be addressed in 2000/2001 following an internal project which revealed a lower than desired awareness.

# Atmospheric emissions

### Oxides of nitrogen (NOx) -Kwinana, Albany and Esperance

The Kwinana nitric acid plant continues to operate at world's best practice for NOx emissions, while the two sodium cyanide plants at Kwinana continued to perform well in relation to NOx emissions (see figure 1).

At Albany and Esperance minor NOx emissions were recorded for the sulfuric acid plants, which only operated for part of the year.

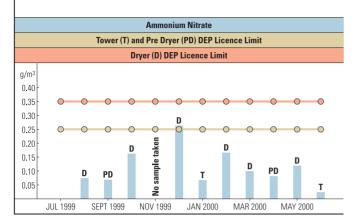
### Sulfur dioxide (SO<sub>2</sub>) -Kwinana, Albany and Esperance

All three sulfuric acid plants have continuous monitoring for SO<sub>2</sub> emissions. The Kwinana plant is the only plant that requires an environmental licence, and it operated well below licence limits (see figure 2).

The Kwinana sulfuric acid plant was closed in January 2000, and we now purchase sulfuric acid on the world market.

We continue to play an active part in the Kwinana Industries Council (KIC) Ambient Air Quality Monitoring Programme, which showed that in 1999/2000 ambient SO<sub>2</sub> concentrations in the Kwinana/Rockingham area remain well below prescribed limits.

### Figure 3: Ammonium Nitrate concentration



### Fluoride - Kwinana, Bunbury, Albany, Esperance

Emissions from superphosphate manufacture at these four sites were well within licence limits.

### Ammonium nitrate prilling plant particulates - Kwinana

Extensive work was carried out to better understand and control particulate emissions from the three drying towers on the prill plant.

The results (see figure 3) are encouraging, and work is continuing. We are discussing with the DEP reduced licence limits for this plant to reflect our efforts to reduce emissions. The plant operated within its emission licence limits during the year.

### Chlorine - Kwinana

The Kwinana Chlor Alkali plant continued to operate within chlorine emission limits. A comprehensive Chlor alert monitoring system (with a detection level of 1ppm) operates in many sites in and around the plant. We recorded 61 Chlor alerts in 1999/2000, compared to 64 in 1998/1999.

Each of these is investigated, but in many cases relate to a slight release of chlorine vapour as transport cylinders and plant valves are opened for testing and cleaning.

### Ammonia - Kwinana, Albany, Esperance

Albany and Esperance each maintain a storage cylinder of ammonia for use in sulfuric acid manufacture. There were no emissions during 1999/2000.

There was one ammonia emission from the new Kwinana ammonia

plant during commissioning which caused some discomfort to construction workers on the site, requiring medical treatment, but no off-site effects.

### Odours

In conjunction with other Australian fertiliser producers we are continuing research to develop an odour control system. Chemical reagents and carbon-based bio-filters are being trialled, but it is clear that avoiding the use of particular types of phosphate rock has the biggest impact.

There were no odour complaints during 1999/2000.

### Noise management

We are an active contributor to the KIC Noise Survey of the Kwinana industrial area, which will conclude in 2000/2001. A detailed study of noise sources is being conducted on our Kwinana site. We are in the process of determining an action plan to address areas of concern in 2000/2001.

Our particular concerns relate to parts of the new ammonia plant, and as part of our compliance with requirements, we will be implementing noise reduction measures in 2000/2001. During the year we installed silencers on the air blowers at the Kwinana sodium cyanide plant. Some additional work may be required once noise survey results are available.

We have been invited to participate in community-based noise management discussions in the east Rockingham area.

# Greenhouse gas emissions

We are a signatory to the Australian Greenhouse Challenge programme, under which we committed to reduce our greenhouse gas emissions (in CO<sub>2</sub> (e) equivalent terms) by five per cent in 2000, compared to a 1995 base line.

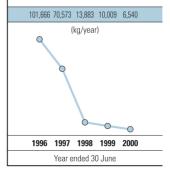
The programme requires regular reports on progress and initiatives. Our most recent report (for 1998/1999) was provided in December 1999.

One of the objectives of the Challenge programme is to encourage participants to more effectively measure CO2 emissions. Our original 1995 "business as usual" projection has been amended to include nitrous oxide, to allow for emissions from the new ammonia plant, construction of which began in 1998, and the closure of the Kwinana sulfuric acid plant. Approximately half of our total greenhouse gas emissions are nitrous oxide from the nitric acid plant. While only present in the waste gas stream at low concentrations (1200ppm), nitrous oxide is a very stable gas, and has a very high CO2 equivalent rating.

We are closely following European research aimed at transforming nitrous oxide to nitrogen with a greatly reduced greenhouse gas impact.

The five per cent Challenge reduction objective will be achieved in 2000 as we will reduce by more than 148,000 tonnes of  $CO_2$  emissions from the revised 1995 "business as usual" case of 990,000 tonnes. Total emissions in 1999/2000 were less than 600,000 tonnes, which was lower than the expected 850,000 tonnes because of reduced production of ammonia.

Figure 4: Phosphorus discharges to Cockburn Sound



During 2000/2001 the following actions will be taken to support our Greenhouse Challenge commitments:

- enhance the efficiency of our power generation systems at Kwinana;
- implement energy management modules as part of our environmental awareness training for staff;
- change our purchasing procedures to favour high efficiency electric motors;
- commence a programme to install variable (instead of fixed) speed pumps in relevant applications;
- undertake an energy efficiency trial in one of our large offices; and
- we will renew our commitment for a further five years.

### Emissions to water

### Wastewater management

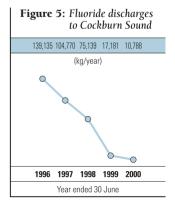
We discharge effluent to waterways at Kwinana, Bunbury and Albany. These discharges all occur under strict licence conditions. Our revised Environmental Care Policy aims to eliminate all discharges of contaminants.

Each of the sites has a detailed wastewater strategy, with the aim of eliminating all but peak storm water surge flows into receiving waterways.

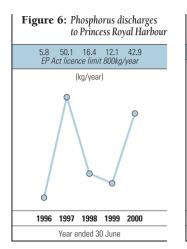
At Albany, we are contributing to a Coast and Clean Seas initiative which may see our nitrogen effluent treated through an artificial wetland.

### Phosphorus and fluoride

Discharges to Cockburn Sound have been further reduced in 1999/2000 (see figures 4 and 5),



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principally through the successful operation of the effluent recycling system in the superphosphate plant, and a strong focus on spillage management on site.

Fluoride emissions to Cockburn Sound totalled 17 tonnes in 1998/1999, and 11 tonnes in 1999/2000, while phosphorus emissions reduced from 10 tonnes in 1998/1999, to 6.5 tonnes in 1999/2000.

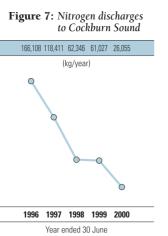
Phosphorus emissions to Princess Royal Harbour at Albany increased to 42 kg for 1999/2000 (licence limit 800 kg per year) (see figure 6), whilst our fluoride emissions were also very low at 336 kg for the year compared to 257 kg in 1998/1999.

At Bunbury, phosphorus emissions remained low at 163 kg for the year, compared to 189 kg in 1998/1999. Our fluoride emissions were 53 kg in 1999/2000, compared to 29 kg in 1998/1999.

In both these regional sites the next improvement in effluent emissions will potentially come from the diversion of effluent to a use (e.g. a wetland) that captures the nutrients in a vegetation mass of some kind.

### Nitrogen

Emissions to Cockburn Sound reduced from 61 tonnes in 1998/1999 to 26 tonnes in 1999/2000 (see figure 7). This significant achievement was assisted by reduced ammonia production during the year, but the site waste water strategy, combined with the effective design of the new ammonia plant, should ensure that the long term trend continues.



At Albany, emissions increased slightly to about 1,369 kg in 1999/2000. At Bunbury discharges were 234 kg in the year, compared to 120 kg in 1998/1999.

