

At SembCorp Industries, we recognise that to be a truly successful company, we must have a strong social commitment to improving the world around us. We see corporate citizenship as an integral part of every decision and action we take. This directly influences how we conduct our business and how we interact with the world at large. As a responsible corporate citizen, we aim to make a difference in the world and communities we operate in and to protect and enhance the environment we live in.

### Our Commitment to the Community

Our employees are passionate about making a difference in the communities we operate in and drive our corporate citizenship programme through their contribution of time, financial resources as well as business experience. In particular, we focus our initiatives for the benefit of children and education. We believe that the future of the world rests in the hands of the next generation and it is vital that we prepare our children well for the challenges of the future through education, the critical building block to the quality of life in our communities. We recognise the importance of education and continue to develop and contribute to programmes that lead to far-reaching impacts on the lives of the individuals they serve.

### Children & Education

In making our own unique and identifiable contribution to society through our corporate activities, our efforts are focused on children and education. For instance, SembCorp Marine (SembMarine) has a School Book Assistance Grant scheme which is targeted at low income households with schooling children. The aim of this scheme is to help these families purchase school textbooks, uniforms and stationery items at the commencement of each academic year. In December 2003, SembMarine contributed S\$202,250 in SchoolBag grants to a total of 1,037 students under this scheme.

Meanwhile, at SembCorp Environmental Management (SembEnviro), we have the Local Environmental Management Scholarship programme for needy and under-privileged children. The scholarship covers tuition fees, examination fees, stipends and other compulsory academic fees. Apart from financial help, SembEnviro also offers these young scholars job opportunities in the company on completion of their studies.

Throughout the Group, we are involved in a wide-range of other programmes and initiatives which support children and education in a variety of ways. In February 2003, SembCorp Utilities (SembUtilities) participated in the National Kidney Foundation (NKF) Lifeforce Campaign 2003 for the benefit of NKF Children's Medical Fund, while in November its subsidiary SMOE organised a Golf Charity Tournament raising S\$72,000 in proceeds for the benefit of the fund.



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In 2003, the Jamiyah Children's Home received S\$20,888 which helped to cover their annual operating expenses from SembEnviro through a charity carnival. The Home provides educational, welfare and development services to disadvantaged individuals between three to eighteen years of age. SembEnviro presented another S\$20,000 to four designated Children's homes under our Bonding Environment Experience Programme. The Muslim Jamiyah Children's Home, the Hindu Ramakrishnan Mission Boys' Home, the Catholic Canossaville Children's Home and the multi-racial Singapore Children's Society each received S\$5,000.

### Community & Volunteerism

Believing that we should also make a difference in our communities using our business expertise, SembCorp Logistics joined the Boys' Brigade Sharity Gift Box Programme as its logistics consultant. From the Sharity Gift Boxes set up throughout the island, we helped to collect items of gifts and food and transported them to our warehouse where the items were sorted and distributed to 123 beneficiary organisations. We provided warehouse space and storage pallets for these gifts, while our staff spent much of their personal time sorting the gifts.

At SembCorp Industries, we believe in doing our part for society, even in times of crisis. During the severe acute respiratory syndrome (SARS) outbreak, SembUtilities' power generation subsidiary SembCorp Cogen (SembCogen) gave utility rebates to Tan Tock Seng Hospital healthcare workers to show its support for the battle against the outbreak. To alleviate the economic downturn arising from the SARS outbreak, SembCogen also pledged a one-time S\$20 utility bill discount for one to three room Housing Development Board flat owners. Meanwhile, SembCorp Engineers and Constructors (SembE&C) also conducted the sale of Singapore Sweep tickets to employees as part of a broader effort to raise funds for SARS-related community causes.

In recognition of our SHARE (Social Help and Assistance Raised by Employees) contributions and fund raising efforts, SembE&C was conferred the SHARE Corporate Gold Award and the Corporate Silver Award for the period spanning from April 2002 to March 2003.

Team spirit, endurance, speed and perseverance. These are the values we see in athletic commitment, and values we would like to pass on through brand sponsoring in sports.

As part of our ongoing support of sports in Singapore, SembCorp Power (SembPower) and SembCorp Gas (SembGas) held the "SembCorp Power & Gas Football Challenge", a charity football game in January 2003. A friendly match between Woodlands Wellington Football Club and Malaysian state teams, the event raised S\$60,000 in total. Being a proud supporter of the local sporting scene, SembPower and SembGas are also patrons of the Woodlands Wellington Football Club and the Football Association of Singapore.



