Wesfarmers Environment, Safety and Health

1999 PROGRESS REPORT

	OUR COMMITMENT TO THE Environment & a safe workplace About This Report	1	CONTENTS
Wesfarmers Coal	ENERGY - COAL	4	k Exchange.
& Kleenheat Gas	ENERGY - GAS RETAILING	10	D Mustralian Stoch
WESFARMERS LPG	ENERGY - GAS PRODUCTION	14	RS.C
FOREST PRODUCTS	FOREST PRODUCTS And plantations	18	RME ments released
CSBP	FERTILISERS AND CHEMICALS	24	SFA nd media state
Wesfarmers Transport ////////////////////////////////////	TRANSPORT	32	V.WE terim reports a
Wesfarmers Limited ACN 008 984 049	REGISTERED OF 11th Floor, Wesfarmers 40 The Esplanade Western Australi Telephone: (08) 932	FICE House Perth a 6000 7 4211	VISIT US AT WWV his site contains this report and our latest annual report, int



In this competitive world it is natural and necessary that the primary focus of business success should be on delivering satisfactory financial returns.

At Wesfarmers our primary objective is to provide those returns to the people who own us.

At the same time, we know our shareholders want to be confident that, in meeting this objective, we provide a safe and healthy workplace for our employees. They want to be assured, also, that what we do is in accord with sound principles of environmental management.

We welcome this growing emphasis on corporate accountability. There is no doubt it will continue to grow in importance both for people considering investment and for the communities in which we operate.

The publication of our second report covering environmental, safety and health issues at most of the business units is a further contribution towards meeting the growing interest in these aspects of our performance.

We have learnt from the experience gained in the 1997/98 report. Our commitment to continuous improvement applies both to the matters of substance and the way in which they are reported.

Despite our best efforts, accidents affecting people and incidents impacting on the environment have occurred. I reaffirm our aim of eliminating both.

Wesfarmers is proud of its financial performance and growth over the past 15 years. We intend to be just as proud of our safety and environmental achievements. This report is an honest accounting of how we are going towards meeting that objective.

chaner

MICHAEL CHANEY MANAGING DIRECTOR

ABOUT This report

Our second environment, safety and health report has a two-fold purpose – to review progress and performance in the areas covered last year and to introduce another of our business units.

The liquefied petroleum gas plant at Kwinana is the newcomer, joining coal mining, gas retailing, fertilisers and chemicals, forest products and plantations and transport in a detailed accounting of environment-affecting activities and safety performance.

For those businesses reporting a second time we have included a quick reference check on progress. Each has adopted a set of goals for 1999/2000.

As was the case last year, preparation of the information contained in each segment rests primarily with the business unit. This is consistent with the Wesfarmers corporate structure and philosophy which assigns day-to-day management responsibility to the group's operating divisions.

The data on which the various reports are based is, to the best of our knowledge, correct.

VERIFICATION

One difference this year is that there has been no external verification. We decided our immediate objective should be to respond to the major conclusions of the 1998 PricewaterhouseCoopers (PwC) audit report which was critical of some aspects of the inaugural report, including consistency in identifying issues and record keeping and reporting.

To this end, representatives from across the group were brought together to discuss and agree on major issues that should be included. This internal stakeholder process was most valuable in reaching consensus on priority items while accepting that not all would be relevant to every business unit.

It has resulted also, we believe, in improved data collection and recording and having these results readily available for audit.

The verification process this year involved business unit representatives compiling check lists of source material for their part of the report. These were then reviewed by a team from the Wesfarmers' Corporate Solicitors Office and the risk management department which will prepare a detailed report for senior management.

Experience gained this year will further improve the accountability of the group's operating businesses.

We expect to have next year's report externally verified.

EXPLANATORY NOTES

The business unit reports contain some technical terminology. We have tried to make the reports as readable as possible by eliminating jargon. We are conscious, however, of the need not to misrepresent any situation by oversimplifying the text.

Some terms and reporting requirements are common to all businesses and we thought it would be useful to explain a few of them here.

Lost Time Injury Frequency Rate (LTIFR)

A lost time injury occurrence is recorded when a person is absent from work for one day/shift or more as a result of a work-related injury.

This is the primary measure of workplace safety applied by us to assess the performance of all the business units. Businesses are free to provide other safety-related data but they must comply with the LTIFR requirement over the same reporting period.

The LTIFR is calculated as follows:

number of occurrences in the period number of hours worked in the period

Unless otherwise indicated, calculations of LTIFRs do not include contractors.

The LTIFR data in this report is based on information available as at 30 June of the relevant year.

Workers' compensation claims

These include workplace injuries for which compensation is payable, including lost time injuries and medical treatment injuries. Data shown in this report is year ending 30 June, with information up to date as at 30 September 1999.

ISO 14001

ISO 14001 is an international standard which provides a framework for developing an Environmental Management System (EMS) and against which that system can be audited.

National Pollutant Inventory (NPI)

The NPI is an internet database designed to provide community, industry and government with information on the types and amounts of certain substances emitted to the air, land and water. It has been developed by the National Environment Protection Council made up of Commonwealth, State and Territory Environment Ministers. Our business units are preparing to meet their reporting obligations as part of the NPI and action taken will be included in next year's report.

ABOUT US

Wesfarmers Limited is a major Australian diversified industrial company headquartered in Perth.

We have interests in fertilisers and chemicals manufacture, gas processing and distribution, coal mining, building materials, hardware retailing, forest products, rural merchandise and services - including insurance and transport.

The company began in 1914 and was publicly listed in 1984. Since that time we have recorded strong growth with assets at the end of June 1999 totalling \$2.6 billion and a market capitalisation at that time of \$3.6 billion. We employ about 8,700 people full-time and a further 4,000 on a part-time or casual basis and have about 37,000 shareholdings on our register.

As part of our corporate governance process, the Wesfarmers Limited board - through its audit committee - receives annual reports from each business unit on environmental, safety and health policies, practices and performance.



ABOVE AND ON FRONT COVER

BUINNINGS WATERCARE PROGRAMME MANAGER MELISSA CAMPBELL WITH STUDENTS FROM ST MARY'S PRIMARY SCHOOL, BOYUP BROOK, ASSESSING THE HEALTH OF THE BLACKWOOD RIVER, NEAR BRIDGETOWN. SINCE 1991 MANY CHILDREN AND ADULTS HAVE BEEN MONITORING THE RIVERS OF THE BLACKWOOD AND MARGARET RIVER CATCHMENTS AS PART OF THE PROGRAMME. BUNNINGS WATERCARE IS LINKED CLOSELY TO THE STATEWIDE RIBBONS OF BLUE PROGRAMME.





Priorities for the future

- an injury free workplace
- implement our EMS, train employees and consider certification of the system
- continue focus on noise management and associated community issues
- develop a co-operative agreement for the Commonwealth Greenhouse Challenge Programme
- continue rehabilitation of mined-out areas

ENERGY - COAL

Our coal operations are centred at the Premier coal mine in the Collie Basin, about 200 kilometres south of Perth, Western Australia. The Basin, approximately 225 square kilometres in area, is a centre for power generation and farming. We employ approximately 340 people. We also hold a 37 per cent joint venture interest in the Bengalla coal mine in the Hunter Valley, New South Wales, which is managed by Peabody Resources and is therefore not included in this report. In addition, we own Cardinal Contractors, a small contracting company, that is also not included in this report.

KEY ISSUES

Our key issues are:

- land, forest and water management
- the impact of noise and dust on nearby residents
- waste management
- safety

OUR PROGRESS

1997/98 REPORT TARGET	COMMENT
Rehabilitation of Cardiff Sub-basin areas by 2003	Ongoing. Completed a further 126 hectares.
Zero discharge of dewatering bore water by June 1999 through supply to power stations	231ML (7 per cent) discharged due mainly to infrastructure maintenance.
55 per cent reduction in waste to landfill	50 per cent (66m³/month) reduction achieved. 55 per cent target may not be possible.
Completion of the Environmental Management System by June 1999	In progress and largely completed. System externally audited and judged comprehensive.
An injury free workplace	LTIFR 29.5 for year, a 27 per cent reduction on 1998.



ENVIRONMENTAL MANAGEMENT

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

Company policy is to keep our 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, development of our Environmental Management System (EMS) to ISO 14000 standard has largely been completed and will be implemented during 1999/2000. An independent audit of the EMS, by Quality Assurance Services, found that it was "comprehensively documented". A list of objectives and targets was developed during the year based on a detailed risk assessment of all work activities.

Land management

Major opencut mining commenced in 1970. Since then, 2,367 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 our abandoned mine areas focussed on completing work in one of the former opencut mines (WO-5H) and beginning earthworks at two other opencut sites (WO-5B and WO-5D).

Prior to land clearing, operational areas are mapped to determine jarrah dieback boundaries. Peripheral areas are left as undisturbed as possible. To minimise wastage of forest resources, in 1998/99 we funded a trial to optimise forest product yields prior to mining. For a 156 hectare area, a 144 per cent improvement was achieved. Ongoing viability of this approach is subject to development of satisfactory commercial arrangements with the Department of Conservation and Land Management. 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 1-2 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 8.5 million litres (ML) per day was abstracted (removed) with an average of 2.5ML/day required for dust suppression, vehicle wash down and domestic supplies (see figure 2). Some bore water (181ML) was discharged during maintenance programmes. The remainder (1,940ML) 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. This was made possible through the construction of a new holding sump and pumping station.

We are licenced to discharge water to the environment and have reduced discharge significantly since 1994 (see figure 3). All groundwater abstraction and minewater discharge is monitored regularly as well as adjacent rivers systems, regional groundwater levels and abandoned mine voids.