### Heavy metals

Heavy metals (elements such as copper, zinc, molybdenum, arsenic, cadmium and manganese) are present at trace quantities in most fertiliser products, by virtue of the raw materials used, or additions (e.g. of copper) to meet specific nutrient needs in agricultural applications. These heavy metals are also naturally present in soils and water in Western Australia.

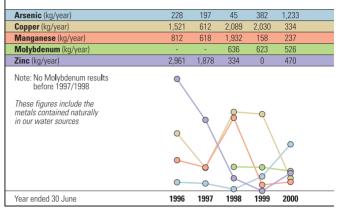
Since October 1999 we have monitored a wide range of heavy metals in our daily effluent stream at Kwinana. Figure 8 shows average loads of the most common heavy metals in our Cockburn Sound effluent stream.

Most of our EP Act Licence limits for heavy metals are at or below the Australian guidelines for marine waters. Our effluent stream meets these limits.

### Waste management

We manage solid and liquid waste from production through a strategy focussing on avoiding, reducing, reusing and recycling in preference to treatment or disposal.

Our central objective is to deal with wastes in the plants where they are created. However, when waste has to be removed from sites, we have clear protocols and policies that ensure appropriate analysis and handling, prior to it being directed to relevant treatment or disposal options. Figure 8: Heavy Metal discharges to Cockburn Sound



At our Kwinana site we also implemented a solid waste management strategy with the twin goals of reducing waste to landfill, and promoting recycling. In figure 9 we demonstrate our real progress in this area since 1998.

### Pre-existing wastes

By virtue of either past practice, or the decommissioning of aged plants, we have to manage some significant stockpiles of solid wastes accumulated from past production to plant decommissioning.

During 1999/2000 we made significant progress in this regard, including:

- decommissioning and treatment of our last PCB-containing transformer;
- reprocessing of about 2,000 tonnes of sodium bisulphate;
- packaging and disposal to the Mt Walton East waste disposal facility of 55 tonnes of waste containing arsenic; and
- reprocessing of 3,000 tonnes of sulfur filter residues into fertiliser products.

It is likely that the Geraldton sulfuric acid plant (which contains large quantities of lead) will also be demolished and cleaned up during 2000/2001.

### Site contamination

During the year we continued to relocate operations from our Bayswater property and this will be completed in 2000/2001. We plan to cease using it as a fertiliser storage site from August 2001. Extensive research analysis has been conducted as part of developing a site management plan for Bayswater. A potential remediation method has been identified and will be trialled in 2000/2001.

The studies mentioned last year confirmed contamination at our Geraldton site. The timing of the cleanup is dependent on the demolition of the sulfuric acid plant.

At Kwinana our activities are focussed on preventing new contamination, and the remediation of the ammonia/arsenic groundwater plume near the old ammonia plant. Other groundwater contamination at the site, involving sulfates and nitrogen, is being closely monitored. Testing has revealed the presence of ammonia and arsenic at levels up to 220 parts per million (ppm), which is higher than the ANZECC groundwater criteria (0.05 ppm total).

The chlor phenol plume to the north of our site (reported in 1998/1999) continues to be of concern to us, and we continue our co-operation with government agencies, and other industry to monitor and manage it.

### Major hazards management

We operate four major hazard facilities at the Kwinana site, which are regulated by the DME under the National Code for Major Hazard Facilities. These are the:

- sodium cyanide;
- chlor alkali;
- ammonium nitrate; and
- ammonia manufacture, storage and distribution businesses.

The preparation of safety reports for the management of these plants was completed as required in October 1999, and they are to be reviewed in November 2000, in conjunction with a statutory compliance audit for DME. The safety reports received a satisfactory "fit for purpose" audit.

During 1999/2000 we concentrated on the preparation of a hazards register, risk reduction studies and regular review of the Quantified Risk Assessment (part of the Safety Report) for the site.

# Community involvement

Our regular involvement with the community includes the:

- Kwinana Community and Industries Forum, and the
- Responsible Care Open Day with other chemical industries at Kwinana, when more than 5,000 people attended our site to view displays and/or take site tours.

We also provide sponsorship and support to a wide range of community-based organisations in metropolitan and regional Western Australia.

We published our first stand alone Environment Health and Safety Report, titled "Making Time". We intend to do this every two or three years as a supplement to this report.

We continued our support for the CSBP Chair of Cleaner Production at the John Curtin International Institute.

# Groundwater management

We met all the requirements of our extraction licences from the Water and Rivers Commission for Kwinana and Esperance.

At Kwinana we significantly upgraded our production bore infrastructure, including more effective flow measurement equipment. Figure 10 shows extraction from our Kwinana Groundwater (Tamala aquifer) over several years. In addition to this we commissioned two approved bores in the artesian Yarragiddee aquifer to supply our new ammonia plant.

To ensure effective management of the resource, we commissioned an extensive study with our neighbours (BP), to assess the potential impact of future plans.

### Hazardous substances

During the year we conducted an extensive review of dangerous or hazardous goods (liquid) storage and distribution at our Kwinana site, and developed action plans to address potential risks, and to avoid accidental releases. We also conducted a thorough review of the storage of environmentally-hazardous substances at Kwinana.

Whilst we do not transport any dangerous goods ourselves, we have mandatory driver training programmes for contractors, and formal transport management plans for sodium cyanide and ammonia. We also conducted two large off-site emergency exercises during 1999/2000, and attended five emergency callouts (all related to storage at customer sites, except one involving an ammonia rail tanker at Forrestdale).



# Environmental training

We have developed a 10 module environmental training programme for all staff. During 1999/2000, 81 staff participated in this programme. We also trained 171 staff in the objectives and requirements of the Code for Major Hazard Facilities.

# Sustainable agriculture and Landcare

Through our CSBP futurefarm fertiliser business, we supply an extensive range of agronomic, farm planning and soil and plant analysis services, which are all directed at assisting growers to improve the effectiveness of farm practices. The construction of a new soils and plant laboratory will be completed in early 2000/2001 to further enhance this service.

We provide extensive support to Landcare, and other rural groups, who are working to sustain agricultural productivity and protect the environment.



**Top** Drying bed and tanks at the Albany fertiliser works.

**Above** Duty site controller Martin Noordzy inspects the electricity generator associated with the new ammonia plant at Kwinana.

Figure 9: General waste disposal (from our Kwinana site)

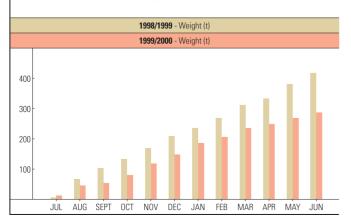
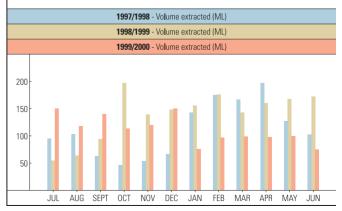


Figure 10: Monthly total extraction Kwinana Works



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**Left** Mark Morton, Works Manager at the Albany fertiliser operations, at a plantation established five years ago to reduce groundwater impact on Princess Royal Habour.

### Emergency response

Implementation of the outcomes of our 1998/1999 review of emergency response structures and practices neared completion during 1999/2000. A close working relationship with the State's emergency services has been established at all major sites, and regular joint training exercises held. Many Kwinana site facilities are now connected directly to the Fire and Rescue Service alarm monitoring system.

During the year we implemented the PC COPS community emergency notification system at Kwinana, in association with the WA Police Service. We upgraded much of our emergency equipment, including a new fire tender at Kwinana.

We have commenced training all our staff in first response emergency competencies, and this will be a major focus in 2000/2001.

We also have two well trained and equipped Emergency Response teams, who are available on 24 hour callout, to support our products anywhere in the State whilst they are being transported, or in storage or use at our customers' premises. The staff who make up these teams are volunteers from within our workforce who are also used to assist in on-site emergency response activities at our Kwinana site to support the staff from the various operating businesses.