01 The Jamiyah Children's Home received S\$20,888 from SembEnviro.

02 Woodlands Wellington Football Club, sponsored by SembPower and SembGas, in training mode.

03 SembE&C receiving the prestigious SHARE Corporate Gold Award and the Corporate Silver Award.

## Our Commitment to Health, Safety and the Environment

SembCorp Industries is committed to responsibly serving our community and safeguarding the environment. We aim to ensure that the health and safety of our customers, employees, the communities in which we operate, as well as the environment are protected through tight certification, regulations and more importantly, a culture that recognises the importance of health, safety and the environment (HSE) at every level.

In some ways, 2003 has been a milestone year for SembCorp Industries with regards to HSE.

It saw the creation of the first SembCorp Industries Environmental Committee. With non-executive Board Director of SembCorp Industries, Richard Hale OBE, as Special Advisor and Loh Wai Kiew, President and CEO of SembCorp Environmental Management as Chairman, the committee comprises representatives from all our key business units and exemplifies SembCorp Industries' resolve to instill a keen interest and commitment to HSE across the Group and at every level.

With a view to develop and drive SembCorp Industries' environmental strategy and action plans, the committee aims to ensure best practice compliance, continuous improvement and innovation in our delivery of service and the responsible management of our environmental impacts.

During 2003 the environmental committee focused on assessing our current status and carried out an initial review of the potential significant environmental impacts of our businesses. In the year ahead, the aim is to set a clear environmental strategy for the future so that we can take planned and solid steps to meet HSE challenges ahead with innovation and determination. We hope that these measured steps will enable us to move towards becoming a more responsible and sustainable company and address issues that are important to our stakeholders.

There are however challenges ahead. We have a broad portfolio of businesses, and each of them differ with respect to the nature of their operations and environmental impacts. However, with the progress made in the past year, we hope to have made the first small steps in our journey towards environmental sustainability.

## Commitment to excellence

Periodic review of our operations and procedures is part of an ongoing effort to maintain excellence. Our company adheres to the guidelines of the Quality Management System for ISO 9001 and Environmental Management System ISO 14001 to provide the highest quality of service while carefully weighing environmental factors. We ensure a safe working environment for all employees by following Occupational Health and Safety (OH&S) Management System OHSAS 18001 guidelines.

The aim is to ensure that our operations not only meet the basic guidelines and comply with local regulations and standards, but that responsibilities for environmental protection are clearly defined. We remain committed to continuous improvement and employing the framework for the Malcolm Baldrige award. We seek to continually improve our operations, and conduct research and continuous education while responding to stakeholders' concerns.

We will continue to roll out HSE management systems across our operations. Figure 1.0 (right) summarises our overall progress towards certification.

## The SembCorp Industries Health, Safety and the Environment Policy

SembCorp Industries strives to be a leader - setting standards for the industry.

We are committed to responsibly serving our community and safeguarding the environment. We aim to conduct all business operations in a manner that ensures the health and safety of our customers, employees, the communities in which we operate, and our ecological system.

Understanding the importance of health, safety and the environment, we will:

- Assist the community by offering products, services and solutions that will better conserve and protect our environment
- Encourage conservation and recycling in an effort to increase participation in recycling and promote environmental awareness among our staff and community
- Ensure safe operations while minimising impacts on the environment and the communities in which we operate

As part of our ongoing efforts to improve our operations in a responsible and environmentally sustainable manner, we will also:

- Comply with existing environmental health and safety laws and legislation in all our operations
- Continue research, development and employee training and education in order to conduct business in a responsible manner
- Conduct careful review of all procedures to improve performance and quality, with constant consideration of environmental factors

<b>Business Units</b>	<b>ISO 14001 certified</b>	<b>ISO 9001: 2000 certified</b>	<b>OHSAS 18001 certified</b>
<b>Utilities</b>			
SUT Sakra	2001		
SembCorp Gas	2002	2000	2002
SMOE	2001	2001	2001
<b>Engineering &amp; Construction</b>			
SembCorp Engineers and Constructors	2000	2001	2000
Construction Technology	2000	2001	2000
Reliance Contractors	2000	2001	2000
SembCorp (Tianjin) Construction Engineering	2002	2002	2002
SembCorp Simon-Carves	2003	2001	2003
ST Architects & Engineers	1999	2001	
SembCorp Infrastructure (India)		2002	
<b>Environmental Engineering</b>			
SembCorp Environmental Management	2004	2004	2004
SembWaste	2003	2001	2004
SembWaste Medical	2002	2001	2004
SembWaste Municipal	2003	2001	2004
SembWaste Industrial	2003	2001	2004
SembWaste Cleantech	2004	2004	2004
SembSITA	2004	2004	2004
SembVISY Recycling	2004	2004	2004
SembVISY Recycling MRF	2004	2004	2004
SembEnviro Alex Fraser	2004	2004	2004
SembEnviro Tay Paper	2004	2004	2004
<b>Logistics</b>			
ST Medical Services		2002	
ST Logistics (Government Business Group)		2002	
ST Logistics (Freight Management Division)		2002	
ST Logistics (Clementi Warehouse)		2003	
Singapore Offshore Petroleum Services	2002	2003	2002
ST Airport Services	2001	2002	2001
Oil Tex (Thailand) Company	2002	2003	2004
<b>Marine Engineering</b>			
Jurong Shipyard		2002	2002
Sembawang Shipyard	2002	2002	
Jurong SML		2003	