This year's discharge was made up of:

- 130ML of water pumped from the void at WO-5D into the Collie River South Branch during July to September 1998; and
- overflow from our central environmental collection dam (sump A) being 181ML of bore abstraction water during maintenance and 301ML of run-off and used water.

ABOVE

THE WO-5H REHABILITATION AREA











The first discharge was due to a requirement to make conditions safe for rehabilitation, specifically dozer activity, at WO-5D. The water was within discharge licence criteria except for 105ML which went 3.3mg/litre iron (instead of 3.0mg/litre) and subsequently discharge was stopped.

During the commissioning of the Dissolved Air Flotation (DAF) plant for water treatment at Premier, 24ML of unrecycled water had to be removed from Sump A in February 1999. The sump discharge water contained an elevated level of manganese (1.36mg/litre), because of the DAF process water contribution, and this level was in excess of the allowable level. Normally this water would not have been released but it was discharged to allow for sump repairs. Modifications to plant and associated systems will be made to reduce the risk of re-occurrence.

Both these discharges are regrettable but are not considered to be of significant environmental impact.

To assist in water management, we have installed a data base 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, to date dewatering has not reduced groundwater levels near private land and dwellings in this area.

One water management and rehabilitation initiative commenced in 1998/99 has been the construction of a river diversion structure at one of the largest abandoned mines in Collie (WO-5B). This will allow for rapid fill with a view to increased safety control and enhanced rehabilitation prospects. Filling will take four to five years instead of around 100 years through natural accumulation. The local community was concerned about water loss from the river, but diversion will only occur at peak winter flow and will have no impact on their water requirements or the environment.

Rapid rehabilitation will expedite the availability of the land for other purposes. Such areas have a high potential value for recreational activities.

Dust management

We recognise that dust is 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, speedy rehabilitation, and using water to suppress dust on road and operational areas.

The Premier mine has been operational for nearly five years. Dust monitoring is required in dry months and the records show that we have operated well within compliance and that 1998/99 dust levels were lower than last year (see figure 4).

Noise management

Mining equipment and blasting are the main sources of noise. The replacement in 1998/99 of nine old trucks and the commissioning of a third electric shovel have reduced fleet noise levels by six decibels.

However, the general mine-noise impacts on adjacent rural dwellings - particularly at Buckingham - have, at times, been unacceptable to some residents. A strategy for addressing this is being developed with the Department of Environmental Protection and is expected to be implemented during 1999/2000.



Noise from blasting was again usually well below the current regulations (see figure 5) although one blast of 131 decibels exceeded the legal limit for a single blast of 125 decibels. Occasional complaints about blasting have occurred even though our performance has improved. Government heralded the possible decrease of allowable levels by five decibels across the board. We have entered into consultation with industry and government over this proposal.

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. No complaint about structural defects has been attributed by the independent assessors to blasting.

This year we commissioned from Dyno Nobel an extensive review of our blasting methods and expect to implement recommendations making further performance improvements.

The monitor trigger levels have been set as high as 115 decibels (and are now set at 110 decibels) but can also be activated by ground vibration. We expect the decibel average to be lower than indicated by the trigger figure. A decreasing number of blasts triggering the monitors is believed to reflect an improvement in noise reduction (see figure 6).

Waste management

Major waste items - including used oils, metal scraps, cardboard, paper, tyres, batteries and domestic garbage - are recycled. In 1998, we introduced an holistic waste-management approach applying the principles of "Reduce, Reuse and Recycle". This resulted in a reduction of waste to landfill of 50 per cent (795m³) through additional recycling. The 1997/98 report target of 55 per cent proved difficult, may not be achievable in the future and would require an increase in the current recycling

efficiency of 83 per cent to more than 90 per cent. Part of the programme has been the promotion of recycling through the provision of recycling bins in car-parks for our employees' domestic requirements.

The main infrastructure area is serviced for sewage by a treatment plant. Overflow 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 fuel-bay areas is treated by the DAF plant before being recycled.

Rehabilitation work at the WO-5 open cut mine is being accompanied by assessment of possible contaminated sites, namely the waste-water settling dam and fuel bays. This work should be completed in 1999/2000.

Energy consumption

A diesel-powered machinery fleet dominates our fuel consumption and emissions. The introduction of large electric shovels and reduced haulage distances will increase the proportion of electricity but it should remain less than 20 per cent of energy requirements.

An energy audit was conducted in 1997 for the Premier mine infrastructure during construction. A further external audit, by Energetics, of the whole operation was conducted this year and identified several improvement possibilities. These will be assessed in 1999/2000 for economic and environmental viability.

Total fuel energy consumption for 1999 was 627,662 gigajoules, up from 618,474 in 1998.

Greenhouse gas

We have reduced Carbon Dioxide (CO₂) emissions by 45 per cent per bank cubic metre equivalent since 1994, with a total CO₂ emission for 1998/99 of 65,369 tonnes. Distribution of emissions by source can be seen in figure 7.



DAVE CHAPMAN CARRIES OUT PIEZOMETER MONITORING TO MEASURE WATER LEVELS. PETER RILEY COLLECTING WATER SAMPLES. WATER FROM THE VEHICLE WASHDOWN AREA IS TREATED BY THE DAF PLANT BEFORE

AREA IS TREATED BY THE DAF PLANT BEFOR BEING RECYCLED. PETER RILEY CHECKING NOISE

MONITORING EQUIPMENT.







Figure 6: Premier Mine Blasting - 1998/99				
	Buckingham	Griggs		
<125 decibels	99.6%	100%		
<120 decibels	99.6%	100%		
<115 decibels	97.3%	100%		
Average (decibels)	101	103		
Total blast	261	261		
Did not trigger	199	254		
Year ended 30 June				





During the year, we planted 10,000 eucalypts as part of our aim to achieve a reduction in net CO_2 emissions. We are a signatory to the Commonwealth Greenhouse Challenge Programme and, using information from the recent energy audits, will develop a co-operative agreement with the Challenge Office.

Employee awareness training

We have an employee induction programme which includes environmental training. A training programme for the EMS will be completed in the coming year to cover general awareness and the risks identified during the EMS development.

We have in place a career path training programme for environmental issues and management.

External recognition

Our environmental performance was recognised by being the winner of the South West Waste Management award for 1998 for Large Industry. We were also proud to be runners up in the Industry Category of the WA State Energy Efficiency Awards.

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 their environmental effect.

Research and development

We are a co-industry sponsor of the Australian Coal Association Research Programme in Collie into acid amelioration of abandoned mine water bodies; a three-year, \$1 million project. We also sponsored the Collie Aquarium and studies into aquaculture prospects for abandoned voids. Our more recent research and development commitments have been in excess of \$600,000.

SAFETY AND HEALTH

We operate under the Mines Safety and Inspection Act 1994, the Mines Safety & Inspection Regulations 1995, and Explosives and Dangerous Goods Act 1961 for compliance with state health and safety laws.

Safety management system

Along with legislative compliance, site health and safety is managed under the RiskMap system. This system involves consultation and development with employees on minimum safety standards to apply across the site.

Training

Training is an integral part of maintaining awareness of safety and site specific hazards. Training in strain injury prevention, with associated risk identification, assessment and control, was initiated to target those injuries that cause a significant amount of individual pain and loss, as well as disruption to the business. During the year, supervisors and safety and health representatives were trained in the RiskMap system and standards.

Key performance indicators

Our performance continued to improve with a further reduction in LTIFR from 40.3 to 29.5 and a reduction also in workers' compensation claims from 83 to 64 (see figures 8 and 9). We include contractors in calculating LTIFRs.



Emergency preparedness

The site mine rescue team has increased from 22 to 25 employees and now requires medical and physical assessment for membership. A detailed emergency training plan has been developed to ensure skills are maintained. Emergency scenarios have been practiced with the local emergency services groups.

A chemical substances inventory has been developed to track hazardous substances and dangerous goods. From this, all buildings have been audited and HazChem signage updated. Some chemicals have been banned from site in favour of safer alternatives or methods.

Risk management

An independent risk assessment was conducted by Global Risk Consultants to evaluate the types of risks and controls required to reduce or eliminate risk.

Communications

Safety Review Groups have been set up in production, maintenance, and administration to review safety performance issues and standards conformance specific to each department. Our Occupational Health & Safety Committee has been maintained and supported with its most significant activity being to develop, review, and assist with implementation of safety standards.

Awards and commendations

Our reduction in LTIFR was recognised by awards through the Industrial Foundation for Accident Prevention and GIO Australia. We achieved an overall reduction in LTIFR of 15 per cent and a 28 per cent reduction in the production department during the award period. THE SITE MINE RESCUE TEAM HAS A VITAL ROLE AT PREMIER MINE.

IAN ANNANDALE AND MATTHEW MORGAN IN NEW WORKSHOP FACILITY.

PETER RILEY CHECKING A WASTE OIL STORAGE TANK.



MKleenheatGas



Priorities for the future

- safety performance goal of zero accidents
- total compliance of the Kleenheat Gas Occupational Safety and Health management system
- promotion of LP Gas as an alternative source of energy and as a replacement for higher carbon chain fuels
- reducing LP Gas emissions

ENERGY - GAS RETAILING

Our main business interest is the national retailing of liquefied petroleum gas (LP Gas) and appliances to domestic, commercial and industrial customers. We employ about 700 people and operate across Australia through six regional centres and more than 100 Kleenheat Gas Houses and Branches, all servicing an extensive dealer network.

KEY ISSUES

Our key issues are:

- safety
- management of LP Gas emissions
- impact of noise and odour on the environment

OUR PROGRESS

1997/98 REPORT TARGET	COMMENT
Achieve zero lost time injuries	10 lost time injuries.
Improve waste management	Total waste management by a preferred, licenced contractor has been extended to the Kwinana site.
Reduce noise levels on tanker equipment	• Installing quieter tanker pumping equipment 95 per cent complete.
	 Sourcing quieter OEM (Original Equipment Manufacture) gas engines to replace diesel engines.
Expand the uses of LP Gas	• Flame cultivation - alternative to chemical use for weed control.
	• LP Gas substitution for diesel fuel.