Our emergency response readiness is tested regularly both on our sites, and on transport routes in conjunction with the State's emergency services, and during the year we conducted three exercises on transport routes, or in our customers' premises.







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**Left** Members of CSBP's emergency response team performing a chlorine drum capping exercise using specialised safety protection gear.

**Bottom left** Emergency response team member Don Goodyer at the Kwinana Emergency Reponse Centre.

**Bottom right** Russell Cross, dispatch supervisor, checking the new urea dispatch facility at CSBP's fertiliser works.

# safety and health

Our goal is to have a workplace free of injury.

We have developed a Workplace Safety Plan based on the guidelines contained in AS/NZS 4804:1997 Occupational Health and Safety Systems, and a WorkSafe audit /guidance document emanating from the WA Occupational Safety and Health (OSH) legislation, to manage safety in the various areas of our operation.

The Workplace Safety Plan defines specific undertakings and actions to manage safety and health. The plan will be used to maintain safety standards and improve performance. Its implementation is supported by a team which provides advice and assistance on:

- legislative compliance;
- systems and quality issues;
- health and medical matters; and
- hygiene.

Trained internal auditors measure the performance of our management systems. Audits are designed to give feedback to managers on quality, safety and environmental issues.

As a result of gaps identified in these audits, we are reviewing the competency standards for our operating plants using a national training package developed for the chemical, hydrocarbons and oil refining industries. We are also reviewing operating procedures that complement the competency standards.

We also ensure that our Workplace Safety Plan adheres to the requirements of the WA Occupational Safety and Health Act administered by WorkSafe WA.

We provide a range of occupational hygiene services that include:

- assessing workplace noise levels and exposure;
- monitoring the workplace for exposure levels to fluorine, chlorine and ammonia gases;
- monitoring dust levels; and
- monitoring for airborne asbestos fibres where any work is conducted involving asbestos material.

### Asbestos

As a continuation of our hazard reduction programme, we have removed and properly disposed of approximately 33 tonnes of roof cladding at our country works, and replaced it with stainless steel sheeting. All work on asbestos is conducted in strict accordance with the law, and our documented procedures that stipulate methods for handling, storage and disposal.

### Lifestyle and work

Our aim is to achieve a motivated and productive workforce and to reduce injuries both at home and at work. Workplace assessments have been introduced to assist us to appropriately place our staff according to their capabilities.

We have introduced some new health initiatives (for staff based at Kwinana) to complement the availability of voluntary annual medical assessments. This is intended to improve safety and increase productivity and enjoyment in the workplace.

In addition, we encourage all employees to be voluntarily assessed by our trained staff in the following areas:

- body composition;
- weight management;
- musculo-skeletal strength and endurance and flexibility; and
- ergonomic assessment to aid in job design.

Based on these assessments individual programmes are developed to assist employees progress towards improved health and wellbeing, and reduce the rate of injuries such as sprains and strains.

### Employee Assistance Programme

We provide a personal and confidential counselling and support service to our employees and their families. We do not have access to any of this data.

### Accident reporting

### Lost Time Injury Frequency Rate (LTIFR)

The LTIFR for our employees during 1999/2000 was zero. This reflects a concerted effort by all employees to reduce lost time injuries. Our contractors are included in injury statistics from 1997/1998 onwards.

The LTFIR for our employees and contractors during 1999/2000 was 1.7. This is a reduction of about 47 per cent, however in the first three months of 2000/2001 we incurred three Lost Time Injuries, which will be reported next year.

In the year to 30 June 2000 we incurred 37 Workers' Compensation claims, compared with 43 claims in the year to 30 June 1999. The results continue the downward trend set over the past five years, and we are committed to maintaining this trend.

### Safety Improvement Notices

During the year there were no Safety Improvement Notices or prosecutions resulting from activities of the company in this area.

# rural services & insurance





### Overview

This is the first time we have been included in the Wesfarmers Environment, Safety and Health report. We account for the activities of both Wesfarmers Dalgety and Wesfarmers Federation Insurance, but not joint ventures and partnerships or other business arrangements in which we do not hold a majority interest. To gather data for this report we surveyed all branches in order to improve our knowledge of environmental and safety issues concerns at all our locations.

At Wesfarmers Dalgety, we achieved a reduction in the Lost Time Injury Frequency Rate (LTIFR) of 15 per cent and a similar-sized drop in claims for workers compensation. During the year we appointed a national occupational health and safety specialist to implement a comprehensive strategy and management system in these areas. On the environmental front we have maintained branch accreditations with Agsafe,

the industry body that implements the self-regulatory regime, and we have made a major commitment towards a proposed research programme into plant-based management of dryland salinity.

At Wesfarmers Federation Insurance, we achieved an LTIFR of zero, compared with 5.09 in 1998/1999 and our revised occupational health and safety system was due for implementation in October.

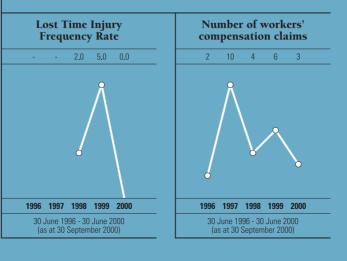
### Priorities for the future

- Halve Wesfarmers Dalgety's LTIFR, maintain zero at Wesfarmers Federation Insurance and reduce workers compensation claims.
- Implement Wesfarmers Dalgety health and safety management system and complete revision of the Wesfarmers Federation Insurance system.
- Maintain Agsafe accreditation of all relevant branches.

### Wesfarmers Dalgety



### | Wesfarmers Federation Insurance





Above Wesfarmers Dalgety's saleyards at Boyanup, WA, showing walkways treated with non-slip paint.

# environmental management

We have no documented Environmental Management System in place. We report every year to the Wesfarmers Limited Board on our environmental performance.

### Agsafe

An important part of our management of environmental issues is our national accreditation under Agsafe, the industry body which implements the agricultural and veterinary chemical industry's self-regulatory accreditation programme. The aim of this programme is to ensure that there is responsibility, regulatory compliance and duty of care throughout the supply chain. The industry has approval from the Australian Competition Consumer Commission (ACCC) not to trade with individuals or organisations which do not meet their accreditation obligations. To gain accreditation for a site we must prove that we are compliant with all Federal and State legislation and regulations covering agricultural and veterinary chemicals. Wesfarmers Dalgety is represented on the Agsafe board.

Accreditation targets apply to agricultural and veterinary chemicals as defined in Section 4(1) of the Commonwealth Agricultural and Veterinary Chemicals Act, 1988, including specified poisons and other dangerous goods. Agsafe accreditation requires planning for emergency procedures for chemical spills, fire, contact with poisons, and evacuation procedures.

Premises are audited by external auditors through Agsafe every two years. Employees handling chemicals must attend a course and pass an examination prior to gaining accreditation which must be updated every three years.

Agsafe maintains a register of the current accreditation status of each location and our employees. Should a branch fail to maintain compliance requirements, it may have trading sanctions placed upon it. Agsafe retains records of all premises audited. Any location with outstanding items is notified and must rectify them prior to receiving a renewed certificate. Currently several branches are waiting on Agsafe to confirm their re-accreditation.

There is no obligation for locations that carry small quantities of agricultural or veterinary chemicals to be accredited. However, Agsafe is considering broadening the scope to cover all agricultural suppliers and, if this eventuates, Wesfarmers Dalgety will comply.

# Chemicals and dangerous goods

Licences for the storage and handling of dangerous goods and chemicals are required in each State and are renewed annually. A licence register is maintained at regional offices.

In June 1999 a drum of Trifluralin, a herbicide, fell while being unloaded and burst open at our Bassendean (WA) operations. A heavy rainstorm occurred during clean up operations leading to some diluted Trifluralin escaping from the drainage system contained in a sump. All emergency procedures were followed. Enquiries by the Environmental Protection Authority under Sections 50(2) and 72 of the Environment Protection Act, 1986 have been answered in full. Bassendean operations have now moved to new premises, where a sealed drainage system has been installed to contain spills.

We are not aware of any chemical spills occurring during 1999/2000 which had a significant impact on the environment or were reportable.