Figure 1.0

## Our environmental impacts

We recognise that managing our impacts is critical to the success of our business and the health of our environment and the communities in which we operate.

In 2003, we took the first steps in mapping out the potential significant environmental impacts of our businesses through an initial review. We intend to further develop on this initial survey so as to define our key environmental impacts, establish environmental performance indicators and set clear and definable targets to work towards.

The key environmental impacts identified by our initial review are:

- Energy
- Air emissions
- Water use
- Waste
- Other impacts (odour and noise)

We have taken steps to reduce these key impacts, and increase the beneficial impact that SembCorp Industries can have on the environment. Below is a brief summary of some of the measures that we have taken to date.

## Energy

Energy consumption occurs throughout all sectors of our businesses.

As part of monitoring energy consumption in our operations, we will pay special attention to operations fuelled by less environmentally friendly fuel such as diesel and work towards using less of such fuel. For example, SembEnviro currently operates a fleet of refuse collection vehicles that runs on diesel. However, we have minimised this impact by route optimisation exercises and have reduced the number of vehicles on the road to an optimum.

Apart from monitoring and minimising energy use in our operations, we are focused on creating solutions that would help reduce energy consumption for our industries and customers, and are also at the forefront of promoting cleaner fuels and renewable energy.

Our cogeneration facilities in Singapore (Jurong Island), Australia (Kwinana) and China (Qianan and Shanghai) reduce the impact on the environment by lowering emissions and resource consumption through the use of cogeneration technology. Cogeneration is the combined production of heat and electricity from the same plant and is often referred to as Combined Heat and Power (CHP). As opposed to classical power

plants, where the only product generated is electricity and the heat generated in the process is wasted and lost to the environment, cogeneration provides an opportunity to save fuel because heat energy, wasted in classical plants, is harnessed for use. Cogeneration helps to bring fuel utilisation up to the region of 70% to 75% efficiency levels, as opposed to 50% to 60% for conventional power plants, thereby making more efficient use of our energy resources.

SUT Sakra is in the process of finalising plans to convert its steam boilers from using fuel oil to natural gas, a more environmentally friendly and energy efficient fuel. The conversion will also substantially reduce the emission of greenhouse gases, sulphur dioxide and nitrogen oxides per unit of steam generated.

SembCorp Utilities UK is also exploring the generation of power from renewable fuels such as biomass materials including crops, forestry wood cuttings and animal fat, while SembEnviro is in a joint venture to set up a biomass waste-to-energy plant in Malaysia which will convert agricultural waste from palm fruits into energy. By reducing the need for non-renewable fossil fuels, both projects have potential beneficial environmental impacts.



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**Air emissions**

We endeavour to reduce the emission of greenhouse gases through energy minimisation initiatives and the development of renewable energy.

SembGas, the first commercial importer and retailer of natural gas in Singapore, plays a vital role in encouraging the use of cleaner and greener fuel. The majority of our power plants are fired by natural gas, and therefore have lower emissions of greenhouse gases than conventional plants. The plants emit a negligible amount of sulphur dioxide, particulate matter and less carbon dioxide than plants fired by fuel oil.

SembGas is also the pioneer in introducing Compressed Natural Gas (CNG) as a new source of fuel and is currently undertaking a pilot project to introduce CNG fleet vehicles in Singapore. In 2003, SembWaste also signed a memorandum of understanding to retrofit trial units of its trucks with engines powered by CNG. Route optimisation and fleet rationalisation of SembWaste's fleet vehicles have also been carried out to reduce the number of vehicles on the road, and correspondingly reduce the emission of greenhouse gases and other pollutants.

Atmospheric emissions are produced by SembUtilities' chemical waste incineration plant, SUT Sakra's boilers, the propylene

purification plant on Jurong Island and SembWaste Medical's incineration plants. However, these units are equipped with continuous emissions monitoring systems and meet the national regulations for air emissions limits. Appropriate pollution control devices are also fitted, such as scrubbers and bag filters in the case of the medical waste incineration plant.