ENVIRONMENTAL MANAGEMENT

The main features of our approach 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.

Legislation review

We have third party Quality Management System certification to AS/NZS ISO 9002 at all our regional centres. At Myaree, in Perth, we also have third party certification of our Environmental Management System (EMS) to AS/NZS ISO 14001. We are currently progressing towards third party certification of our Occupational Safety and Health Management System.

The EMS requires that all employees be trained in environmental awareness. Regular meetings of representatives from different sections of the Myaree site are held to provide an opportunity for employee input and feedback.

At the Queensland depot we operate under an approved Environmental Management Plan. The site is licenced by the Queensland Department of Environment.

Legislation

The LP Gas industry is highly regulated at both the federal and State levels. These requirements are regularly reviewed by a company specialising in environmental law. It provides a monthly update of any changes or additions which may impact on our operations. This information is reflected in changes to the Operations Management System (OMS) which is accessible on our intranet.

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

We operate on three contaminated sites in Australia. These sites were contaminated by previous occupiers, have been contained and are monitored as required by Government authorities.

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 commercial washers.

Water is used in significant quantities for two activities:

- truck washing when our new system is complete, water will be processed through an oil/water separator and will subsequently be filtered and re-used for watering the landscaped areas of the Kwinana depot; and
- 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 sprinklers in the event of leakage or fire. The system is tested weekly and all water is re-cycled back into the sump.

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

Odour management

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

Since the relocation of exchange cylinder filling and bulk LP Gas transfer operations to Kwinana, odour is no longer a significant factor at Myaree. Kwinana operations are located away from residential areas and, accordingly, the small quantities of LP Gas released during filling readily dissipate within the industrial area.

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

We are reviewing and quantifying the releases of product to determine that there are no unnecessary releases. We aim to research methods of release reduction, such as hand piece modification.

FROM LEFT

BRIAN CHISHOLM LOADING A ROAD TANKER AT WESFARMERS LPG PLANT, KWINANA.

LPG-FUELLED FLAME CULTIVATION UNIT OPERATING AT PAULIK & SONS FLOWER FARM AT YANGEBUP, NEAR PERTH.



Noise management

As with odour, noise generated during normal operations is no longer a significant issue given the relocation of exchange cylinder filling and bulk LP Gas transfer operations from residential Myaree to the Kwinana industrial area.

During re-filling at sites such as caravan parks and hospitals the noise generated by pumping equipment is being addressed and 95 per cent of tankers have had reduced noise pumping equipment fitted.

As with odour management, most other sites are in industrial areas and/or handle low volumes of LP Gas.

Asbestos management

Asbestos surveys by environmental specialist companies have been performed at Myaree WA, Pinkenba QLD, Camellia NSW and Kwinana WA. The results of the surveys at major locations follow:

Store and workshop, Myaree, WA	Biennial audit of the whole site. Replacement of asbestos materials when re-building or any re-development is undertaken.
Kwinana Ramp, WA	The roof of the cylinder filling area is the only significant asbestos location. A plan has been developed to address this issue.
Pinkenba, Qld	All buildings treated, all loose material disposed of from site.
Camellia, NSW	Audit of whole site and asbestos sealed.

It is intended to survey all other sites.

Hydrocarbon management

Minor emissions of LP Gas inevitably occur when 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. The emissions calculated for 1999/2000 will be used as a yardstick for the reduction of emissions in the future. The use of low loss filling equipment ensures that emissions for cylinder filling are no more than 5ml per cylinder disconnection. For bulk tank disconnections the discharge is 56ml per disconnection.

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

Waste management

Wastes, such as oil, filters, rags, tyres, batteries, paper, plastics and scrap metal are disposed of under a total waste management plan using a specialist contractor.

SAFETY AND HEALTH

We regularly review our management of occupational safety and health to ensure that aims, objectives and key performance indicators are being met and are still current.

A recent review of the Safety and Health Policy Statement has resulted in a broadening of the scope of the statement to include reference to customers and the general public.

The integration of Safety, Quality and Environment Management Systems has been further developed during the period. As a result, the integrated system is now known as the Operations Management System. This system now fully addresses safety, quality and environmental impacts relative to the core aspects of our operations.

The Operations Management System is now electronically available on our intranet. This is accessible at each regional centre, and some branches, and will ultimately be accessible at all branches throughout Australia. This step forward in technology now enables us to update policies and procedures instantly and on a national basis.

Employees

We aim to provide an accident free and healthy environment for our employees and subcontractors.

Our goal for employee occupational safety and health performance is zero workplace accidents. The main progress indicator is the LTIFR and our goal of zero LTIFRs includes an annual target of at least a 50 per cent reduction each year.

The target for 1998/99 was an LTIFR of 3.5 and we in fact recorded a rate of 7.4.



Accident statistics are recorded for all States and Territories in which we operate. Of these, South Australia, Victoria, Queensland and the Northern Territory all reported no lost time injuries for the financial year. This is the third consecutive year South Australia and Northern Territory have achieved this target.

Safety awards

As part of our awareness programme, safety awards have been introduced nationally. The awards are used to recognise achievements in overall safety at branches and terminals. They take into consideration lost time injuries, near hit incidents, housekeeping and commitment to the accident prevention programme.

Training

Employees and contractors are exposed to formal induction training at the time of engagement. There are seven basic modules designed to familiarise attendees with LP Gas properties, handling and storage. The seven modules include environmental awareness. Further training for work activities ensures that job-specific requirements for safety and real or potential environmental impacts are understood.

Training records are maintained on our central computer as part of the employee's personal records and are available for review when job requirements change. These records also provide evidence of experience and competency.

Compliance

During the reporting period, we received five Improvement Notices issued by WorkSafe Western Australia regarding the alleged non-registration of Kleenheat-owned pressure vessels. On review by the WorkSafe Commissioner, however, all the notices were cancelled.

In 1998/99 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 32,376,722 kilometres and, during this same period, vehicles from the fleet were involved in 15 on-road minor accidents with no personal injury or major damage.

Whilst the adoption of the sixth edition of the "Australian Code for the Transport of Dangerous Goods by Road and Rail" resulted in very little technical change regarding the transport of LP Gas, the penalties for failing to comply sharply increased, as did the intensity of on road vehicle inspections. This increase in surveillance activity was used as a trigger to raise and reinforce driver and supervisor awareness of their responsibilities under the Code.

Community involvement

We are responsive to the attitudes and expectations of the community in which we operate. Training in relation to LP Gas safe handling and storage issues is provided to voluntary organisations, country fire authorities and other interested groups.

We are modifying our web site to enable alternative methods of assessing customer and community attitudes.

Hazard control

All of our storage depots are required to have a Site Safety Plan which details responsibilities and actions to be followed in the event of an emergency. The Site Safety Plan forms part of the annual technical audit performed on all depots and terminals and is supported by records of weekly checks, fire equipment inspections and equipment maintenance records.

The emergency response system is periodically tested to ensure acceptable outcomes.

We maintain a 24 hour specialist advice service, seven days a week. This service handles queries from residential customers and the general public. The toll free number is prominently displayed on road tankers, static tanks and cylinder labels.

Hazard identification and risk management/control for typical terminal and delivery operations forms a part of the hazardous operations (Hazop) study for safety case documentation and provides assurances that controls are in place to ensure the safety of our operations. Safety cases are prepared to relevant State or Territory legislation.

Emergency response

We have an Emergency Response Communications System Manual which details what has to be done in the event of an emergency and which provides contact numbers for our specialist personnel.

FROM FAR LEFT

PLANT ENGINEER GRAHAM BRIGGS CHECKING STORAGE TANKS AT V&V WALSH, BUNBURY.

KLEENHEAT AUTOGAS SERVICE STATION, MYAREE.

SEAN DICKSON ATTACHING LOADING HOSES TO A ROAD TANKER.

KLEENHEAT GAS TRUCK TRANSPORTING CYLINDERS IN THE PERTH METROPOLITAN AREA.









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

ENERGY - GAS PRODUCTION

We operate a Liquefied Petroleum Gas (LP Gas) extraction plant at Kwinana, south of Perth. This plant processes natural gas from the Dampier to Bunbury natural gas transmission pipeline, producing pressurised and refrigerated propane and butane for the domestic and export markets. A small by-product stream of condensate is also produced, and sold to the Kwinana petroleum refinery. We employ approximately 40 people.

KEY ISSUES

Our key issues are:

- providing a safe and healthy workplace for all employees
- identification and management of risks and hazards
- protection of the environment

This is the first time we have detailed our activities in the Wesfarmers' environmental report.



ENVIRONMENTAL MANAGEMENT

The 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.

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 the commencement of plant operations in 1988, establishing procedures for the control of change to the plant, environmental protection, employee training and safety and emergency response. This plan is subject to regular 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", however, auditing and reporting requirements continue unchanged. The Safety Report also addresses environmental policy and procedures.

Environmental incidents

There have been no environmental incidents involving a significant release - that is, a release which may affect areas outside the plant - of LP 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.

Atmosphere

During plant shut downs, or 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. Over the next year, we plan to measure and then investigate reducing the level of these emissions.

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 from the public were received in 1998/99.

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 is being undertaken to determine the extent to which our plant is contributing to this boundary noise level.

Land management

There are no contaminated sites at the plant. Extensive landscaping including planting of trees and shrubs has been undertaken to improve the plant's appearance, 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. An oil recycling contractor collects oil wastes (lubricating oil and seal oil).