The proximity to retail, commercial and residential areas of some of our branches storing and handling dangerous goods is an issue. We are progressively addressing this by relocating some branches to more appropriate sites.

### Saleyard operations

We own and operate saleyards throughout Australia. The main environmental issues arising at large saleyards are effluent run-off, dust and noise. This report deals only with saleyards wholly owned and operated by us.

Our saleyards are licensed by a variety of regulatory bodies, including EPAs, the Meat Industry Authority (NSW) and local government authorities. EPA licensing requirements vary from state to state, and in some cases also depend on the throughput of sheep and cattle.

Western Australia - Under environmental legislation saleyards are required to be licensed where the annual throughput exceeds 10,000 cattle. Our only saleyard which presently requires licensing is at Northam. These premises are currently operating under a restricted licence pending development of new saleyards. Should this not happen the Department of Environmental Protection will consider imposing more stringent pollution control requirements.

Queensland - Under

environmental legislation, a number of specified activities are considered to cause or have the potential to cause harm to the environment and are described as environmentally relevant activities (ERAs). No ERA relates to saleyards. There is no requirement for saleyards to hold a licence or seek approval under either the environmental or primary industry legislation. However, the Department of Primary Industry (DPI) has classified the Toowoomba Saleyards as a probable contaminated site. An independent environmental audit revealed higher-than-acceptable levels of chromium and nickel arising from the treatment of cattle for ticks. This does not present problems with the current use of the site, however, remediation work would need to be conducted should the use of the site change. The audit also revealed an effluent run-off problem from the saleyards to Condamine Street. Toowoomba. In October 1999 the DPI submitted recommendations to rectify this problem. Discussions are continuing to resolve the problem.

**South Australia** - All saleyards with throughput greater than 50,000 sheep (or equivalent stock) per annum are required to be licensed, including our Jamestown and Strathalbyn facilities. Recent environmental improvements to the Jamestown saleyard include planting trees around the perimeter, and provision of truck wash-down bays with approved water discharge.

Victoria - Livestock saleyards or holding pens that are designed to have a throughput of at least 10,000 animal units per year are required to be licensed. However, premises discharging or depositing waste solely to land are exempt. Our Heywood, Traralgon and Koonwarra saleyards meet the throughput requirements, but are exempt on the basis of their discharge activities. At the Koonwarra saleyard we installed ponds to deal with effluent. Water samples are taken by us and tested by the EPA prior to authorising discharge of the pond water onto nearby land. In October-November 1999, after discussions with the EPA. settling pits were installed to eliminate any potential effluent problems at the Yarram saleyard.

**New South Wales** - Saleyards are not required to be licensed in that state.

### Farm environment

We promote the drumMuster programme and act as a collection depot at some locations. The programme is coordinated by Avcare, the National Association for Crop Production and Animal Health, to encourage the return and recycling of used chemical containers from farmers. Users are charged a drumMuster levy which is used to fund the establishment and running of drum collection sites by local councils.

We have agreed to provide \$350,000 over seven years towards continuing research into soil salinity through the proposed Co-operative Research Centre (CRC) for plant-based management of dryland salinity. This project is being coordinated by the University of Western Australia and involves also Agriculture WA, Charles Sturt University, the Department of Conservation and Land Management in WA, CSIRO, Department of Natural Resources and Environment (DNRE) Victoria, NSW Agriculture and the University of Adelaide. The CRC proposal aims to manage water in the landscape through profitable farming systems based on perennial plants.

### Asbestos

Wesfarmers Dalgety maintains a register of buildings known to contain asbestos. External consultants have assessed all locations in South Australia, and some locations in other states and recommendations have been made. Other locations are self-assessed from year to year to ensure that conditions do not deteriorate while appropriate action plans are developed to rectify problems. Branches were self-assessed in a survey in April 2000 and additional information is being obtained so that remedial action can be considered if necessary.

No such assessment has been made of Wesfarmers Federation Insurance premises.

Wool stores at Brooklyn, Geelong, Albany and Fremantle, and South Australian branch buildings at Eudunda, Bordertown, Strathalbyn, and Coonalpyn, have recently been sold with full disclosure of asbestos presence.

### Vehicles

Wesfarmers Dalgety has a fleet of approximately 630 vehicles which travel about 32 million kilometres each year. LP Gas tanks are fitted to 458 (73 per cent) of these.

Wesfarmers Federation Insurance has 84 company vehicles which average nearly 40,000km each year, 31 (37 per cent) of these are fitted with LP Gas.

We encourage drivers to use LP Gas. We expect its usage to increase as the number of autogas outlets increases. **Below** Wesfarmers Dalgety agent Campbell Nettleton closing a gate at the Boyanup saleyards.

**Bottom left** Trees planted at the saleyards to reduce noise to neighbouring areas.

**Bottom right** Andrew Rogers, Wesfarmers Federation Insurance Area Manager, with farmer Reece Edgley near Albany, WA. **Right** Trainee Wade Groth operating a forklift at the Wesfarmers Dalgety merchandise store in Bunbury, WA.

**Far right** Safety handrails at the Boyanup saleyards.











# safety and health

### Wesfarmers Dalgety policy

A revised Occupational Health and Safety Policy was issued in October 1999. We are committed to the provision of a safe and healthy work environment. It is our objective to be recognised by our employees, customers, community and stakeholders as a responsible company committed to the continual improvement of health and safety management in all business activities. Safety of our employees is not negotiable.

A national occupational health and safety specialist was appointed in April 2000 to develop and implement a co-ordinated programme.

The aim of our occupational health and safety system is to:

- create an environment where health and safety are an integral part of day-to-day business;
- identify all work hazards and put in place effective strategies and training programmes to manage them;
- maintain accurate records to allow analysis and forward planning; and
- reduce accidents and incidents.

Our overall objective is to position safety as the normal way of doing things.



### Training

A central training record register is currently being developed to document the level of training and accreditation of employees.

We have identified that livestock saleyard operations, manual handling and vehicle accidents are major issues. These are to be addressed in 2000/2001. This will include an induction programme for all staff and new employees and casuals working in the saleyards focussing on cattle movement, handling of cattle and responsibilities of individual employees. The risk of injury from manual handling will be addressed through hazard identification and risk management, including ongoing training of staff.

We aim to reduce the number of vehicle accidents by driver education and fatigue management.

### Wesfarmers Federation Insurance

An occupational health and safety programme currently in place, is being updated to take into consideration any legislative amendments and to re-emphasise the importance of health and safety. A module within the induction programme for new staff covers occupational health and safety issues, procedures and legislative requirements.

### Accident reporting

Accident reporting and investigation are an integral part of our occupational health and safety plan. The information collected will be analysed and used to plan ongoing occupational health and safety strategies.

All accidents and incidents are required to be reported to the national occupational health and safety specialist who will follow these up and assist with rehabilitation of injured workers. We have a policy which supports injured workers and offers alternative duties to allow return to work at the earliest possible time.

The immediate manager of the injured worker must report any injury where lost time occurs to our Managing Director within 24 hours.

Wesfarmers Dalgety Lost Time Injury Frequency Rate (LTIFR), reduced from 13 to 11 during the year.

Wesfarmers Federation Insurance had an LTIFR of zero for the year compared with 5.09 in 1998/1999.

# forest products

# SOTICO

### Overview

Progress was made during the year in implementing our Environmental Management System (EMS) compatible with the requirements of the international standard ISO14001. The EMS will contain full documentation on our activities that affect the environment and provide a baseline for continued performance improvement. Our overall safety record improved on 1998/1999 with a reduction in the Lost Time Injury Frequency Rate (LTIFR) from 7.7 to 5.7 with an LTIFR of zero achieved in 24 out of 30 locations during the year. The removal of bark and sawdust is always an issue in the timber industry and we are pleased to report that we expect to be able to stop using the burner at the Deanmill sawmill at the end of 2000 thanks to an arrangement with a southwest horticulturist.

This report includes woodchipping and plantation development which were part of our business in 1999/2000 but have since been sold.