While welding activities in SembMarine shipyards produce metal fumes and gaseous emissions, we are progressively moving towards carbon dioxide welding which generates less fumes than traditional welding. We also ensure that all welding environments are adequately ventilated, which dilutes the welding fumes generated and put in place measures such as enclosing blasting facilities to control the dust emissions from the blasting and painting of ships.

**Water use**

From the use of water for cooling purposes at our facilities, to the washing of our fleet vehicles and activities at our construction sites, water is consumed across our various businesses.

Although a comprehensive system of tracking water usage is not yet in place, we have continued to encourage more efficient use of our water resources through the

innovative solutions and services provided by our businesses.

Our multi-utility facilities on Singapore's petrochemical hub Jurong Island recycles some 30,000 cubic metres of sewage effluent per day to produce high grade industrial water which is used as process water for chemical plants and refineries on the island. This not only reduces pollution of our water resources as the sewage effluent would otherwise be discharged to the sea, but also reduces the consumption of potable water by the chemical companies by providing them a viable alternative to potable water. Continuing research and development is also being carried out on membrane-based water purification technology and biogranulation technology, which is widely used in the treatment of many industrial effluents.

In the daily washing of its refuse collection vehicles in its Singapore operations, SembWaste uses recycled NEWater in its depots. This reduces the consumption of potable water.



**01**  
SembUtilities UK employees celebrating its achievement of having high standards of workplace safety.

**02**  
Exhibitions are held regularly to promote health and safety measures at the workplace.

**03**  
Our efforts play a key role in supporting the Singapore government's push to have every one in two households recycling.

Our businesses could also potentially impact water resources through the discharge of effluent. SembLog's ST Airport Services (STARS) for example has stringent measures in place to ensure that the effluent water discharged does not contain aviation fuel. STARS monitors all effluent water within the sites to ensure that no oil is released into the public drainage. All sites are also equipped with interceptors and these are checked to ensure that they contain no oil before the water is allowed to be released.

## Waste

Our engineering and construction arm, SembE&C utilises materials such as concrete, steel bars and timber for its construction activities. During the construction process in our projects, systems and procedures are established to minimise pollution and material wastage. However, there remains an inevitable amount of construction debris that is non-incinerable, and needs to be landfilled.

To divert construction and demolition waste from going to landfill, a joint venture between SembEnviro and the Alex Fraser Group of Australia was set up in 2003 to operate Southeast Asia's first integrated construction and demolition materials recovery facility. Located in Sarimbun Recycling Park, Singapore, the S\$8 million facility can mine up to 2,000 tonnes per day of co-mingled waste such as metals, wood, cartons and hardcore concrete from construction jobsites in Phase 1. By Phase 2, an additional 1,000 tonnes per day is expected to be added to the capacity of the facility and will focus on single stream demolition waste. The facility will play a pivotal role in the recovery of specific construction aggregates such as sand, and reduce the amount of non-incinerable waste going to landfill and the dependence on virgin materials. It also marks a milestone in Singapore's efforts to move "Towards Zero Landfill".

SembLog has also reduced the amount of packaging materials discarded through the reuse of logistics packaging materials such as foldable plastic containers and trays, plastic pallets, and pallet bands and by standardising sizes and materials.

## Recycling

During the year, we made significant progress towards our goal of closing the recycling loop in Singapore. In the municipal sector, SembEnviro launched a pilot household recycling project, giving out free user-friendly recycled storage crates to several housing estates. The rates of participation and the volume of materials recovered continue to be on the rise and our efforts play a key role in supporting the Singapore government's push to have every one in two households recycling materials.

Apart from the SembEnviro Alex Fraser construction and demolition materials recovery facility, we also operate the SembVISY Recycling automated materials recovery facility, which automatically sorts and recovers paper, plastics, glass and metals. The facility presently recovers some 25 tonnes of recyclables per shift.

## Other impacts

### Odour

SembWaste's fleet of vehicles also impact air quality in terms of odour during collection. To minimise this, SembWaste has in place the pneumatic waste conveyancing system. Called the Singmatic System, this waste collection system differs from conventional waste collection methods because refuse from housing estates is drawn into trucks via a vacuum pipe at collection points. The collection points at the housing estates are linked to the various households by underground conveyance pipes and waste is stored temporarily in underground tanks before being collected by the trucks. Fully automated, the system requires minimal manpower, is faster than conventional waste collection methods and eliminates hygiene problems commonly faced by manual waste collection.