Ground water

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

FROM LEFT

DAVID ALLAN, GENERAL MANAGER WESFARMERS LPG, TALKING WITH AN EMPLOYEE AT THE LPG PLANT.

AERIAL SHOT OF WESFARMERS LPG PLANT FROM THE SOUTH EAST.



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 reuse, eliminating any residual odourant disposal requirements.

Liquid nitrogen is stored in an insulated storage 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 licences 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

Induction

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 in is place for all process operators, involving demonstration of acquired competencies against internal and national standards.

Safety 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 10,000m³ 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 to 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.

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.

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 pressuretested twice 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.

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 (KIC) and its subcommittee 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

LTIFR and the Average Time Lost Ratio (ATLR) are key performance indicators which are calculated monthly and reported to the Wesfarmers Energy Limited board at every board meeting (two monthly).

There were no Lost Time Injuries (LTIs) recorded this year for our workforce (see figure 1).

The workforce exposure hours increased to 209,454 without an LTI (a record for us). The last recorded LTI for our workforce was in August 1996.

As there were no LTIs, both the LTIFR and the ALTR are zero for the reporting period.

Workers' compensation

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

There have been a total of nine claims over the past five years (see figure 2).

FROM FAR LEFT

EXPORT STORAGE TANKS AT LPG PLANT.

DAVID BOYD NEAR THE DOMESTIC LPG STORAGE TANK.

PROCESS OPERATORS RICKY THOMSON AND MICHAEL YAP CHECKING PLANT OPERATION ON THE DISTRIBUTED CONTROL SYSTEM.





SUNNINGS FOREST PRODUCTS



Priorities for the future

- progressive implementation of ISO 14001
- investigate removal of all remaining underground oil and fuel tanks
- finalise action plan for rehabilitation of the Pemberton contaminated site
- establish a minimum of 5,000 hectares (5.5 million seedlings) of blue gum plantations in 2000
- halving of LTIFR to 3.6

FOREST PRODUCTS AND PLANTATIONS

We are a Western Australian forest products company encompassing native forest operations, plantation establishment and management, timber milling, woodchipping, seasoning and processing. We employ about 900 people, most of whom live in communities in the south-west. Our value-added timber products are distributed in both Australian and international markets.

KEY ISSUES

Our key issues are:

- safety
- waste disposal

- noise
- site contamination

OUR PROGRESS

997/98 REPORT TARGET	COMMENT
External environmental audit of all operating sites by 30 June 1999	Replaced by audit procedures of ISO 14001 system.
Development by 30 June 1999 of an action plan to rectify the Pemberton contaminated site	Consultant's report received.
Follow-up audit in 1999 of compliance with timber plantations Code of Practice	Conducted in September 1999.
Begin implementation of a company-wide Environmental Management System by 30 June 1999	Underway.
TIFR of 3.5	LTIFR of 7.1.



ENVIRONMENTAL MANAGEMENT

Forest management

Western Australia's publicly-owned 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. 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. We have no control over what parts of the forest are logged, when they are logged or at what rate.

Regional Forest Agreement

In May 1999, the Commonwealth and State governments signed a Regional Forest Agreement (RFA) for the south-west forests of Western Australia. This 20-year agreement is the culmination of research and public consultations carried out over several years. Under the RFA, an additional 150,885 hectares of forest have been set aside in National Parks and other reserves. Seventy-one per cent of the remaining old growth forest in the south west is now protected in reserves. In July 1999, the State Government announced its decision to cease all logging of old growth Karri and Tingle forest from the end of 2003.

Plantation development

We planted almost five million seedlings in hardwood plantations in the south-west of Western Australia and South Australia during the winter of 1999. We now manage or have harvesting rights to an area in excess of 40,000 hectares of hardwood and softwood plantations. We will work with plantation developers with the aim of establishing 5,000 hectares, or 5.5 million seedlings, during the winter of 2000.

These plantations are helping to combat degradation caused by past land uses and are also contributing to the reduction of atmospheric carbon levels. We have adopted 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. Improvements recommended in a first independent audit of our compliance with the Code, including staff training, were implemented during 1999. A second independent audit of our compliance with the Code was carried out in September 1999. The plantation Code of Practice will be 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 south-west. In 1999, the facilitator assisted with the establishment of around 75 hectares of plantations for individual growers.

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 forests to the Department of CALM, and also harvest plantations on private land. All harvesting operations carried out in State forests are 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 and the Guidelines for Timber Harvesting were revised by CALM during 1999. They also contain procedures for restricting the spread of dieback disease (Phytophthora cinnamomi) in the south-west forests. These procedures are monitored by CALM and are regularly updated. The Code will be incorporated into our EMS.

Timber processing

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

One complaint was received during 1999 regarding noise at our Yarloop sawmill. The complaint has been investigated through noise level testing on-site, which concluded that the level of noise exceeded legal limits. Remedial action was taken to reduce noise by installing insulation around sawdust extraction fans.

FROM LEFT

CALM SIGN, WARNING OF DISEASE RISK AREA. SORTING SEEDLINGS READY FOR PLANTING.





Grinding sludge, containing lubricant oil and metal filings, is produced at the Manjimup and Welshpool Processing Centres. This waste is initially stored on site prior to removal 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 surface to dry. Any excess solution is captured and recycled. The process used ensures that the chemicals cannot be leached out.

The treatment storage tanks are well bunded and the process is controlled by our certified quality procedures. All excess stormwater is collected in a containment dam, samples from which are tested every three months, as is soil downhill from the dam. The test results are reported to the Department of Environmental Protection (DEP) and to the Shire of Serpentine-Jarrahdale annually. Those test results have been within licence limits.

Woodchip operations

The south-west 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 to us for processing at the Diamond mill into woodchips for the production of paper.

Jarrah is not suitable for paper-making, but jarrah residues are used to produce charcoal for use in silicone production.

We report annually to the DEP on our compliance with the conditions of the 1988 Environmental Review and Management Programme covering woodchipping. All 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 sawmill. We also ensure that no residue logs are obtained from the clearing of remnant vegetation on private land, except where authorised by the Minister for the Environment.

We also produce woodchips from plantationgrown *eucalyptus globulus*. The volume of this material will increase dramatically as the plantations mature. Production and export of plantation woodchips is expected to reach about 70,000 tonnes in the 1999 calendar year, increasing to about 300,000 tonnes in 2000.

Water runoff from stockpiles into surrounding waterways is monitored at both Diamond mill and Bunbury Port, in conjunction with the DEP. No adverse issues associated with runoff were identified in 1999.

Following signing of the RFA in May 1999, we are no longer required to hold a woodchip export licence. A report was submitted to the Commonwealth Government for the period leading up to May 1999 to comply with the requirements of the export licence.

We welcome visits by members of the public to Diamond mill. Tours covering all aspects of the woodchipping operation, from log receival and segregation, to woodchip production and transport are conducted regularly.



Environmental Management System

Implementation of a company-wide Environmental Management System (EMS) commenced during 1999. This EMS, which will be compatible with the requirements of the international standard ISO 14001, will maintain full documentation of our activities which affect the environment, while providing a baseline from which to improve performance. It will be integrated with our existing Quality Management System (ISO 9002). CALM is currently implementing an ISO 14001-based EMS. The aim is for all stages of the forest management and production process to comply with ISO standards.

An Australian Forestry Standard, encompassing the Montreal criteria and indicators for sustainable forest management, is currently being developed by the Federal and State governments. Once complete, this Standard will also become part of our EMS.

All employees directly involved with implementing the EMS will be trained in environmental awareness. The training will provide employees with the skills to identify aspects of their daily activities that impact the environment, and help them to develop methods for reducing these impacts.

Implementation of the EMS in 1999/2000 will occur at the Mundijong pine treatment plant, the northern region forest harvesting operation and the Treefarms business unit.

Although no external environmental audits of operating sites were conducted in 1998/1999, our EMS will be audited by an independent organisation to gain initial certification to ISO 14001. This will identify those aspects of our operations where improvements need to be made and monitor those improvements through to completion.

Site contamination

Part of our Pemberton sawmill site is contaminated with arsenic 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 environmentallyacceptable standard.

The extent of the contamination has been monitored, and a consultant's report received. Discussions will be held with the State Government, given its original ownership of the site, with a view to finalising our rehabilitation action plan in 1999/2000.

Waste and hazard management

During 1999, one underground fuel tank was removed from the Westwood Timbers Welshpool yard. Investigations are continuing, in conjunction with BP, into removal of all 14 remaining underground fuel and oil tanks.

Potential environmental hazards resulting from the use of dangerous goods are controlled through our compliance with WA's Dangerous Goods Regulations. Each location currently has an emergency plan. These plans are being upgraded to include environmental issues, with specific reference to the spillage of hazardous materials.

Bark removed from logs at our Yarloop, Collie, Nannup and Deanmill sawmills is sold to various customers for use as garden mulch and potting mix. Customers include contractors supplying nurseries, as well as individual residents. Bark that is not disposed of in these ways is currently burnt. Other alternatives have not yet proved viable but investigations are continuing.

Sawdust from our jarrah sawmills is sold for use as garden mulch. Some sawdust from Deanmill is also used in brick manufacture, as is sawdust from the Welshpool Processing Centre. Karri sawdust is sold to a dairy to fuel boilers.

Environmental licensing

We hold nine environmental licences. These licences, associated with the production and discharge of waste, effluent disposal, and groundwater and surface water, are issued by the Water Authority, the Health Department and the Department of Environmental Protection. We conformed to all environmental licence requirements during 1999.

BFP in the community

Landcare

We play a role in regional landcare activities through membership of the Manjimup Land Conservation District Committee and regular contact with other district committees throughout the south-west. Our personnel take part in field days and offer discounts on seedlings to all Conservation District

FROM FAR LEFT

FORESTER MATT POTTER AT WILLETT TREE FARM, BOYUP BROOK.