### **Our Progress**

1999 Report Priorities	Outcomes
Progressive implementation of ISO 14001.	Currently implementing an EMS at Mundijong, Forest Harvesting Operations and Treefarms.
Investigate removal of all remaining underground oil and fuel tanks.	No tanks removed during the year. Investigation ongoing.
Finalise action plan for rehabilitation of the Pemberton contaminated site.	Preliminary discussions held with State Government. A further consultant's report to be commissioned.
Establish a minimum of 5,000 hectares (5.5 million seedlings) of blue gum plantations in 2000.	Planted 2,800 hectares (three million seedlings) of blue gum plantations.
Halving of LTIFR to 3.6.	LTIFR of 5.7.

### Priorities for the future

- Continue implementation of ISO 14001.
- Progress removal of remaining underground oil and fuel tanks.
- Submit to the DEP an action plan for rehabilitation of the Pemberton contaminated site.
- Reduce the LTIFR to 2.5.





### environmental management

#### Forest management

Western Australia's publiclyowned forests are managed by the Western Australian government's integrated land management agency, the Department of Conservation and Land Management (CALM). It administers the 10-year Forest Management Plan. Annual harvest levels are set according to this plan. During the year, the government introduced legislation to create two new agencies - the Conservation Commission and the Forest Products Commission.

We are one of a number of companies contracted to provide forest harvesting services. We also purchase both sawlogs and residues for processing and value adding.

### Regional Forest Agreement

In May 1999, the Commonwealth and State governments signed a Regional Forest Agreement (RFA) for the southwest forests of Western Australia. This 20-year agreement was the culmination of research and public consultations carried out over several years.

**Below** Nursery leading hand David Henderson examining seedlings at Manjimup, WA.





Above Loading of 12-year-old plantation logs near Northcliffe, WA.

In July 1999, the State Government announced changes to the RFA including an end to old growth karri logging after 2003 and the appointment of an independent committee to review karri forest management practices. This committee, headed by Professor Ian Ferguson of Melbourne University, reported in December 1999. The government accepted its recommendations, including the retention of clearfelling as the preferred harvesting method in the karri forest and a halving of the maximum size of karri old growth harvest patches.

The RFA and subsequent decisions will result in more than one million hectares of forest ecosystems being included in reserves where no logging is allowed, including 70 per cent of remaining old growth jarrah and 86 per cent of remaining old growth karri. The government has appointed an independent committee to examine sustainable harvest yields as part of the review of the current Forest Management Plan which expires at the end of 2003.

CALM is seeking accreditation to ISO14000, an international standard for environmental management systems, which allows certification of sustainable forest management practices. To complement this, the Federal and State governments are developing an Australian Forestry Standard which will establish detailed criteria for the ecologically sustainable management of Australia's forests and be recognised internationally.

### Plantation development

We planted three million seedlings in hardwood plantations in the southwest of Western Australia and South Australia during the winter of 2000 and sold a further 1.5 million seedlings for planting by others.

These plantations are helping to combat degradation caused by past land uses and are also contributing to the reduction of atmospheric carbon levels. We work under the "Code of Practice for Timber Plantations in Western Australia", which requires plantations to be established and managed in accordance with principles of environmental care, safety and forest protection. This code is currently being updated with our input.

A second independent audit of our compliance with the Code was carried out in September 1999 with the primary focus being on the 1998 recommendations. The final report was completed in February 2000 which found no issues regarding compliance. The plantation Code of Practice is currently being incorporated into our Environmental Management System (EMS).

A farm forestry facilitator partly funded by a federal government grant encourages landowners to establish plantations on their properties throughout the southwest.

During the year, the facilitator assisted with the establishment of around 65 hectares of plantations for individual growers. Funding for the programme ends in August 2000.

We continue to work closely with the West Australian Farmers Federation (WAFF) which takes a proactive role in educating and motivating farmers to establish plantations on private property, by providing sponsorship, information and speakers at zone meetings.

### Forest harvesting

We are a major harvesting contractor in state-owned forests to CALM, and also harvest plantations on private land.

In state forests all harvesting operations are carried out in accordance with a Code of Practice titled "Timber Harvesting in Western Australia" and the "Manual of Management Guidelines for Timber Harvesting in Western Australia". These documents contain guidelines relating to protection of the environment. They also contain procedures for restricting the spread of Phytophthora cinnamomi (dieback disease) in the southwest forests. Staff involved in forest harvesting have been accredited by CALM to the Phytophthora cinnamon hygiene course. These procedures are monitored by CALM and are regularly updated. The Codes will be referenced in our EMS.

In private plantations, harvesting is carried out in accordance with the "Code of Practice for Timber Plantations in Western Australia". In addition, we use preferred contractors who conduct their haulage operations in accordance with a code of conduct. This code has been developed by our Treefarms' staff and endorsed by local government authorities. One aspect of it ensures that haulage operations do not conflict with school bus times.

We liaised with local government regarding haulage of plantation products. We have developed 10-year road haulage plans, which have been submitted to approximately 15 shires. This enables the local authority to seek funding for road upgrading well in advance of the harvesting and haulage operations taking place.

Most of our plantation assets have now been sold to a subsidiary of international trading house Marubeni Corporation.

### Timber processing

Noise and dust are considered serious issues at our five hardwood sawmills, woodchip mill and two processing centres and are carefully managed.

Remedial work undertaken following the noise complaint at our Yarloop sawmill has been successful with the noise survey report, a copy of which was provided to the Department of Environmental Protection (DEP), indicating the levels were within legislative requirements.

Grinding sludge waste, generated at a number of locations is removed from site by contractors.

Our Yarloop, Nannup, Deanmill and Pemberton sawmills are required to take water samples of runoff once every year. These samples are analysed externally. The Manjimup Processing Centre also samples water leaving the site, with samples being analysed every two months. The DEP receives an annual report on water sampling results from the Manjimup Processing Centre.

### Mundijong Treatment Plant

We operate a plant at Mundijong, which uses a CCA (Copper, Chrome and Arsenic) treatment process to preserve timber. The main products from this operation are treated pine rounds used in fence, vineyard establishment and other applications.

The preservation process involves dried timber undergoing a pressure vacuum treatment using the CCA solution. Once treated, the timber is stacked on a concrete pad to facilitate fixation. Any excess solution is captured and recycled. This process results in the chemical becoming chemically bound to the timber.

The treatment storage tanks are bunded and the process is controlled by our certified quality procedures. Normal stormwater flows from treated timber storage areas are collected in a containment dam, samples from which are tested every three months. The test results are reported to the DEP.

### Woodchip operations

Our woodchipping operations were sold in October 2000, but are included here as they were part of the business in the reporting year.

The southwest forests outside the reserve system are harvested for the production of sawlogs for milling into sawn timber. In the process of obtaining this wood, and in ensuring the successful regeneration of the forests, some logs are produced which because of shape or internal defects are not suitable for milling. Rather than burn this material or leave it to rot on the forest floor, CALM is able to sell karri and marri logs for processing at the Diamond mill into woodchips for the production of paper.

Jarrah is not suitable for papermaking, but jarrah residues are sold to Simcoa Operations Pty Ltd at Kemmerton, near Bunbury, to make charcoal for use in the production of silicon.

We report annually to the DEP on our compliance with the conditions of the 1988 Environmental Review and Management Programme covering woodchipping. Logs are inspected on receival at Diamond mill and any logs assessed as containing portions suitable for commercial sawmilling are redirected in whole or in part to Pemberton, or other, sawmills. We will not accept residue logs obtained from the clearing of remnant vegetation on private land, except where authorised by the Minister for the Environment.

Establishment of blue gum (*Eucalyptus globulus*) plantations has been aimed at providing an alternative source of wood fibre for our overseas customers.

Water runoff from stockpiles into surrounding waterways is monitored at both Diamond mill and Bunbury Port. No adverse issues associated with run off were identified in 2000.

### Environmental Management System

Implementation of a companywide EMS continued during 1999/2000. This EMS is compatible with the requirements of the international standard ISO 14001, and will contain full documentation of our activities that affect the environment, while providing a baseline for continued performance improvement.