### Noise

Noise comes mainly from construction activities and heavy vehicle traffic at our various businesses such as from construction sites (SembE&C), during ship-repair activities (SembMarine) and offshore platform construction (SMOE), as well as from truck engines during waste collection activities (SembWaste).

Noise from construction is constantly monitored, and its impact mitigated by limiting construction activities within certain hours.

## Advancing health and safety

Through the process of learning and continuous improvement, we make every effort to remain a leader in workplace health and safety. Apart from achieving internationally recognised safety standards such as OHSAS 18001, we are committed to the highest standards of occupational health and safety for all employees, in all locations and on all projects.

Operating in industries where our clients such as international oil and gas and petrochemical companies demand extremely high safety requirements from their service providers, we continue to ensure that the best safety practices and standards are maintained in our operations.

Highlights in 2003 include:

- Nine Silver and eight Merit Awards clinched by SembE&C, two Silvers and eight Merit Awards received by SembMarine, and one Merit Award given to SembLog at the Annual Safety Performance Awards 2003 organised by the Singapore Ministry of Manpower
- Sembawang Shipyard's HSE Team "Green Triangle" was awarded the Gold Medal in the 6<sup>th</sup> SIT (Safety Improvement Team) Convention for the Marine Industry organised by the Association of Singapore's Marine Industries (ASMI) for their project entitled "Safe-T-Guide for Pneumatic Winches". The same project was also awarded the Gold Medal in the National Safety Innovation Team Competition in September 2003
- SembCorp Utilities UK suffered no lost time injuries to any of its employees or contractors in more than 1.7 million man-hours of work and was awarded the prestigious Five-Star Health and Safety Award for workplace safety award by British Safety Council

## 2003 Highlights

### Greenwave Environmental Care Project

SembMarine's subsidiary Sembawang Shipyard launched the Green Wave Environmental Care Project ([www.sembship.com/greenwave](http://www.sembship.com/greenwave)) for schools in Singapore in January 2003.

Open to all students, the Green Wave Environmental Care Project competition aims to inspire and motivate young minds to think innovatively and adopt advanced technologies on environmental protection and improvement so as to inculcate a sense of personal and group responsibility for their own environment in the students.

The first project of its kind in the Singapore marine engineering industry, winners of the award not only take home prize money but starting 2004, will have the opportunity to take up developmental attachments with Sembawang Shipyard and its alliance partners, such as Shell Trading and BP Shipping.

The inaugural award presentation ceremony was held on November 27, 2003, with Mr Lim Swee Say, Minister for the Environment as the Guest-of-Honour.



(Above) A poster for the Green Wave Environmental Care Competition.

### SARS Efforts

The severe acute respiratory syndrome (SARS) virus invaded Singapore borders in February 2003. For three months, our nation battled against SARS on all fronts and on May 31, 2003, the World Health Organisation announced that Singapore was removed from its list of SARS affected countries.

During the SARS outbreak, we at SembCorp Industries undertook prompt actions to help control and prevent the spreading of SARS.

A taskforce was promptly set up at the SembCorp Industries corporate headquarters to look at ways to effectively and swiftly implement, control and manage the SARS threat. Precautionary measures included the suspension of all business travel to SARS-affected countries, temperature screening for all employees and visitors, enhanced cleaning of common areas, issuance of personal hand sanitisers and thermometers, and the review of business continuity plans across our businesses.

Apart from putting SARS preventive measures in place, our businesses also actively contributed to helping the nation in its bid to combat the virus.

SembLog was activated by the government to help combat SARS in April 2003. Its role was to provide logistics support and procurement services for essential supplies such as isolation gowns, gloves, respiratory masks and thermometers. In a true test of our supply chain management readiness, a 24-hour Operations Centre was set up within days to provide a single point of contact for all parties and to co-ordinate the requirements from various agencies and departments. Besides providing medical supplies to the hospitals, SembLog also sourced for some 2 million oral digital thermometers, equipping all school-going children with a thermometer and 1 million households in Singapore with a SARS toolkit that included a thermometer and masks, among other items.

SembWaste Medical, a subsidiary of SembEnviro, also played an essential role in ensuring no recontamination through proper handling of medical waste and its incineration. SembWaste Medical employees are trained in proper collection procedures and drive a fleet of specially-designed trucks that are watertight and regularly disinfected. SembWaste Medical's systems allowed workers to continue collecting potentially life-threatening waste. Essential services were kept functioning at a time of international crisis, underpinning Singapore's post-SARS recovery.



(Above) An incineration facility at SembWaste Medical, one of the providers of essential services that underpinned Singapore's post-SARS recovery.