VALUE ADDED WA HARDWOODS AT BFP MANJIMUP.

NEVILLE MCDONALD, PLANT OPERATIONS PRODUCTION MANAGER, CHECKING INSTRUMENT READING AT TREATMENT PLANT.

Environmental Policy

We are committed to the principle of sustainable development adopted by the United Nations Conference on Environment and Development in its report "Our Common Future" – "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Its main features are:

- implementation of the internationally-recognised ISO 14001 Environmental Management System;
- endorsement of the National Forest Policy Statement;
- compliance with all environmental legislation; and
- minimisation of waste and prevention of pollution.



 Figure 1: Lost Time Injury Frequency Rate

 17.0
 9.9
 6.6
 7.1
 7.7

 Image: Colspan="4">Image: Colspan="4"

 Image: Colspan="4">Image: Colspan="4"
 Image: Colspan="4">Image: Colspan="4"
 Image: Colspan="4"
 <t

Committees. During 1999, we donated 93,000 seedlings for Arbor Day plantings. These seedlings were supplied to 263 schools throughout Western Australia and to the public via Bunnings Building Supplies stores. Over 40,000 seedlings have also been donated to other causes, including rehabilitation following the Moora floods and bushfires in the wheatbelt.

Bunnings Watercare Programme

The Bunnings Watercare Programme was established in 1991, in response to local communities' concerns about the state of the Blackwood River catchment. The programme employs a full-time manager and works with communities across 30,000 square kilometres of the Blackwood and Margaret River catchments. Annual monitoring gathers information to help assess the health of rivers in the catchments.

The Watercare Programme aims to increase community awareness and understanding of water quality issues. It also aims to encourage local action projects involving the community, schools and government. In 1999, over 100 people from schools, local catchment groups and environment groups took part in one such action project - a water quality Snapshot which identified problem areas requiring specific management strategies.

SAFETY AND HEALTH

Occupational safety and health policy

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.

Our Safety Management Plan, which sets out how our policy will be achieved, is currently under a comprehensive review as part of our continuous improvement process. This review, when complete, will ensure occupational safety and health initiatives and practices continue to be an integral part of our management processes.

Injuries

We have an ultimate safety goal of zero workplace injuries and an annual target of halving our LTIFR (see figure 1). Our focus on reducing the number of all injuries resulted in a further decrease in the number of workers' compensation claims in 1998/99 (see figure 2).

We achieved an LTIFR of zero in 19 out of 29 locations during 1998/99. Overall, our LTIFR increased slightly from 7.1 to 7.7.

We very much regret that in September 1999 a fatality occurred at Deanmill sawmill. The outcome of the investigation by WorkSafe WA will be included in next year's report.

Occupational safety and health issues

Occupational Safety & Health legislation changes are distributed to locations as they occur and any necessary changes are incorporated into relevant work procedures and management systems.

Training continues to be an important feature of improving our workplace safety and health. Involvement by location safety committees and working groups in the training process ensures that work instructions and training initiatives are appropriate for the specific workplace. This approach also promotes a wider interest in and commitment to workplace safety.

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.

Safety awards

We participated again in the Industrial Foundation for Accident Prevention/GIO Safe Way Awards with seven locations achieving bronze results.

Hazard control

Workplace inspections

Our commitment to reducing workplace hazards continues. Regular inspections of locations are performed with reference to hazard identification checklists. Among other things, these checklists require visual inspection of the condition of plant and machinery, fire fighting equipment, and the general state of the working environment. Any items requiring attention are noted for action by a certain date and are followed up to ensure completion.





FROM FAR LEFT

SARA MATHIESON AT THE DIAMOND DALE TREEFARM NEAR PEMBERTON. AUTOMATED TIMBER HANDLING PLANT AT DEANMILL JARRAH SAWMILL. ESTABLISHING EUCALYPT PLANTATIONS.

Incident investigation

Thorough investigation and reporting of workplace incidents is an important aspect of hazard control. Minor incidents requiring basic first aid or medical treatment are recorded and discussed at workplace meetings. All lost time injuries are reported immediately and are discussed at monthly meetings of our executive risk management committee to ensure that appropriate steps are taken to address the cause of the incident.

Emergency plans

Site emergency plans continue to be updated and reviewed. The plans outline steps to be taken in an emergency and include contact numbers of emergency response organisations and personnel, evacuation procedures and responses to specified events. Periodic testing and emergency drills are required to ensure the effectiveness of the plans and the readiness of our personnel.

Managing Director's risk management awards

Our Bunnings Forest Products Managing Director again conducted an inspection of all locations, together with a panel of risk management and insurance specialists, as part of an annual assessment of risk management practices. This assessment reviews safety and risk management measures including: 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. Considerable improvement over previous years was demonstrated in most areas of the assessment.

Safety initiatives

During 1998/99 a major emphasis was directed towards the risk management of contractors. To this end we have developed a system setting out the requirements for selecting and managing contractors. The system includes assessing contractor qualification or competency, induction to our specific site requirements and ensuring appropriate training and knowledge of site safety, hazard control and relevant work instructions. Documentation to assist in implementing the system at our locations has been completed and distributed.

Customer safety

Our commitment to customer safety continues with a review of the current Material Safety Data Sheets and information sheets for timber products.

WorkSafe Western Australia

Throughout 1998/99 WorkSafe WA issued 16 improvement notices. One improvement notice was successfully appealed and all others were complied with by the due dates.

No WorkSafe prosecutions occurred or were instigated during 1998/99 One outstanding WorkSafe prosecution for an incident in 1997 is scheduled for trial in early 2000, and will be vigorously defended.







Priorities for the future

- further reduce nutrient losses to waterways
- implement revised safety systems for our major hazard facilities
- continue programme for safely treating and disposing of hazardous wastes
- implement revised workplace safety management plan
- reduce LTIFR from 4.1 to 2 and reduce All Injuries Frequency Rate by 15 per cent





FERTILISERS AND CHEMICALS

We are Western Australia's largest producer and marketer of fertilisers and industrial chemicals. We have fertiliser operations at Kwinana, Bunbury, Geraldton, Albany and Esperance and a major chemicals complex at Kwinana. We employ approximately 650 people across the State, almost 100 of whom work in agricultural areas. We have a 75 per cent interest in Australian Gold Reagents which operates two sodium cyanide plants at Kwinana. In addition, we have a joint venture interest in the development of an ammonium nitrate plant at Moura in Queensland operated by Queensland Nitrates Management Pty Ltd.

KEY ISSUES

Our key issues are:

- controlling emissions
- site contamination/waste remediation
- support of sustainable agriculture
- management of major hazard facilities
- community relations
 - safety

OUR PROGRESS

1997/98 REPORT TARGET	COMMENT
Reduce fluoride and nutrient losses	Reduced fluoride losses from 75 to 17 tonnes. Slightly reduced phosphorus and nitrogen losses.
Reduce odours from fertiliser manufacture	Conducted trials at Bunbury - work continuing.
Minimise solid waste generation	Significant recycling of product waste continued. 40 per cent of Kwinana site domestic waste recycled.
Improve energy efficiency	1997/98 energy audits reviewed by operating groups.
Support sustainable agriculture	Ongoing technical advice to farmers, crop and pasture trials and soil/plant analysis services.
Reduce workplace injuries	Total injuries reduced by 17 per cent.
Improve contractor safety performance	Contractor induction systems reviewed and upgraded.
Continue "fit backs at work" programme	The programme continues to reduce soft tissue sprains and strains, resulting in a 48 per cent reduction since inception.
Improve emergency response preparedness	Review conducted and recommendations being implemented.
Reduce noise levels	Budget provision for sodium cyanide plant noise reduction.



ENVIRONMENTAL MANAGEMENT

Environmental plan and management programme

We are developing and implementing a corporate Environmental Management System (EMS) consistent with the ISO 14000 series of standards. A key feature is the provision of environmental awareness training for employees. The first stage of this training programme, involving all staff, has begun and will continue for 18 months.

The processing plant at our Geraldton site was closed in 1998/99 after many years of operation. It will be decommissioned over the next few years. As part of our environmental management programme, we are preparing a decommissioning plan for the site, including managing waste material.

Licence compliance

Our operations are regulated under the terms of environmental licences issued by the Departments of Environmental Protection and Minerals and Energy, and other licences issued by the Health Department, and the Water and Rivers Commission.

Three incidents of non-compliance with licence conditions were recorded in 1998/99 compared with 11 the previous year. These involved particulate emissions from the Kwinana prill plant, the pH of wastewater from the Albany plant, and analyser reliability at the sodium cyanide plant.

Environmental incidents

Two separate incidents were associated with the nitric acid plant on 2 and 3 June 1999 respectively. The first incident resulted in nuisance to nearby neighbours when ammonia was released. The second incident resulted in the release of gaseous oxides of nitrogen that impacted neighbouring industry. As a result of these incidents, a thorough review of operating procedures in the nitric acid plant has been undertaken and methods to prevent recurrence are currently being evaluated.

We reported four accidental releases of ammonia from the ammonia plant in 1997/98. Action was taken to prevent recurrence including planned modifications to the flare. In 1998/99 there were two releases from the plant. The first was unrelated to the type of incidents that occurred last year and resulted in impacts to nearby construction workers' and nuisance to neighbours. The second was associated with the flare, which has not yet been upgraded. The new flare has been designed and the components ordered. It is planned for installation in 1999/2000.

In September 1999 our operators detected a loss of containment from an arsenic storage area. This loss resulted in arsenic being released to Cockburn Sound. At the time of preparing this report the incident was under investigation by the Department of Environmental Protection and other regulators. We are co-operating with this investigation and the incident will be reported more fully in next year's report.