The EMS will be integrated with our existing Quality Management System (ISO 9002).

Our EMS project team has been trained and certified in environmental awareness to provide team members with the necessary skills to identify environmental aspects and their impacts and to help them develop ways to reduce such impacts.

Implementation of the EMS is focussed initially on the Mundijong roundwood processing and treatment plant, the forest harvesting operations and Treefarms. To gain initial certification to ISO 14001, an independent organisation will carry out an EMS audit at these locations during 2000/2001.

### Site contamination

Part of our Pemberton sawmill site is contaminated with arsenic, chromium and pentachlorophenol resulting from timber treatment activities carried out, primarily, by previous owners. While we have made very little contribution to the contamination, we accept the need to contribute to the restoration of the site to an environmentally acceptable standard.

The extent of the contamination has been monitored, and a consultant's report received. Preliminary discussions have been held with the State Government, given its original ownership of the site. A detailed action plan for the rehabilitation of the site will be submitted to the DEP following receipt of a further consultant's report.

In conjunction with the Shire of Manjimup, we undertook measures to remove debris from that part of the Gardiner River that flows through the Northcliffe mill site. The area was planted with trees after the removal of unused machinery and scrap metal. The mill ceased production in 1995.

# Waste and hazard management

Investigations are continuing into removal of remaining underground fuel and oil tanks, most of which are owned by BP. The focus for 2000/2001 will be at Yarloop and the Manjimup Processing Centre.

Each location currently has an emergency plan. These plans continue to be upgraded to include environmental issues, with specific reference to potential spillage of hazardous materials.

Bark removed from logs at our hardwood sawmills and sawdust is sold to various customers for use as garden mulch and potting mix. Bark and sawdust that is not disposed of in these ways is currently burnt or stockpiled. Bark from our Deanmill site is to be sold to a southwest horticulturalist, allowing us to stop using the Deanmill burner by the end of 2000.

Bark and pine shavings from our Mundijong roundwood and processing treatment plant are sold to garden supply companies. Five containers of bark, sawdust and other fines have been shipped to the USA as part of ongoing investigations into the potential for use of waste fibre in the generation of power in the southwest.

## Environmental licensing

To meet our legal obligations with respect to environmental licensing, we hold three DEP licenses, 10 DME licenses, five Waters and Rivers Commission licenses and 25 Australian Communication Authority licenses. In addition we have two registrations with the DEP, a Water Corporation approval and a permit from the Health Department.

Departmental licensing authorities have not issued any notices of nonconformance.

### National Pollutant Inventory (NPI)

Our facilities at Mundijong, Yarloop Mill, Deanmill, Collie, Nannup and the Manjimup Processing Centre are required to report under federal NPI legislation. The completion date for the reporting requirement is 30 September 2000 and we are on target to meet this date.

### Landcare

We played a role in regional landcare activities through membership of the Manjimup Land Conservation District Committee and regular contact with other district committees throughout the southwest. Our personnel took part in field days and we offered discounts on seedlings.

During the year, we donated over 50,000 seedlings for various communities and land care activities, including to 13 schools throughout Western Australia from Broome to the Goldfields and Denmark in the southwest.

In addition we donated 11,000 eucalypt seedlings to community group Green Skills for their farm forestry programme which is aimed at extending integrated tree plantings into dryer regions. The programme aims to promote high value timber as another viable crop for farmers, increasing farm diversity and contributing to arresting salinity, water logging and erosion.



Blue gums have been donated to the Shire of Manjimup for rehabilitation of the Shire's old Walpole rubbish tip site.

### Sotico Waterwatch Programme

Sotico Waterwatch was established in 1991 in response to local community concerns about the state of the Blackwood River Catchment. Sotico Waterwatch is a curriculum- linked education programme aimed at increasing community understanding about water quality. Co-ordinated by a full-time manager it covers 30,000 square kilometres of the Blackwood and Margaret River Catchments. Working with catchment groups as well as school students, environmental education with Sotico Waterwatch is enabling rich learning experiences for all members of the community. About 25 schools and community groups are involved in the collection of data, and the programme provides training opportunities for teachers and community members. It promotes links between natural resource management groups, government and the community.

During the year, the programme involved several hundred people in events such as the Blackwood River Marron Snapshot (where marron populations were assessed from Boyup Brook to Nannup), and water quality monitoring of streams and groundwater across the catchments from Dumbleyung to Margaret River.

This programme has been transferred to Marubeni Corporation as part of the woodchip and plantation sale. **Left** Skidder operator Desmond Bath at a dieback wash-down area near Northcliffe.

**Below** Research Technician Julie Cox carrying out a controlled cross pollination at the Manjimup nursery.

**Bottom** Pine logs at Mundijong treatment plant, WA.







**Left** Operator Karl Sykes taking a hydrometer reading at Mundijong.

**Below** Sotico's Welshpool processing centre.



**Above** Testing a chemical shower near the chemical storage tank at Mundijong.

investigation by WorkSafe Western Australia into this tragic accident. The investigation has been completed and WorkSafe has taken no further action. We extend our deepest sympathies to the family, friends and workmates of the deceased.

### Training

Training continues to be an important feature of improving our workplace safety and health and continuous improvement processes.

Over 270 organisational procedures and work instructions were either issued or amended during 1999/2000. Workplace work instruction audits continue to be conducted.

Training records are maintained at each location to reflect each person's qualifications and competencies to national, industry or internally-developed standards and to identify further training opportunities. Internal auditing ensures that training records are current and identified needs are addressed.

Considerable investment has been made in the Team Leader Training and Development Programme. This training is nationally-accredited and recognised Australia-wide and is providing our employees in supervisory positions with the tools and skills required to benefit the company and themselves. The first programme resulted in 18 team leaders being accredited with a Diploma in Front Line Management. We are committed to this programme with the second intake of participants commencing in August 2000.

### Safety awards

Sotico locations again participated in the Industrial Foundation for Accident Prevention/GIO Safe Way Awards. Eleven locations achieved success in the Lost Time Injury category and six locations were successful in achieving either silver or bronze awards in recognition of their safety management programmes.

### Workplace inspections

Workplace inspections continue to be conducted. These inspections utilise a checklist as an aid for employees.

### Incident investigation

Incident investigation continues to occur with the use of independent external investigators for serious incidents. From 1 July 2000 incident investigation includes all contractors. These investigations continue to be monitored and are an important aspect of hazard control.

### Emergency response plans

Site emergency plans continue to be updated and reviewed. The locations currently working towards EMS certification are in the process of converting their current emergency and response plan to meet ISO 14001 requirements.

### Asbestos

We use an independent consultant to assist in our monitoring and analysis of any potential hazards flowing from the presence of asbestos at our locations.

Asbestos monitoring occurred during the year at Pemberton and Welshpool timber operations, as these two locations are the only sites with extensive cladding of asbestos cement sheeting. An asbestos-based fence at Bunbury Port was sealed. Provision has been made in 2000/2001 budget to remove the roof of the office at the Yarloop sawmill.

### Managing Director's awards

Our Managing Director's Risk Management Award was again conducted at all locations. A panel consisting of the managing director and risk management and insurance specialists, reviewed key safety and risk management measures. These included attention to the orderly and tidy condition of the location, focus on continuous improvement, safe management of contractors and visitors, induction and training processes, anti-discrimination and harassment measures, emergency preparedness, and management of hazardous substances. We believe these awards make a significant contribution to improving safety and risk management standards. The overall winner was the Manjimup Processing Centre and Collie Mill won the most improved category.

### Safety initiatives

During 1999/2000, Pemberton and the Bunbury Port woodchip export facility focussed on reducing the risk of manual handling injuries. This initiative required employees to undergo manual handling education sessions followed up by an occupational therapist with on site monitoring. We continued the emphasis on improving the risk management of external contractors working on-site. The current contractor documentation was updated to reflect changes necessary to assist in contractor management.