Atmosphere

Oxides of nitrogen (NO_x) emissions – Kwinana, Geraldton, Albany and Esperance

The new nitric acid plant (commissioned in 1996) at Kwinana continues to operate at world's best practice levels for NO_x emissions according to the European Fertiliser Manufacturers Association achievable emission levels, 1995 (see figure 1).

We operate two sodium cyanide plants at Kwinana. Emissions from these plants are measured continuously. Average concentrations of emissions during the operation of the plants are shown in figure 1.

At Geraldton, Albany and Esperance works, minor NO_x emissions were recorded for the sulphuric acid plants. These plants only operate for part of the year.

Sulphur dioxide (SO₂) emissions – Kwinana, Geraldton, Albany and Esperance

All four sulphuric acid plants have continuous monitoring for SO_2 . Emissions of SO_2 are dependent on the throughput of the plant. The Kwinana plant is the only plant that requires a licence from the Department of Environmental Protection (DEP) and it continued to operate well within its licence limits (see figure 2).

We are an active participant in the Kwinana Industries Council Ambient Air Quality network which monitors SO₂ levels in the Kwinana/Rockingham region from a variety of sources in the Kwinana Industrial area. In 1998/99, ambient SO₂ levels continued to remain well below the prescribed limits. ABOVE CSBP KWINANA, AT NIGHT











Other emissions

Ammonia (Kwinana) – There were two accidental releases of ammonia from the ammonia plant and one from the nitric acid plant. Actions to prevent recurrence have included procedural changes, training and minor modifications to equipment. A new ammonia plant is being constructed at Kwinana and the old plant will be decommissioned when this plant is commissioned and stabilised.

Chlorine (Kwinana) – The Kwinana chlor-alkali plant continued to operate within chlorine licence emission limits during the year. A comprehensive monitoring system alerts personnel in the area to chlorine releases above 1 ppm. In 1997/98 there were 74 chlor-alerts. This was reduced to 64 in 1998/99 with the installation of new equipment.

Fluoride (Kwinana, Geraldton, Bunbury, Albany and Esperance) – Emissions of fluoride from the manufacture of superphosphate were within licence limits for the year at all facilities.

Prilling plant particulates (Kwinana) - There are three stacks associated with the prilling plant. In 1998/99, there was one instance when emissions of ammonium nitrate particulates exceeded the licence limit of 250 mg/m³ at one of the stacks. As a result, a review of plant operations and emission monitoring techniques was commenced and an interim increase in the emission limit (to 350 mg/m³) for stack 3 was agreed with the DEP to allow extensive investigations to be undertaken. A project plan has been developed with the aim of reducing the ammonium nitrate emissions from the stacks to achieve less than 100 mg/m³ over the next 12 to 18 months. The project entails conducting further emission testing and continuing research into the generation of particulates during the process including the variables within the plant that may influence this. This will involve extensive work during the 1999/2000 year.

Odours

Additional work to research odour reduction techniques at our Bunbury plant indicated that improvements can be achieved. Further work will be undertaken in 1999/2000 to improve both consistency and cost with the aim of improving odour management at all our fertiliser operations.

Greenhouse gas emissions

We are a signatory to the Commonwealth Government's Greenhouse Gas Challenge under which we have committed to reducing our CO_2 emissions by 28,000 tonnes per year based on 1995 levels until the year 2000. We have commenced a project to re-assess our greenhouse gas emission inventory to take account of emissions of all greenhouse gases. We have developed a database on greenhouse gas emissions and will commence a monitoring programme on a monthly basis in 1999/2000.

We lodged our first report under the Greenhouse Challenge in March 1999 for the 1995, 1996 and 1997 years. In the 18 months to June 1999 our greenhouse gas emission reduction measures already in place saved 25,829 tonnes of carbon dioxide per annum.

In common with many greenhouse gas inventories in Australia, however, our baseline emissions estimations are being upgraded, and our total 1998/99 emissions were 285,169 tonnes CO₂ equivalent (or approximately 18 per cent more than 1997). In addition we are currently working to quantify N₂O emissions from our Kwinana site and will comment on this aspect of our emissions in next year's report.

Efforts to reduce greenhouse gas emissions in 1998/99 included a continuing pilot project to increase the energy efficiency of the nitric acid plant and the implementation of several recommendations arising from the energy audits conducted in 1997/98. In 1998/99, we thinned our Albany tree plantation to maximise its carbon fixing potential. We aim to increase our tree plantation area in the next year.

Site contamination

A site management plan for our Bayswater property is being developed. The expectation is that this plan will involve a remediation effort to continue for many years, but initial efforts are focussing on the cleanup and removal of wastes at the site, and completing our knowledge base of the location and extent of contamination.

A pollution plume containing ammonia and arsenic has been detected in groundwater beneath the existing ammonia plant at Kwinana. A recovery bore has been installed and test work with this bore will commence in the latter half of 1999.



FROM FAR LEFT

HAZARD ALERT SIGN ON A WESFARMERS TRANSPORT TRUCK.

EMPLOYEES WORKING AT THE NEW AMMONIA LOADING STATION.

SAMPLING GROUNDWATER SUPPLIES TO TEST WATER QUALITY.

ENVIRONMENTAL OFFICER CAROL BORE CHECKS AIR MONITORING EQUIPMENT.



Noise

In conjunction with fellow members of the Kwinana Industries Council, in 1999/2000 we will be embarking upon a cumulative noise study of industry along the Kwinana industrial strip. This approach recognises that the issue of noise can only be properly managed by the adoption of an holistic approach involving all sources.

In a separate initiative, we have budgeted funds to modify and reduce noise emissions from the air blowers in the sodium cyanide plant at Kwinana.

Waste management

Oil and fuels

We adhere to a policy of reusing waste oil wherever possible. Spent oil, which is not suitable for reuse, is sent to an oil recovery facility. This two-phased approach reduces the amount of waste oil ultimately requiring disposal.

Product waste

Sulphur filter residue, generated in the sulphuric acid plant, has recently been relocated to a more appropriate storage facility in Kwinana and continues to be reincorporated gradually into product.

We have a general policy of recovering and recycling as much product waste as possible and our reduced nutrient loads to Cockburn Sound are part of this commitment. All of our solid product manufacturing processes (fertiliser and chemical) incorporate significant recycling of off-specification or waste products. In addition the granulating plant is a significant user of effluents containing nutrients at our Kwinana site. This again significantly reduces our discharges to Cockburn Sound.

Recyclables

All of our employees are actively engaged in the effort to minimise waste to landfill by reducing waste generation and recycling material whenever possible. In 1998/99, the Kwinana site diverted 40 per cent of its domestic waste from landfill into the recycling programme.

Water usage

During 1998/99 - in addition to our regulatory obligations - we commenced an intensive programme to monitor and assess our groundwater usage and the impact on the quality of the groundwater at Kwinana. One management issue related to this is a chlor-phenol groundwater plume emanating from a property to the north of our site. We are co-operating with government agencies and other companies in its management.

Efforts to minimise the use of water during 1998/99 included recycling of wastewater within the cyanide and superphosphate plants at Kwinana and the superphosphate plants at Bunbury and Albany. The granulation plant at Kwinana has also been recycling its wastewater since 1996.

Wastewater management

The only sites that discharge to waterways are Albany, Bunbury and Kwinana. These discharges are closely monitored for adherence to the appropriate licence conditions, and where departures from specified performance levels are detected, appropriate remedial action is taken to abate the discharge.

Phosphorus (P) and fluoride (F)

Stage two of a \$1.55 million project to recycle phosphorus and fluoride at the Kwinana facility was completed in 1998/99. This has resulted in a further decrease in the phosphorus discharges to Cockburn Sound in addition to the 80 per cent reduction achieved last year (see figure 3).

The recycling project also reduced discharges of fluoride by about 80 per cent from 75 tonnes in 1997/98 to 17 tonnes in 1998/99. Plans are being developed for Stage three of the project which will further reduce phosphorus emissions (see figure 4).







We continued to maintain and improve on our record in Albany, with phosphorus discharges to Princess Royal Harbour falling from 16 to 11 kilograms per annum. This is well below the licence limit of 800 kg/year (see figure 5).

Fluoride discharges at Albany remained low at 0.3 tonnes in 1998/99.

During 1998/99 we completed Stage three of a long-term wastewater management project at Bunbury. This project comprised the expansion and lining of the wastewater collection pond at our site. As a result of this improvement, we now capture a greater proportion of our effluent and stormwater run-off, resulting in a more accurate reflection of the quality of our wastewater discharges. This accounts for the increase in phosphorus and fluoride discharges from 14 kg in 1997/98 to 189 kg in 1998/99 and from 6 kg in 1997/98 to 29 kg in 1998/99, respectively.

Nitrogen (N)

Nitrogen discharges to Cockburn Sound from our Kwinana facility reduced from 62.3 tonnes in 1997/98 to 61.0 tonnes in 1998/99. This minor improvement is due to a focus on spillage management in 1998/99. We are still working towards reducing our nitrogen discharges to less than 40 tonnes annually (see figure 6).

Nitrogen discharges to Albany's Princess Royal Harbour fell by 40 per cent from 2.5 tonnes in 1997/98 to 1.4 tonnes in 1998/99. This reduction has been realised through improvements to Albany's nitrogen removal facility in 1998/99.

The reported rise in nitrogen discharges from 12 kilograms in 1997/98 to 120 kilograms in 1998/99 at our Bunbury site is a reflection of the improved accuracy of effluent monitoring, as described above.

Heavy metals

In 1998/99 our heavy metal discharges from our Albany site were within prescribed limits.

With respect to heavy metal discharges at other sites there were no licence limits, however we manage the potential sources to minimise emissions.