A drug and alcohol policy has been adopted and is being implemented at two locations. An initial screening process has been conducted as part of the educational programme. This policy is being formatted and will be progressively implemented at all locations.

We have set specific company standards for all categories of mobile plant and are now implementing a system to ensure this equipment meets the standards. Crane, forklift and tractors have been assessed and now comply with these new requirements.

### WorkSafe notices

In 1999/2000 WorkSafe WA issued eight Improvement Notices and two Prohibition Notices at some of our locations, all of which have been complied with.

No WorkSafe prosecutions occurred or were instigated during 1999/2000. The WorkSafe prosecution referred to in last year's report, resulting from an incident in 1997, was withdrawn by the Crown on the first day of the court hearing.

# safety and health

In keeping with our occupational safety and health policy, we believe all accidents and occupational illnesses can be prevented.

We will use the continuous improvement process, appropriate equipment, technology and procedures to eliminate safety hazards.

Review of our Safety Management Plan is continuing and once complete will be included in Employee Procedures and Guidelines to ensure occupational safety and health initiatives and practices continue to be an integral part of our management processes.

### Injuries

Our ultimate safety goal is zero workplace injuries. Our Lost Time Injury Frequency Rate (LTIFR) improved from 7.7 to 5.7 in 1999/2000. The target for 2000/2001 is 2.5.

We achieved an LTIFR of zero in 24 out of 30 locations during 1999/2000. In addition, we achieved two significant periods free of lost time injuries. Manjimup Processing Centre achieved 500,000 lost time injury-free hours and Westwood at Bunbury achieved 10 years without an LTI.

In last year's report we referred to the death of an employee at Deanmill. Safety systems were reviewed as part of an

# transport

Wesfarmers Transport

### Overview

Our safety performance during the year was somewhat mixed. The nature of our business continually exposes us to the risk of accidents with the potential to cause serious personal injury. While we are very pleased to report an absence of these events in 1999/2000, there was a disappointing increase in our Lost Time Injury Frequency Rate (LTIFR), even though the result is well below the industry average. Efforts to reduce vehicle emissions remains a major focus. We are hoping to trial slightly wider freezer trailers with extra insulation which reduces diesel fuel use in the refrigeration unit. Efforts continued during the year to reduce the risk of spillage and leakage from on-site fuel storage, including the installation of an above-ground tank at Mourilyan in Queensland.

### **Our Progress**

1999 Report Priorities	Outcomes	
Implement EMS by 30 June 2000.	Procedures to be entered on the quality system in August 2000.	
Reduce LTIFR from 6.89 to 3.4 in 1999/2000.	LTIFR of 10.92.	
Zero fatalities and serious incidents in 1999/2000.	Zero fatalities, three major vehicle accidents.	

### Priorities for the future

- Reduce LTIFR from 10.92 to 5.4 in 2000/2001.
- Zero fatalities and serious incidents in 2000/2001.
- Reduce vehicle emissions.



**Lost Time Injury** 



## environmental management

In July we incorporated our Environmental Management Procedures onto the mainframe based Business Management System. These procedures form the basis of managing our environmental risk by addressing such things as waste and spill management, control of maintenance activities, emissions, compliance, noise and environmental reporting. The procedures are now accessible to our key operating sites from the computer-based quality assurance system. It is planned to have them fully functional during the second half of 2000 following appropriate roll out and training.

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### Fuel consumption and emissions

Over the last year, our truck fleet reduced by 20 vehicles or 10 per cent, however the average age increased to 6.8 years. Fifteen new vehicles were introduced into service, most at our Johnson River operations in northern Queensland. Here, trials performed on the new vehicles demonstrated significant savings in fuel consumption over the older trucks which were replaced.

Specific fuel consumption reporting continued with a fleet of local metropolitan trucks and was also introduced into another operations group. This data is useful when monitoring usage trends and in particular when seeking improvement in performance of the fleet.

A trial conducted on a dual fuel powered truck (LP Gas and distillate) gave only limited success due to fuel metering equipment problems. New equipment has been ordered and, once fitted, is expected to yield improved results in terms of the LP Gas-to-distillate ratio.

We are also actively pursuing the concept of 2.6 metre wide freezer trailers. The standard width is 2.5 metre and the extra

**Below** Thermo King freezer units at Wesfarmers Transport's operations, Kewdale. 100mm of insulation improves thermal efficiency considerably, in that heat loss through the walls is reduced. This in turn means the diesel-powered "host refrigeration unit" does not have to operate as much thus reducing engine emissions. Currently we are working with another operator seeking approval from the appropriate authorities to introduce a trial freezer trailer into operation.

Total fuel consumption by company-owned vehicles during 1999/2000 was 7,166,168 litres compared to 9,523,645 litres in 1998/1999 a reduction of 24 per cent. This decrease is largely attributable to the fleet reduction referred to above.

# Fuel storage management

We operate out of a number of sites throughout Australia. Over the last twelve months or so we have, where possible, adopted the use of our fuel supplier's card system to reduce the need for on-site bulk storage of product. This rationalisation has led to three of our sites being closed to bulk fuel.

At our Queensland site in Mourilyan, a new above-ground facility has been installed. The old below-ground tank was removed. This reduces the risk of undetected losses to the environment which is more probable from below-ground distillate storage tanks especially where rainfall and the resulting water table is high. Considerable capital was spent installing the tank along with a special effluent treatment system designed to prevent any environmental impact from spillage which may occur during equipment refueling.

At both our Mourilyan and Cairns facilities, new lube dispensing equipment was installed which reduces the chance of spillage and leakage.

Five sites were inspected/audited by our preferred fuel supplier. A report received indicated some surface soil contamination was evident but no leaks were detected from the dispensing equipment.

#### Noise

As reported last year, changes in the times of servicing our freezer fleet at our main Belmont workshops have addressed the noise issue from this facility. It is intended to relocate the Belmont workshops to our freight services operations in the Kewdale industrial area.

### Dangerous goods cartage

The sixth edition of the Australian Code for Transportation of Dangerous Goods has now been fully implemented. This requires ongoing training of drivers, supervisors and warehouse personnel as the code now places responsibilities on loaders and consignors of dangerous goods. These include standardised labelling of different product types.

Refresher courses are conducted to ensure that all relevant personnel are fully aware of the Code.

Regular medical examinations are necessary under the Code.

## Environmental compliance

No non-compliance orders were received from any external statutory authority. No Department of Environmental Protection complaints were received for "smoky" engine exhausts. Two internal environmental incidents were reported. One arose from the failure of a waste oil separator caused by a filter blockage the other from spillage from waste oil drums. Both spills were relatively minor (less than 100 litres) and procedures to rectify these issues were put in place.

# safety and health

To monitor performance in this area we use the key performance indicators of Lost Time Injury Frequency Rate (LTIFR) and the number of serious accidents.

# Workers' compensation claims

Our pro-active claims management strategy involves early intervention through liaison with the treating medical practitioner and identification of alternative duties for injured employees. We believe the low cost of our workers' compensation claims has resulted from this strategy.

### Lost Time Injury Frequency Rate

Our LTIFR, which records injuries to both employees and contractors, increased from 8.21 in 1998/1999 to 10.92 this year. The figure for employees only was 15.46. While this is disappointing, the figure is substantially below the Western Australian Transport and Warehousing Industry Average (1989/1999) of 27.03.

## Accident prevention strategies

Our accident prevention strategy has three major components:

- Dupont STOP for Safety;
- WorkSafe Plan Assessment; and
- Lost Time Accident Review Panel.

### Dupont STOP for Safety

The Dupont Safety Training Observation Programme (STOP), is a non-punitive, behaviour-based observation programme that provides both managers and supervisors with the skills and knowledge to help change employees behaviour towards safety. Training has continued throughout the year with new managers and supervisors undertaking the seven-unit course as part of their accident prevention training.

### WorkSafe plan assessment

We have used the WorkSafe Plan Assessment as our major auditing tool and this has provided us with the ability to monitor performance at a number of levels.

The assessment measures performance against five key elements:

- management commitment to safety;
- hazard management;
- planning;
- workplace consultation; and

• training.