Kwinana wastewater strategy

We are implementing a wastewater strategy based on the principles of reduction, reuse and recycling for our whole Kwinana site. Our aim is to achieve near zero contaminant discharges from the site by June 2002. During 1998/99, we implemented a project for recycling the water used within the cyanide and superphosphate plants, and installed several new monitoring weirs across the site to better track wastewater.

To assist us with developing and implementing plans to achieve our objective, we have installed additional monitoring equipment to provide information on the flows and quality of wastewater and stormwater generated in different areas of the site.

In 1999/2000, we propose to install an additional stormwater containment pond and two additional wastewater collection sumps.

Aesthetic considerations

Visual impact of our country sites is kept to a minimum by virtue of the extensive screening afforded by planted buffers of native species. The visual impact of overspill from excessive floodlighting is also being addressed in a parallel effort to reduce energy demand and subsequent greenhouse emissions.

Our plants at Bunbury and Albany have been enhanced, in both environmental and aesthetic terms, through an extensive eucalypt tree planting programme.

Legislation

A regular review of legal requirements and compliance issues is a component of our EMS, which is nearing completion of the development phase. We have also taken an active role in contributing to the review and development of legislation relevant to the chemicals industry. Through the Kwinana Industries Council, the company has commented on proposed amendments to the WA Environment Protection Act 1986 and the Dangerous Goods Regulations. We have also liaised with the Waters and Rivers Commission in the development of amendments proposed for the Rights in Water and Irrigation Act 1914.



Hazardous substances

Bunding of the sulphuric acid tank farm at Kwinana was completed during 1998/99. Two new storage facilities were approved at Kwinana under the Dangerous Goods Regulations. These facilities were bunded to meet the requirements of Australian Standard 3780.

Improvements were also made to the sulphuric acid tank farm in Bunbury. The project involved modifying the drainage and sealing all roadways in the tanker unloading area to capture any spillage in the event of an incident during transfer of acid.

We recognise our responsibilities as a significant custodian of dangerous goods. All licence conditions on the transport and storage of dangerous goods have been observed, as have the requirements of the Responsible Care Warehouse and Storage Code for all materials.

Major hazard management

Measures required for implementation of the new National Standard for Major Hazard Facilities were nearing completion in the latter part of 1999. A component of the transition to the new standards has been the conduct of a 'fit for purpose' audit and awareness training for employees. This will be a significant implementation issue in 1999/2000.

Community involvement

We are an active member of both the Kwinana Industries Council (KIC) and the Plastics and Chemicals Industry Association (PACIA). We contribute to the co-operative programme of water quality and sediment monitoring in Cockburn Sound run by KIC on behalf of its members. This monitoring programme has been augmented by additional water quality monitoring studies commissioned by us.

Positive engagement with the community is a goal of ours, and efforts in this regard were recognised by the Rockingham Lions Club which presented the company with a certificate of appreciation in July 1998. Another element in this community engagement is the company's sponsorship of a PACIA environmental award.

We were the founding member of the Kwinana Community Advisory Panel (KCAP), and are committed to providing the same level of support and engagement with KCAP's successor, the Kwinana Community and Industries Forum (which meets every second month).

In 1998/99 public meetings were held for all interested parties to discuss our implementation of the new National Standard for Major Hazard Facilities, and our transport of dangerous and hazardous goods.

Complaints

Eighteen complaints about our operations were received during 1998/99, compared to 31 in the previous year. Ten of these complaints related to odour, five of which referred to Kwinana and the other five to superphosphate production operations at country locations. SO₂ emissions were responsible for three complaints and visible plumes for the remaining two. All complaints were investigated and follow-up action taken, as appropriate.

Stakeholder consultations

We have developed eight environmental awareness training modules for employees. These modules were presented to part of our workforce in 1998/99 and, at the same time, employees' feedback on environmental issues was solicited. These sessions have been successful in generating further feedback and enquiries from our staff on an ongoing basis, and are part of an ongoing programme.

Employees and contractors

All permanent employees undergo comprehensive environmental awareness and incident response training as an integral component of their induction training. Temporary employees receive induction training focused upon their area of employment. This training ensures that these personnel have an acceptable understanding of the safety and environmental hazards that might be encountered in their area of work. An ongoing environmental training programme will be embedded in our EMS when implemented.

Research and development

We sponsor the CSBP Chair of Cleaner Production at the John Curtin International Institute at Curtin University, which is directed to expanding the influence of cleaner production and sustainable development technologies and policies throughout Western Australia.

FROM FAR LEFT

PRIMARY PRODUCER, BOB BAKER AND CSBP'S KATANNING AREA MANAGER, LIZ EASTON AT RED HILLS FARM, ARTHUR RIVER, WESTERN AUSTRALIA.

ANALYTICAL CHEMIST MELANIE TRANTER AND LABORATORY TECHNICIAN ABIGAIL GENTRY IN KWINANA LABORATORY.

NEW AMMONIA PLANT, KWINANA.



Innovative disposal options for various process wastes are being investigated by us. These projects will examine better ways of managing vanadium, and the liquid wastes from the chlor-alkali plant. The Centre for Excellence in Cleaner Production at Curtin University is involved in a pilot project to minimise liquid wastes from the chlor-alkali plant.

Sustainable agriculture and Landcare

We maintain a substantial technical support service for our customers to ensure they have optimal information on the use of nutrients in their farming situations. We operate a significant programme of crop and pasture trials to inform producers on their options for optimising soil and plant nutrition. We also support customers with farm mapping and through our soil and plant analysis laboratory.

We also support numerous Landcare groups throughout Western Australia in their work.

Emergency response

We conducted a number of emergency response training exercises during 1998/99. An ammonia transport incident exercise was conducted in Merredin in November 1998. In June 1999 a sodium cyanide emergency response training exercise was conducted in Kalgoorlie.

We are full members Kwinana Industries Mutual Assistance programme, to assist in the management of any significant emergencies that may occur. We are also developing a close partnership with the WA Fire and Rescue Service at all our operating locations.

A review of internal emergency response structures was undertaken during the reporting year. This review was conducted with the assistance of the WA Fire and Rescue Service. Implementation of the review outcomes is in progress and should be completed by the end of 1999/2000.

Prosecutions

One prosecution was recorded for the 1998/99 reporting year. This was in October 1998 and related to a breach of the Dangerous Goods Regulations during transport of arsenic trioxide to the disposal facility at Mount Walton East. The breach occurred in December 1997. Details of the incident were included in our 1997/98 report.

SAFETY AND HEALTH

OH&S policy plans and procedures

We have an Occupational Health and Safety policy, supported by many procedures directed towards creating a safe workplace for staff, contractors and visitors.

Legislation

We adhere to the requirements of the WA Occupational Safety and Health Act administered by WorkSafe WA.

Training

Induction

We are committed to maintaining best practice through continuous improvement. We are part of the Kwinana Industries Council's initiative to standardise the safety awareness aspects of contractor induction programmes across the entire Kwinana industrial strip. Once implemented, contractors who have undergone the standardised training and met the required standard will be issued with a 'Contractor Passport'. The passport will become a mandatory requirement for contractors wishing to work on the Kwinana industrial strip. Standardising safety training is seen as an efficient and effective manner in which to enhance our safety performance and we have undertaken an extensive review and upgrade of our own contractor induction systems.

Specialised training

We continued with our safety management training programme for employees.

Safety improvement notices and prosecutions

No Safety Improvement Notices were issued during 1998/99 and no prosecutions were initiated.

Safety initiatives

We have been active in developing and refining improvements and innovations to ensure that occupational health and safety issues are embedded in every aspect of our operations. Principal among these was the formation of a safety review project team. This was a cross-functional and multidisciplinary group of employees who are under took a comprehensive review of our approach to managing safety.



FROM FAR LEFT

CSBP EMERGENCY RESPONSE TEAM MEMBERS IN TRAINING.

ABOVE

CSBP EMERGENCY RESPONSE TEAM MEMBER LISA O'NEIL PUTTING ON BREATHING APPARATUS, ASSISTED BY EMERGENCY RESPONSE COORDINATOR ANDREW JENNER.

A number of other initiatives have been taken to address potentially hazardous aspects of working within our sites. A computerised register of hazardous substances, including asbestos, was completed in July 1999. This database will improve access to information about hazardous substances for all employees.

Employee exposure to fluoride at Kwinana was reduced by 57 per cent in 1998/99. This improvement has been achieved through significant engineering modifications to the superphosphate manufacturing plant.

Fit backs at work

In 1997/98 phase two of the programme – Fit Back At Work Risk Management System – was developed and implemented.

The system used concentrates on individuals' needs through intensive occupational health, safety and fitness "self help" counselling and education.

Results

The results have shown a 48 per cent reduction in soft tissue strains and sprains at CSBP over the past three years.

Asbestos

As a component of our progressive hazard reduction programme, we have taken action to minimise the potential exposure of personnel to asbestos. Surveys have been completed at all sites to assess the presence of asbestos products. This has led to a programme to replace or protectively coat asbestos materials, most of which is cladding, at all sites as the need arises. All work with asbestos is conducted in strict accordance with documented procedures stipulating methods for handling, storage and disposal.

Accident reporting

Lost Time Injury Frequency Rate

LTIFR for our employees and contractors in 1998/99 was 4.1. This result maintains the level of performance achieved during the 1996/97 and 1997/98 reporting years, which were 4.1 and 4.2, respectively (although contractor data are not included in the 1996/97 total).

Workers' compensation

A total of 43 workers' compensation claims were recorded as a result of incidents in the 1998/99 year. This result continues the downward trend set over the past five years, which has seen the total number of claims drop to over 50 per cent of the 86 claims recorded in 1994/95. We are committed to maintaining this downward trend.

Wesfarmers Transport

TRANSPORT

Priorities for the future

- implement EMS by June 30 2000
- reduce LTIFR from 6.89 to 3.4 in 1999/2000
- zero fatalities and serious incidents in 1999/2000

We are a diverse transport operator in Western Australia providing freight logistics and specialised transport services. We also have operating centres in the Northern Territory, New South Wales and Queensland. Our fleet includes over 1,400 units of operating equipment and we employ over 550 people.

KEY ISSUES

Our key issues are:

- safety
- exhaust emissions

- hydrocarbon product management
- fuel consumption

OUR PROGRESS

1997/98 REPORT TARGET	COMMENT
Improve equipment fuel economy	Fuel consumption monitoring system in place for some metropolitan trucks.
Reduce emissions	Nine new prime movers and 15 new freezer trailers have been purchased to replace older less fuel efficient models. Dual fuel (LP Gas/diesel) equipment has been fitted to a truck for evaluation purposes.
Environmental Management System (EMS)	A consultant has been engaged to commence development of company procedures that will address those activities identified as having an environmental impact.
Reduce LTIFR by 50 per cent	LTIFR reduced from 9.17 in July 1998 to 6.89 in July 1999.
No fatalities or serious incidents	Three non-employee fatalities. Three truck fires.

ENVIRONMENTAL MANAGEMENT

Assistance from an environmental consultant has been sought to help prepare company procedures. These procedures will focus on the already identified critical issues of releases and/or losses associated with:

- hydrocarbon product management arising from maintenance activities; and
- exhaust emissions and noise from diesel powered equipment.

Fuel consumption and emissions

We have recently developed a data base for reporting fuel consumption in litres per kilometre. This will enable us to establish bench marks for fuel efficiency against which future performance can be measured. Initially implemented on a metropolitan based fleet of 13 vehicles, it is proposed to expand this further once system reliability is established.

We are also trialing a dual fuel powered truck, operated by one of our metropolitan distribution groups. The diesel engine of this vehicle has been configured to operate efficiently on LP Gas. It is designed to consume approximately 70 per cent LP Gas and 30 per cent diesel fuel. Over a period of six months we will determine reliability and on-road consumption details.

We have recently purchased 15 new freezer pantechnicons. The freezer units on these trailers are considerably more fuel efficient and have the added advantage of being considerably quieter than the older units they have replaced.

An environmental consultant has been engaged to evaluate and prepare procedures focussing on reducing hydrocarbon emissions/losses arising from maintenance activities and exhaust emissions and noise from diesel powered equipment.

Hydrocarbon storage management

We have conducted a site facilities review to determine at what locations it was appropriate to move away from bulk storage of distillate fuel. Use of an external fuel card at our suppliers' sites not only reduces our risk of losses/spills but also provides management/administration benefits. Three country and metropolitan sites have been identified for future changeover to this new system.

Specific tank and pipeline tests conducted at one site prior to taking over the lease found no signs of leakage.

Approval has been given for the construction of a new improved above ground bulk fuel storage facility at our Mourilyan site in Queensland.

Waste management

We have recently installed improved waste collection and lubricant dispensing equipment at our Kwinana workshop facility. Similar dispensing equipment will be installed at the Mourilyan facility. This will help reduce losses through poor work practice and product leakage/spillage.

Appropriate waste management systems are in place at our major metropolitan maintenance workshop facility at Belmont, in Western Australia. This includes collection and disposal by a certified waste management company of all waste lubricant and oil filters. All floor washdown water and any spills are trapped in purpose-built sumps which separate oils from water and retain the oily waste for later collection.

Work is underway with an environmental consultant to set up standard procedures which will have universal application across all of our operating sites where maintenance activities are carried out.

Noise

Of the 15 freezer units recently purchased twelve are 'Whisper' Thermo King freezer units. These are considerably quieter than the units they have replaced. With the Belmont Workshops being located in a built up area we have maintained a policy of not running any freezer units between 8pm and 6am. No noise related complaints have been received since this policy has been implemented.

Environmental compliance and complaints

No non-compliance orders have been received from any external statutory authority.

Three DEP complaints were received in 1998/99 relating to smoky engine exhausts. Each vehicle was inspected and any faults rectified as necessary.

ABOVE

TEAM LEADER, DENIS WYLE CHECKING DRUMS AT THE KWINANA WORKSHOP FACILITY.

Dangerous goods cartage

During the 1998/99 period the sixth edition of the Australian Code for the transportation of dangerous goods by road and rail was introduced. The new edition places greater emphasis on the operator for compliance and clearly defines the responsibilities of the operator, principal contractors, and the consignor.

Information and training for Wesfarmers Transport's drivers has been disseminated to employees through site meetings and during compulsory driver dangerous goods refresher training.

Contaminated sites

Below ground fuel storage tanks are a potential source of site contamination.

No comprehensive assessment of our sites has yet been conducted but we are addressing this issue and will report progress next year.

HEALTH AND SAFETY

To monitor performance in this area we use the key performance indicators of LTIFR and Number of Serious Incidents.

Key performance indicators

Although workers' compensation claims have increased over the last five years (see figure 2) there has been a significant reduction in LTIFRs since 1996, when we first started recording LTIFRs (see figure 1). We attribute this reduction in part to improved injury management and an increased awareness in the workplace.

We include contractors in calculating LTIFRs.

Dupont STOP

During the year training continued to be provided for managers and supervisors under the Dupont STOP (Safety Training Observation Programme). In addition, training also occurred for other employees under the employee version of the programme. The performance of managers, supervisors and other employees under this programme is monitored by senior management.

WorkSafe WA audits

The WorkSafe WA system of audits has been conducted at, or is scheduled for, our major locations.

This system of auditing is based on the philosophy of continuous improvement leading to world's best practice and is structured around five key elements:

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

In addition, the audit system is supported by an awards process where by companies qualify for silver and gold certificates for improvements achieved under the audit criteria. A silver certificate is received for achieving 60 per cent compliance in each element and a 10 per cent reduction in LTIFRs and a gold certificate is received for achieving 85 per cent compliance in each element and a 50 per cent reduction in LTIFRs.

In recent years our Kalgoorlie location has received silver and gold certificates and Bunbury has received a silver certificate.

Other training

Training is also provided to employees in higher risk areas including such courses as forklift operation, dangerous goods handling and loading and lashing requirements.

An external consultant was engaged to assist in the development of a training package for the handling of the explosive ammonium nitrate with a particular focus on the clients' products and transport requirements.

Incidents

We review each lost time injury or incident. During 1998/99, 15 review panels were established to investigate incidents. The panel consists of the General Manager, Divisional Manager and the Safety Co-ordinator. The supervisor and the employee concerned are required to attend.

FROM FAR LEFT

IAN FRANKLIN PUTTING OIL FILTERS INTO A RECOVERY BIN.

ROAD TRAIN OPERATOR IAN BLACK CARTING SUGAR CANE AT THE ORD RIVER IN WESTERN AUSTRALIA.

We very much regret that in 1998/99 there were three fatalities - an accident in which a pedestrian was hit by a crane arm from one of our trucks, a collision between one of our trucks and a private vehicle, and a death resulting from one of our trucks running over a person asleep on a road in the Kimberley.

In addition, there were a number of non-fatal incidents reviewed during 1998/99. These included a truck explosion following a tyre deflation and fire in a remote area of the Goldfields, and two other truck fires, one near Turkey Creek and the other near Ravensthorpe, in Western Australia.

Investigations into all of these incidents by police and WorkSafe WA have been completed. No action has been taken against us or the drivers of the vehicles as a result of these investigations.

Driver fatigue

A "Code of Practice" addressing Driver Fatigue for Commercial Vehicle Operators was launched during the year. We played an important part in the development and implementation of the Code. The issue of driver fatigue has been included with health and safety aspects and is enforced under the Occupational Safety and Health Act.

The Code requires us to have systems in place which address the rostering of drivers, scheduling of loads, health and well being of the driver, driver training and review processes of incidents. We have provided a submission to the Road Safety Council for an award in the Insurance Commission of WA Awards for Road Safety for our activities in this area.

Site safety

General health and safety issues relating to employees, sub-contractors and visitors to our sites are reviewed through regular safety meetings. These meetings take account of activities such as evacuation procedures from individual locations, first aid facilities, condition of equipment and general site safety issues.

As a result, a number of new policies and procedures have been or are in the process of being introduced through consultative mechanisms with employees, clients and visitors.

Improvement notices

Eight Improvement Notices were received from WorkSafe WA during 1998/99, seven of them related to the operating condition of fork lifts at Port Hedland. These notices were lifted following appropriate repairs being made to the equipment. The remaining notice, issued at Broome, concerned a contractor working at height. The appropriate safety requirements were implemented in completing the work.

HOW CAN WE Improve this report?

Our goal is to continually improve the way we report on our environmental, health and safety performance. Your comments on our efforts are important so please take the time to give us your feedback.

> After completing the reply-paid form below, please tear along the perforations and place in the mail.

Wesfarmers FEEDBACK

	Yes	Generally	No
Did this report meet your information needs?			
Did you find the report to be transparent and open ?			
Did you find the information easy to understand ?			
Did you find the information useful ?			

	Poor	Good	Excellent
How would you rate our environmental performance ?			
How would you rate our health & safety performance ?			

	Less favourable	Same	More favourable
How has this report changed your opinion :			
• of our environmental practices?			
• of our health and safety practices?			

General comments you would like to make about this report.

 What is your interest in this report?

 Shareholder
 Employee

 Wesfarmers Contractor/Supplier
 Educator or Student

 Industry Advocate
 Special Interest Group

 Other (please specify)
 In what form would you prefer to receive this report?

 Paper
 Internet
 CD-Rom