Within each of the key elements there are criteria that need to be met, and these are then rated out of a possible score of 10. WorkSafe Western Australia recognises high performers and has a system of awards. During the year assessments were carried out at Specialised Services Divisions in Kalgoorlie, Kwinana, Bunbury, Jandakot, and the Belmont heavy vehicle workshop. No depots qualified for awards.

### Lost Time Accident Review Panel

A review panel is established whenever a Lost Time Injury occurs or an incident that could have led to an LTI occurring. The panel consists of the General Manager, Divisional Manager and the Safety Co-ordinator. The supervisor and the injured employee are also required to attend.

The review panel is not a substitute for an official investigation. It is part of management's commitment to provide a safe and healthy workplace by reviewing the accident and becoming directly involved in developing strategies to improve safety in the workplace.

### Safety training

All new employees receive safety training as part of their induction. This has been extended to contractors engaged through labour hire companies for short periods of time. An offer of similar training was made to long term contractors, most of whom accepted.

Special training is provided to new and existing employees in high-risk areas such as dangerous goods, forklift and crane operation and loading and lashing. Particular attention is paid to fatigue management, manual handling and back care.



**Left** Dual-fuel powered truck, with LP Gas tank, at Welshpool, WA.

**Below** Wesfarmers Transport warehousing and logistics operations at the Swan Brewery, Canning Vale, WA.

**Bottom** Loading nut coal at Wesfarmers Coal's Premier mine at Collie for delivery to Loongana Lime, at Kalgoorlie, WA.

With the development and introduction this year of an alcohol and drug policy, all employees have undergone extensive training on the need for such a policy, how and why testing will take place and the effects of alcohol and drugs on safety in the workplace.

All elected occupational safety and health representatives undertake a five-day training course through a WorkSafe-accredited training organisation. Managers and supervisors also undergo safety and health training.

### Major accidents

There were three major vehicle accidents in the past year. The first occurred near Timber Creek in the Northern Territory when a tautliner trailer caught fire. The cause of the fire remains unknown at this stage. The second incident involved a trailer that caught fire at Mt Magnet. The cause of this incident also remains unknown. The third incident involved a freezer trailer that rolled over at Newman. On this occasion the driver was found to be at fault.

### Prohibition and Improvement Notices

One Prohibition Notice and one Improvement Notice were received from WorkSafe during 1999/2000. The Prohibition Notice was in relation to the way in which a sub-contractor engaged by us to deliver a product to Kalgoorlie had organised his roster for his drivers. WorkSafe maintained that the roster system was in breach of the Code of Practice, Fatigue Management for Commercial Vehicle Drivers. The rostering system has since changed and WorkSafe does not intend taking action at this stage.

WorkSafe issued the Improvement Notice when an inspector found that a mobile crane had not had an inspection by a competent person in the previous 12 months.

### Asbestos

Asbestos cladding used on the wall of one of the freight sheds at the main Kewdale (WA) depot was found to be damaged after trailers had accidentally backed into the wall. The broken fragments had fallen down onto the railway lines. Once identified as asbestos a registered asbestos removal contractor was contacted and the damaged fragments of asbestos building product were removed out of working hours and the railway line area vacuumed in accordance with the Regulations and the Australian Standards. The contaminated material was disposed of at a licensed land fill tip.

During the year our heavy vehicle workshop made an attempt to move to 100 per cent synthetic brake linings for all fleet brake replacements. We achieved 95 per cent replacement. The remainder of the fleet are unable to accept synthetic brake linings.





Wesfarmers Limited Progress Report 2000

# verification statement



### Verification objective

Wesfarmers Limited (Wesfarmers) commissioned Snowy Mountains Engineering Corporation (SMEC) to verify the data and content of this Annual Environment, Health and Safety Report 1999/2000 (the report). This is Wesfarmers' third environment, health and safety public reporting cycle. The objective was to verify the accuracy of data and statements made within the report.

Wesfarmers has the responsibility for the preparation of the report and this statement represents SMEC's independent opinion. SMEC was not responsible for preparation of any part of this report.

### Verification method

The accuracy of the report was verified by checking randomly sampled information presented within the report. SMEC was commissioned to:

- review the report for any major anomalies;
- examine Wesfarmer's monitoring and reporting procedures, background documentation and data collection procedures; and
- execute an audit trail of selected data streams to determine the accuracy in the collection, transcription and aggregation processes.

The verification process involved meetings and discussions with personnel responsible for collating and writing the various parts of the report. All reporting business units were visited in order to ensure selected claims were discussed and substantiated.

### Opinion

The data verification process involved assessing the accuracy of the data contained within the report through a broad review of randomly selected data sets, focussing on the data collection, transcription and aggregation processes. The data verification process has identified the following:

- A high level of accuracy in data presented within the report. However, there were a small number of anomalies that were attributed to human transcription errors or misinterpretation of data during the report writing stage.
- Each of the data trails selected was easily identifiable and traceable. The personnel responsible for data collection and reporting processes demonstrated reliably the origins, aggregation trails and transcription processes of data.
- Overall SMEC is satisfied that:
- the report is a fair and honest representation of the organisation's policies, management systems and performance;
- the numerical data in the report are valid and accurate; and
- the written statements made in the report are an accurate reflection of the results and progress achieved during the reporting period.

# General Findings and Recommendations

The following recommendations are made as a result of the verification process:

- While the progress made to date on developing a consistent and systematic approach to performance measurement and reporting is commendable, the challenge lies in progressing towards reporting best practice. Continuous improvement in reporting is an objective of the company and a five-year improvement plan is currently being developed.
- The rigour of internal verification programs represents best practice. The continuous progress towards formalising the measurement and reporting systems will further ensure improvement in data transcription and aggregation processes.
- The continuous involvement of operations personnel throughout the reporting process results in a report that has significantly more ownership from the various business units that make up Wesfarmers. This represents best practice in reporting from a diversified industrial operation.

The above findings represent a summary of a more detailed report presented to Wesfarmers.

for SMEC Victoria

Terence Jeyaretnam ACCREDITED ENVIRONMENTAL AUDITOR (EPA VICTORIA) SENIOR ENVIRONMENTAL AUDITOR (QSA) 1st November 2000

# glossary

Australian Competition and Consumer Commission (ACCC)	The Federal Government's independent competition policy and consumer protection watchdog.
Australian Standards (AS)	National benchmarks for products and services.
Gigajoule	Unit of energy equivalent to 1,000,000,000 joules.
Greenhouse gases	Gases such as carbon dioxide, methane and nitrous oxide which contribute to retention of heat in the Earth's lower atmosphere.
Greenhouse Challenge	The Federal Government's programme of co-operation between industry and government to reduce greenhouse gas emissions through voluntary action.
International Organisation for Standardisation (ISO)	ISO publishes internationally-agreed standards covering areas such as quality management (the ISO 9000 series) and environmental management (ISO 14000).
Kyoto Protocol	The result of a meeting in Kyoto, Japan, in 1997, which set greenhouse gas emission targets.
Landcare	A national network of community groups tackling land-related environmental issues.
Liquefied Petroleum Gas (LP Gas)	A combination of, predominantly, propane and butane extracted from natural gas or as a by-product of petroleum refining.
Lost Time Injury (LTI)	An LTI is any work injury which causes absence for one day or a shift or more.
Lost Time Injury Frequency Rate (LTIFR)	The main calculation we use to measure workplace safety performance. It is calculated by dividing the number of LTIs by total hours worked, multiplied by one million. Unless otherwise indicated, LTIFRs in this report do not include contractors. Another indicator, Average Time Lost Rate (ATLR), provides a measure of the severity of occurrences.
National Pollutant Inventory (NPI)	An Internet database designed to provide the community, industry and government with information on the types and amounts of certain chemicals being emitted to the environment.
National Environment Protection Council	A Federal-State government body which develops environmental protection measures and aims to achieve a national approach.
WorkSafe Western Australia	The WA Government department that administers workplace safety and health laws.

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